OECD Regional Outlook 2016

PRODUCTIVE REGIONS FOR INCLUSIVE SOCIETIES

OECD

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FOR INCLUSIVE SOCIETIES

BETTER POLICIES FOR BETTER LIVES

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Foreword

This third edition of the Regional Outlook continues to emphasise the untapped growth, productivity and well-being potential associated with cities and regions. *The first edition of the Regional Outlook in 2011 identified at least two major trends requiring a better integration of the subnational perspective in OECD policy agendas. One trend was the persistent low productivity growth in most OECD countries. To tap into broader sources of productivity gains, the Regional Outlook 2011 was advocating a more integrated strategy, consolidating economy-wide structural policies by complementing them with place-based policies. A second trend is the observed disconnect between the quest for productivity on one side, and individual well-being on the other, that has generated the need to consider the three pillars of efficiency, equity and environmental sustainability. Subsequently, the Regional Outlook 2014 reckoned that well-being is intrinsically local and needs to be constructed by aligning policies from the top to the relevant scale: the places where people live and work.*

Five years after the first edition of the Regional Outlook, productivity growth remains low. *At the same time, inter-personal income inequalities are at their highest levels for decades. Moreover, demographic trends in OECD countries will make these questions even more salient. With an ageing population and a higher dependency ratio, productivity advances will become more critical to maintain material and non-material aspects of well-being in all OECD regions. Some regions may face more acute demographic challenges due not only to longer lifespans, but also lower fertility and outmigration. The only way to address these trends is to start planning for demographic impacts today to create a sustainable tomorrow. Furthermore, concerns among younger generations of not having the same opportunities as their parents and distrust in governments' capacities to address these challenges raise the tough question: what can policy do?*

This report contributes to the critical agendas of OECD countries to achieve more inclusive growth in urban and rural areas. *The report sheds light on some of the place-based drivers of productivity growth. Productivity growth is important for well-being as it has a significant impact on income and jobs, as well as non-material dimensions, such as health. The place-based elements of well-being can create virtuous or vicious cycles depending on where one lives, which has repercussions for access to services today as well as inter-generational mobility tomorrow. Stagnating productivity growth and its consequences for well-being contribute to social and political polarisation. Regions and cities are the spaces where the dynamics between productivity and inclusion are felt. Conception of national policies therefore needs to consider the impact on different types of places, and the firms and people located there. While the majority of OECD residents live in cities, rural areas also can, and do, contribute in many ways to national prosperity.*

Within and beyond the OECD, localising the recently adopted global agendas is essential to their success, which can be informed by regional, urban and rural development policy approaches. *The 2030 Agenda for Sustainable Development sets 17 Sustainable Development Goals and 169 targets for developed and developing countries alike. The Paris Agreement at COP21 tasks countries to design plans that keep global temperature increases below 2 degrees Celsius.*

Furthermore, Habitat III will help the world re-think urbanisation processes and the policies that shape and react to them. Part III of this Outlook adds to these global discussions by highlighting the fundamental role of regions and cities, as well as the way national policies influence them, as spaces and actors that contribute to all of these agendas.

The Regional Outlook is part of a broader work programme on regional development. *This work is developed under the auspices of the OECD Regional Development Policy Committee that addresses regional, urban and rural development as well as territorial statistics and multi-level governance practices.*

Mari Kiviniemi

OECD Deputy Secretary-General

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Definitions and typologies

Typology of regions with respect to productivity	
Frontier	is the region leading its country in terms of labour productivity, measured by the real gross domestic product per employee. In some countries the leading region accounts for a small percentage of the total workforce. Where this is the case, the frontier is the weighted average of regions with the highest labour productivity levels accounting for 10% of the country's total employment.
Catching-up regions Diverging regions Keeping-pace regions	is a classification of regions based on their labour productivity growth relative to the frontier. It is based on the growth in labour productivity between 2000 and 2013 (or closest year available). Regions where labour productivity grew/dropped by at least 5 percentage points more/less than in the frontier are classified as catching-up/diverging regions, with regions that are keeping pace falling within the +/- 5 percentage points band.
Typologies of regions with respect to population or other functions	
Cities	an individual city is defined by an administrative border of a local government. A functional urban area (see below) encompasses more than the urban core of the main city. In this report, for simplicity, a city refers to a functional urban area, and if of large size, is referred to as a metropolitan area (see below). Where the term refers to an administrative city, this will be made explicit.
Functional regions	are geographic areas defined by their economic and social integration rather than by traditional administrative boundaries. A functional region is a self-contained economic unit according to the functional criteria chosen (for example, commuting, water service or a school district).
Functional urban areas (FUAs)	are defined as densely populated municipalities (urban centres) and adjacent municipalities with high levels of commuting towards the densely populated urban centres. (commuting zones), according to a definition developed by the OECD and the European Union (EU). FUAs can extend across administrative boundaries. The OECD tracks FUAs of 50 000 inhabitants and more.
Metropolitan areas	are defined as those FUAs with a population of over 500 000. There are 281 metropolitan areas in the 30 OECD countries with data; of these, 90 had a population greater than 1.5 million in 2014.
Regions (TL2 and TL3)	are classified by the OECD into two territorial levels that reflect the administrative organisation of countries. OECD's large regions (TL2) represent the first administrative tier of subnational government, such as the Ontario region in Canada. OECD small (TL3) regions are contained within a TL2 region. For example, the TL2 region of Castilla-La Mancha in Spain encompasses five TL3 regions: Ciudad, Real, Guadalajara, Toledo and Albacete. In most cases, TL3 regions correspond to administrative regions, with the exception of Australia, Canada, Germany and the United States. For more information about the OECD regional classification see *OECD Regions at a Glance 2016*.
TL2 regional typology	TL2 regions have been classified as mostly urban (MU), intermediate (IN) or mostly rural (MR), according to the percentage of residents living in FUAs. Regions with more than 70% of their population living in a FUA, or some percentage of their population living in a large metropolitan area with more than 1.5 million inhabitants, are classified as mostly urban, those with less than 50% are classified as mostly rural.
TL3 regional typology	TL3 regions have been classified as: predominantly urban (PU), intermediate (IN) and predominantly rural (PR) based on the percentage of regional population living in rural communities, combined with the existence of urban centres where at least one-quarter of the regional population reside. The terms urban, intermediate and rural are used to refer to these categories. An extended typology distinguishes between regions that are predominantly rural and close to a city, and predominantly rural regions that are remote. The distinction is based on the driving time to the nearest urban centre with at least 50 000 inhabitants for a certain share of the regional population. Due to lack of information on the road network, the predominantly rural regions (PR) in Australia, Chile and Korea have not been classified as remote or close to a city.

ISO country codes

AUS	Australia	ISL	Iceland
AUT	Austria	ISR	Israel
BEL	Belgium	ITA	Italy
CAN	Canada	JPN	Japan
CHE	Switzerland	KOR	Korea
CHL	Chile	LUX	Luxembourg
CZE	Czech Republic	MEX	Mexico
DEU	Germany	NLD	Netherlands
DNK	Denmark	NOR	Norway
ESP	Spain	NZL	New Zealand
EST	Estonia	POL	Poland
FIN	Finland	PRT	Portugal
FRA	France	SVK	Slovak Republic
GBR	United Kingdom	SVN	Slovenia
GRC	Greece	SWE	Sweden
HUN	Hungary	TUR	Turkey
IRL	Ireland	USA	United States

Disclaimers

Latvia 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 area totals.

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.

Acronyms and abbreviations

AfD	*Agence Française de Développement* French Development Agency
ANRU	*Agence Nationale pour la Rénovation Urbaine* National Agency for Urban Renewal (France)
CCFLA	Cities Climate Finance Leadership Alliance
CGET	*Commissariat général à l'égalité des territoires* General Commission for Territorial Equality (France)
CHP	Combined heating and power
CLLD	Community-led local development
COAG	Council of Australian Governments
COE	Council of Europe
COP21	21st Conference of the Parties (United Nations Framework Convention on Climate Change)
CoR	Committee of the Regions
EAFRD	European Agricultural Fund for Rural Development
EC	European Commission
EDA	Economic Development Administration (Unites States)
EU	European Union
EMFF	European Maritime and Fisheries Fund
EPRC	European Policy Research Centre
EQI	European Quality of Government Index
ERDF	European Regional Development Fund

ESF	European Social Fund
ESIF	European Structural and Investment Funds
FAO	Food and Agriculture Organization
FDI	Foreign direct investment
FMDV	*Fonds Mondial pour le Développement des Villes* Global Fund for Cities Development
FSN	Food security and nutrition
FUA	Functional urban area
GDP	Gross domestic product
GHG	Greenhouse gas
GIAF	Green Investment Accelerator Fund
GIS	Geographic information system
GRW	*Bund Länder Gemeinschaftsaufgabe "Verbesserung der regionalen Wirtschaftsstruktur"* Joint Task for the Improvement of Regional Economic Structure (Germany)
GVA	Gross value added
GVC	Global value chain
HLPE	High Level Panel of Experts on Food Security and Nutrition
HUD	Department of Housing and Urban Development (United States)
ICT	Information and communications technologies
IEA	International Energy Agency
IN	Intermediate (region)
INC	Intermediate close to city (region)
INR	Intermediate remote (region)
INSEE	*L'Institut national de la statistique et des études économiques* National Institute for Statistics and Economic Analysis (France)
IPCC	Intergovernmental Panel on Climate Change
IT	Information technology
ITI	Integrated territorial investments
LAC	Latin America and the Caribbean
LAG	Local action groups
LEADER	*Liaison Entre Actions de Développement de l'Économie Rurale* Links between the rural economy and development actions (EU)
MDG	Millennium development goal
MW	Megawatt
NEET	Young people that are not employed, in education or in training
NGO	Non-government organisation
NRP	National Rural Policy (Canada – Québec)
NUA	New Urban Agenda
NUTS	Nomenclature of units for territorial statistics
NSS	National Spatial Strategy (Japan)
ODA	Official development assistance
ÖREK	Austrian Spatial Development Concept
ÖROK	*Die Österreichische Raumordnungskonferenz* Austrian Conference on Spatial Planning
OSS	One-stop shop
PA	Partnership agreement
PIF	Pre-investment facility
$PM_{10}/PM_{2.5}$	Particulate matter (concentration of fine particles in the air)
PPF	Planet Pledge Fund
PPP	Purchasing power parity / Public-private partnerships
PRC	Predominantly rural close to city (region)
PRR	Predominantly rural remote (region)
PU	Predominantly urban (region)
PV	Photovoltaic
R&D	Research and development
RDA	Regional development agency
RDPC	Regional Development Policy Committee

RE	Renewable energies
S&T	Science and technology
SDG	Sustainable development goal
SEDATU	*Secretaría de Desarrollo Agrario, Territorial y Urbano* Secretariat for Agricultural, Urban and Territorial Development (Mexico)
SEZ	Special economic zone
SME	Small and medium sized enterprises
SNA	System of National Accounts
SNG	Subnational government
SUBDERE	*Subsecretaria de Desarrollo Regional y Administrativo* Sub-secretariat for Regional and Administrative Development (Chile)
SWOT	Strengths, weaknesses, opportunities, threats
TL2	Territorial level 2
TL3	Territorial level 3
UCLG	United Cities and Local Governments
UN	United Nations
UN-DESA	United Nations Department of Economic and Social Affairs
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	U.S. dollar
USDA	United States Department of Agriculture
VC	Venture capital
VINNOVA	Public agency for innovation systems (Sweden)
VINVÄXT	Programme for regional specialisation (Sweden)
WCR	World Cities Report
WGI	Water Governance Initiative (OECD)

Executive Summary

Regions matter for building productive economies and inclusive societies. This third edition of the OECD Regional Outlook shows that while gaps in GDP per capita across OECD countries have narrowed over the last two decades, within their own borders countries are witnessing increasing income gaps among regions, cities and people. Leading regions and cities are now competing more with global peers than with others in the same country. There will always be interregional gaps, but those regions lagging behind have opportunities to "catch up" in terms of social and economic development. By helping to fuel the catching-up machine, countries can reap a double dividend of both increased aggregate productivity and inclusion.

While the majority of OECD residents live in urban areas, both rural regions close to cities as well as rural remote regions can and do contribute in many ways to national prosperity. This Outlook places a special focus on these low-density regions, and highlights how countries need to rethink rural development to better tap the productivity growth potential of all rural regions.

Cities, regions and place-based national policies also have an important role to play in meeting the ambitious targets of the Sustainable Development Goals (SDGs), the Paris Agreement of COP21 and Habitat III, among others. Greater involvement of regions and cities gives greater voice to their residents in these and other global agendas. Localising targets and their measurement will raise awareness, generate locally adapted solutions, and ensure that no region or city is left behind.

Key findings

- **The average productivity gap across regions has widened over the past two decades as the leaders outpace other regions in their country.** The average GDP per worker gap between the top 10% (frontier) and the bottom 75% regions across OECD countries has grown by almost 60%, from USD 15 200 to 24 000. As a result, one in four persons in the OECD lives in a region that is falling further behind the high-productivity regions in their country.
- **Limited catching up is driven in part by the mixed patterns within countries, showing that high-productivity regions can, but do not always, spur catching up across the economy.** Around three-quarters of these high-productivity regions are urban, but urban areas account for only one-fourth of those that are catching up. Assuming current growth rates, catching-up and high-productivity regions would not have the same productivity levels before 2050. For regions currently diverging, to close the gap in the same period, they would need to increase productivity growth to 2.8%, four times their current growth rate.

- **Among rural regions, those close to cities are more dynamic and resilient since the recent crisis as compared to rural remote regions.** Rural regions close to cities are home to more than 80% of the rural population and their income and productivity growth tend to be more similar to that of urban regions. Prior to the crisis (2000-07), over two-thirds of rural regions registered both productivity and employment growth. Since the crisis (2008-12), remote rural regions have not been able to bounce back in terms of employment and productivity.
- **Tradable sectors appear to be an important productivity driver for catching up in both urban and rural regions, despite their different growth dynamics.** Catching-up regions had a greater share of their economy in these tradable sectors (especially in services, manufacturing or resource extraction and utilities) and have increased that share over time to nearly 50% of their output, compared to only one third in diverging regions.
- **Good governance practices are also important for productivity performance.** High-productivity regions have higher scores in a European-wide survey on quality of government, and quality improved in the regions that were catching up. Good governance arrangements to manage public investments can reduce the productivity and inclusion penalties associated with fragmentation of local jurisdictions, particularly in metropolitan areas.
- **Interregional gaps are wider when considering multi-dimensional measures of living standards instead of income alone.** A measure combining income, health and employment reveals that some regions may suffer from multiple gaps in terms of well-being. Within cities, which bring together high- and low-skilled jobs ("bankers and baristas"), income inequalities are typically higher than at the national scale. Complementary policies are important to ensure that productivity growth benefits different social groups and places, including within cities themselves.

Key recommendations

There is no simple policy prescription to resolve these regional productivity and inclusion challenges, but several areas for public action may help boost productivity, inclusion, or both:

- **Structural reforms such as for labour and product markets need to be complemented with other place-specific policies to reap the full potential benefits.** Structural reforms can have different repercussions depending on the region. Tighter labour market restrictions, measured by indicators of employment protection, penalise rural regions with smaller labour markets more than cities. Improved transport options increase the effective size of a local labour market that can complement a particular labour market reform to increase its impact.
- **Regional development policies should focus on productivity drivers and growth in all regions through strategic investments, not mere subsidies.** However, as a share of government spending, public investment has declined over the past two decades from 9.5% to 7.7%. Boosting capacity of subnational governments, responsible for 59% of that investment, should be a higher priority. Investments that facilitate the diffusion of innovation and good practices across sectors and firms within and beyond a region are an opportunity to increase productivity. While in many countries policies seek to reduce gaps across regions, they should avoid stifling growth in the highest-productivity regions.

- **Urban development policies should consider how cites are linked together in a "system of cities" within a country.** Several countries report recent or upcoming changes to national urban policies. While these policies typically focus on reducing the social and environmental costs in cities, they can also consider the economic role of cities, their local and interregional links in a national system, and their capacity to generate innovation that should benefit the wider economy.
- **Rural development policies need an upgrade to "Rural Policy 3.0".** Progress has been made to move rural development approaches beyond farm supports to also recognise the diversity of rural regions and the importance of connectivity to dynamic areas. Rural Policy 3.0 puts the focus on enhancing communities' competitive advantages, through integrated investments and appropriate local services, and by encouraging local participation and bottom-up development.
- **For place-based policies, the governance arrangements to implement them (the "how") are critical.** Reforms of subnational government are undertaken in many countries to bring policy to the relevant scale or to achieve economies of scale for investments and service provision. Countries continue to experiment with better ways to manage regional development policy and public investments at all levels of government to join up public action across policy fields so as to leverage complementarities and address trade-offs.

PART I

The place-based dimension of productivity and inclusion

PART I

Chapter 1

Regional productivity gaps and their consequences

While there will always be some form of interregional gaps, those regions lagging behind should have opportunities to "catch up" in terms of social and economic development. This chapter considers the implications of the OECD trends of low levels of national labour productivity growth for different types of regions, including the differences between regions that are catching up to the "frontier" and those that are falling behind. It explores the dynamics of regions in the OECD and the extent to which certain regions are, or are not, catching up. It then addresses the implications of these trends for the well-being of people living in different cities and regions, as the regional and local level are at the nexus of productivity and inclusion. Finally, it outlines the three broad types of public action that can be used to boost productivity in lagging regions and address inclusion. They are: structural policies, public investment (including through regional development policies), and multi-level governance reforms.

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.

Key Messages

- While gaps in GDP per capita between countries have narrowed over the last two decades, within their own borders OECD countries are witnessing increasing gaps in GDP per capita between higher performing and lower performing regions. Leading cities and regions are increasingly competing with their global peers, rather than with others within national borders.
- The gap within countries between the top 10% regions with the highest labour productivity and the bottom 75% has grown on average by almost 60% over the last two decades, from USD 15 200 to USD 24 000.
- Three-quarters of "frontier" (highest productivity) regions in OECD countries are predominantly urban. Three-quarters of the regions that were catching up to their country's frontier regions between 2000 and 2013 are intermediate and rural regions.
- Tradable sectors emerge as a critical driver in regional catching-up dynamics, particularly tradable services, manufacturing and resource extraction and utilities. This is the case in both urban and rural regions, despite differences in their growth patterns.
- Productivity growth is important for well-being as it has a significant impact on income, jobs and consequently several other non-material well-being dimensions such as health. One in four people in the OECD lives in a region that is falling behind in productivity growth, and that figure can climb as high as eight in ten people depending on the country. In terms of opportunity, catching-up regions register greater drops than in regions falling behind in terms of unemployment levels and the share of 18-24 year-olds who are not employed, in education or in training (NEETs).
- Levels of well-being have improved across OECD regions on several indicators, however gaps have widened in many countries on some indicators. Interregional gaps in a multi-dimensional approach to well-being are even wider than for income alone. Complementary policies are important to ensure that productivity growth benefits different social groups and places, including within cities themselves.
- Actions to boost productivity and social inclusion include: *i)* structural reforms combined with place-based approaches; *ii)* public investment drawing on subnational governments as well as regional, urban and rural development policies; and *iii)* multi-level governance reforms. Good governance is associated with higher levels of productivity and catching-up dynamics. Less fragmentation of local governments is associated with better performance in terms of productivity and inclusion.

Introduction

To address both productivity growth and inclusion, countries need to mobilise the catching-up potential of regions. The goal of regional development policy is to ensure that different types of regions are able to thrive and offer a high quality of life for their residents. There are enormous differences in productivity levels across regions in OECD countries. Often, those differences are much larger than those across countries. These differences may be the result of geographic conditions and cities (agglomeration forces). Therefore, one

cannot expect that the gaps will entirely close over time, as it may happen with the process of convergence across countries. However, a productivity gap across regions always signals a potential for catching up. This "advantage of backwardness", as often coined in economics textbooks, simply means that a lagging region can copy, imitate or import many of the innovations and discoveries produced in the frontier regions and, in this way, boost its productivity and increase growth, without necessarily requiring more labour or capital.

Over the last several decades, many countries have tried different approaches to promote the catching up of those regions lagging behind. The term convergence is often used, but it may imply that the values of different regions or countries are growing closer, but not necessarily for the right reasons. The term "catching up" implies a more dynamic view of regional performance whereby lagging regions are growing faster. However, in some cases regions may be converging, but the "frontier" itself is not growing. Policies should promote the growth of lagging regions, while not cutting off the ability of leading regions to continue to be successful. This chapter therefore explores the implications of firm productivity trends on the productivity performance of regions and the characteristics of those regions that are catching up, or not. It then considers the implications for interregional and inter-personal differences in well-being and inclusion, before outlining three broad areas of public action to consider for addressing both productivity and inclusion.

The role for regions and place-based policies in boosting aggregate productivity

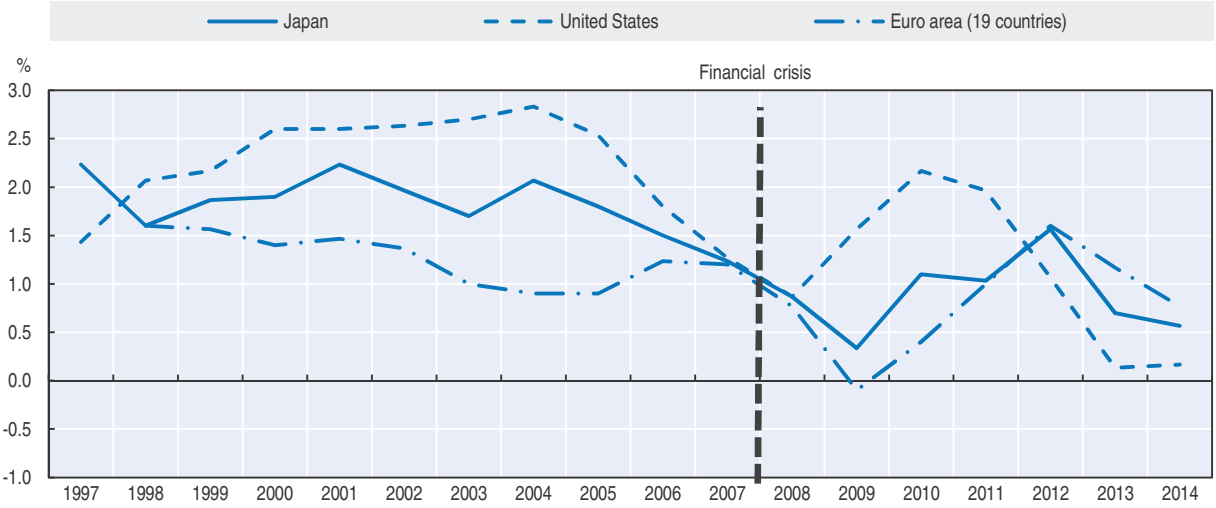
The productivity gap between frontier firms and the rest has widened

Labour productivity growth has been on a downward trend over the last fifteen years across the OECD. By 2000, there was a notable labour productivity growth gap between the United States, Japan and the Euro area (Figure 1.1). It peaked at nearly a 2 percentage point difference between the United States and the Euro area in the early 2000s. Europe's Lisbon Agenda was an attempt to address these trends, seeking to make Europe the most competitive knowledge-based society by 2010. However, starting in 2004, the United States joined Europe and Japan in their declining rates of labour productivity growth. Before the financial crisis, productivity in all major OECD economies was growing at approximately the same rate of around 1% per year.

Productivity experienced a temporary spike following the crisis, but its growth engine appears to be running out of steam in all major OECD economies. Crises are often processes through which unsustainable trends are stopped, such as over-investment or market price bubbles. It is therefore normal that, by disinvesting in declining productivity sectors and using these resources in more productive ones, average productivity tends to rebound after a crisis or during a recovery. The United States experienced a productivity rebound that peaked in 2010, given its flexible labour market permitting more rapid and deep labour reallocation across firms, sectors and places. Europe, with more rigid product and labour markets, did not peak again until a couple of years later. The same happened in Japan. However, the rebound in the United States was short-lived, and all three (United States, Europe and Japan) were back down to productivity growth levels of below 1% by 2014.

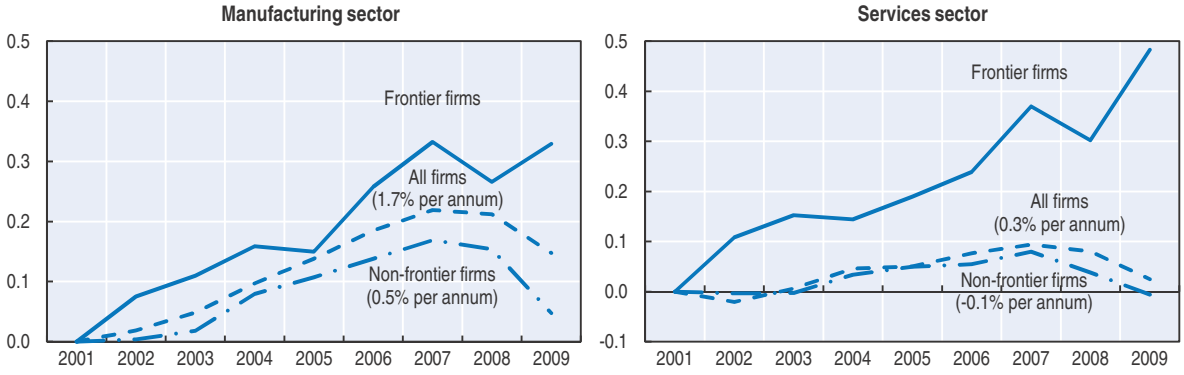
Recent OECD research on the "Future of Productivity" finds that the problem is not that all firms are experiencing slow productivity growth, but rather the diffusion of productivity from the top firms is not reaching the others (OECD, 2015a). A decomposition of productivity growth by type of firm shows that the top firms, those at the "frontier", show continued increases in productivity (Figure 1.2).[1] These findings are true for both manufacturing and service sectors. The service sector accounts for the bulk of the

Figure 1.1. **Labour productivity growth trending downward even before the crisis**



Note: Values represent three-year moving averages (t, t-1, t-2) of labour productivity (GDP per hour worked) 1997-2014. GDP refers to the gross domestic product, in USD, at constant prices, constant PPPs, OECD base year 2010. Total hours worked are derived for all persons as average hours worked from the OECD Employment Outlook, OECD Annual National Accounts, OECD Labour Force Statistics and national sources, multiplied by the corresponding and consistent measure of employment for each country.
Source: Calculations based on OECD (2016a), *Productivity Statistics* (database), *www.oecd.org/std/productivity-stats/* (accessed 17 March 2016).
StatLink http://dx.doi.org/10.1787/888933411597

Figure 1.2. **Productivity gaps between frontier firms and other firms are widening**
Labour productivity; index 2001 = 0



Note: "Frontier firms" corresponds to the average labour productivity of the 100 globally most productive firms in each 2-digit sector in the ORBIS database. "Non-frontier firms" is the average of all other firms. "All firms" is the sector total from the OECD STAN database. The average annual growth rate in labour productivity over the period 2001-09 for each grouping of firms is shown in parentheses.
Source: Andrews, D., C. Criscuolo and P.N. Gal (2015), "Frontier Firms, Technology Diffusion and Public Policy: Micro Evidence from OECD Countries", *OECD Productivity Working Papers*, No. 2, OECD Publishing, Paris, *http://dx.doi.org/10.1787/5jrql2q2jj7b-en*.
StatLink http://dx.doi.org/10.1787/888933411605

knowledge economy, and it displays the most dramatic productivity growth differentials at 5% per year for the top firms and 0.3% for all firms, with non-frontier firms actually showing negative productivity growth (-0.1% per year). Most of the contribution to aggregate labour productivity comes from the catching up of firms, sectors and regions. These findings may therefore explain why there has not only been an overall slowdown of labour productivity growth, but also why there are increasing inequalities (i.e. growth has been less inclusive).

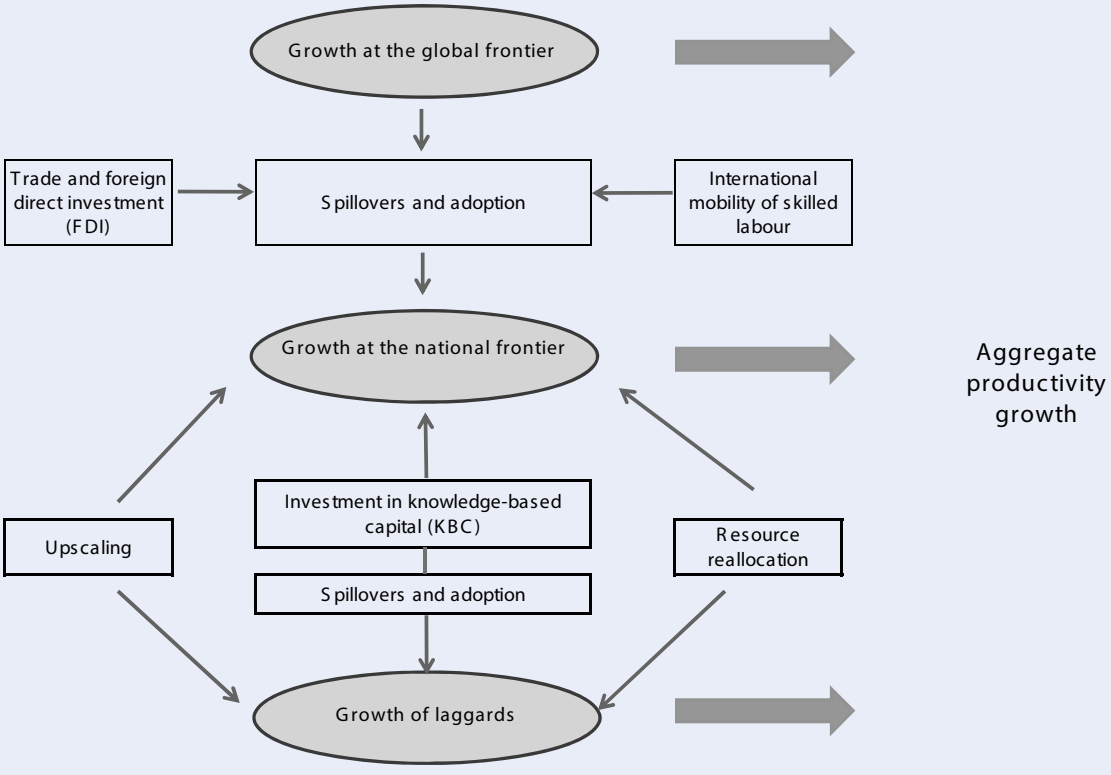
The full explanations for this diffusion challenge are still to be found (Box 1.1). They may include the "winner-takes-all" markets surrounding new technologies or the fact that replication of certain innovations has become more difficult. Firms need to have many different capabilities to succeed, such as technological capacity; capabilities in branding, marketing, and managing; being part of global value chains (i.e. importing intermediate products, exporting parts or final products); etc. For regions in countries, the emergence of global value chains may shift productivity spillovers from leading regions to foreign countries rather than other regions of the same country. Indeed, one of the characteristics of the current wave of globalisation is the possibility to disconnect the creation of knowledge from its use. Lagging regions in high-cost countries compete increasingly with regions that have similar capabilities in middle-income countries.

Box 1.1. **The global innovation "diffusion machine" for productivity**

According to recent OECD research, the productivity problem is not the lack of innovation on a global scale, but rather the performance of the rest of the economy to adopt new technologies and best practices. Indeed, as stated in Criscuolo (2015), "… the main source of the productivity slowdown is not a slowing in the rate of innovation by the most globally advanced firms, but rather a slowing of the pace at which innovations spread throughout the economy: a breakdown of the diffusion machine."

Why this process of diffusion may be more difficult during the current technological revolution (recently called digitalisation), than in the previous periods of major technical progress, is still a topic for much debate and research in economics. Both the global and national frontiers play a role in diffusion of innovation to other firms throughout the economy, as depicted in the figure below.

Stylised depiction of aggregate productivity growth



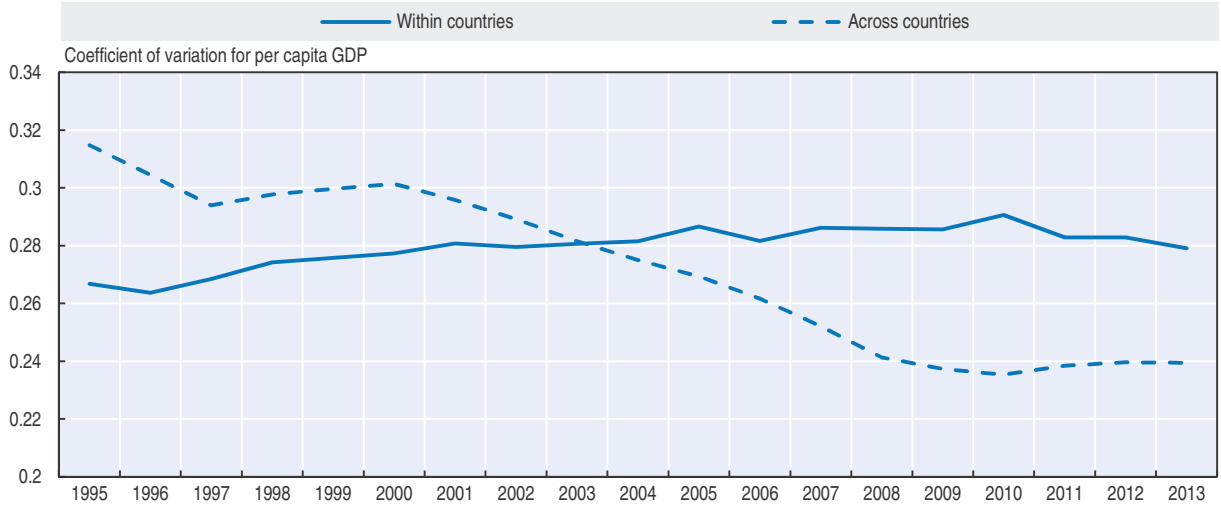
Box 1.1. **The global innovation "diffusion machine" for productivity** *(cont.)*

The shift in the global frontier can be transmitted to national frontiers through the mobility of production factors (capital and labour) and trade flows. Within countries, the investment in knowledge-based capital (KBC) and all actions favouring spillovers and adoption may facilitate the diffusion of the frontier innovations to lagging firms, sectors or regions. This process is facilitated by a macro-structural environment that supports, rather than hinders, the shift of resources across sectors and the upscaling of best productivity practices.

Source: Criscuolo, C. (2015), "Productivity Is Soaring at Top Firms and Sluggish Everywhere Else", Harvard Business Review, 24 August 2015, *https://hbr.org/2015/08/productivity-is-soaring-at-top-firms-and-sluggish-everywhere-else*; OECD (2015a), The Future of Productivity, *http://dx.doi.org/10.1787/9789264248533-en*.

The existence of persistent interregional disparities is not a new fact, but recent trends reveal greater differences within than across countries. As economic activities tend to concentrate in space, agglomeration economies (see later discussion) may create advantages leading to higher per capita GDP in urban regions over intermediate and rural regions. These disparities have been largely documented in the previous Regional Outlooks (OECD, 2011a, 2014a) and in OECD Regions at a Glance (OECD, 2016b). Economic disparities, measured in terms of per capita GDP, have slightly increased or remained stable, while there has been a steady reduction over the past decades of average disparities across countries (Figure 1.3). The same trend is found among metropolitan areas, as cities across the OECD are converging, while within countries, cities are diverging (Figure 1.4). The speed of convergence among the OECD countries' metropolitan areas is slightly faster than that of countries as a whole, pointing further towards the importance of large cities for their

Figure 1.3. **Country convergence has been accompanied by divergence of regions within countries**

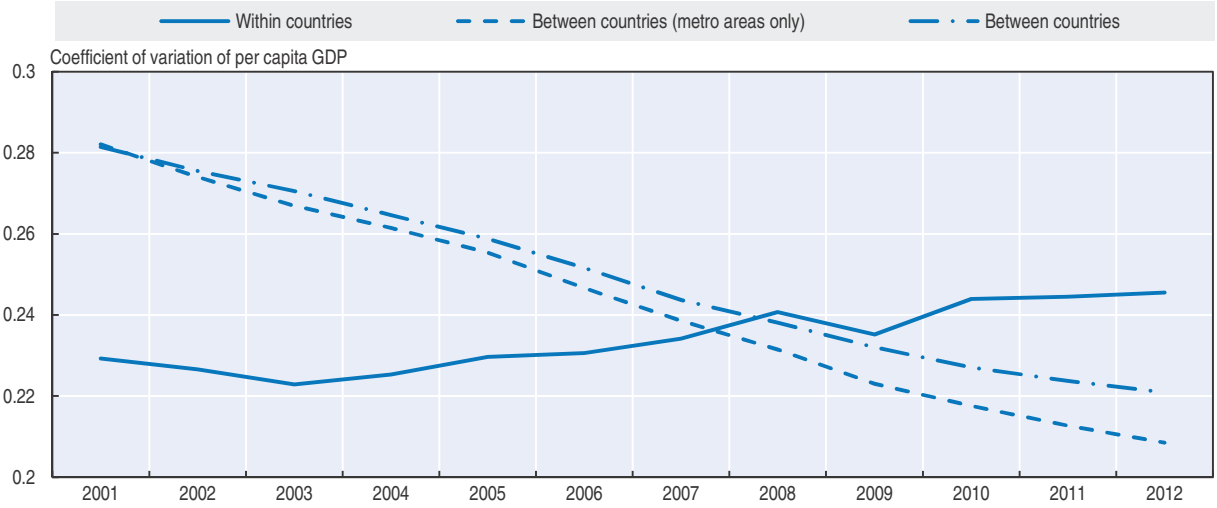


Note: Data refers to GDP PPP constant 2010 USD from the national accounts and the regional accounts; the disparity between countries is measured as the coefficient of variation of national GDP per capita across all countries in the sample; the disparity within countries is measured as the coefficient of variation of regional GDP per capita across regions within each country, and then is averaged across all countries. Data for 1995-2013. Countries included: Australia, Austria, Belgium, Canada, Chile, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, Netherlands, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom, and the United States (District of Columbia is excluded).

Source: Bartolini, D., H. Blöchliger and S. Stossberg (2016) "Fiscal Decentralisation and Regional Disparities", *Economics Department Working Paper* (forthcoming).

StatLink *http://dx.doi.org/10.1787/888933411619*

Figure 1.4. **As metro areas across countries converged, metro areas within countries diverged**



Note: Data refer to per capita GDP PPP constant 2010 USD; the disparity between countries is measured as the coefficient of variation of national per capita GDP across all countries in the sample, between countries (metro area only) disparity is measured by the coefficient of variation for the country average of metro area per capita GDP; the disparity within countries is measured as the coefficient of variation of metro area per capita GDP across metropolitan areas within each country, which is then averaged across all countries. Data for 2001-12. Countries included: Australia, Austria, Belgium, Canada, Chile, Czech Republic, France, Germany, Italy, Japan, Korea, Netherlands, Poland, Spain, Sweden, United Kingdom and the United States.

Source: Calculations based on OECD (2016c), "Metropolitan areas", *OECD Regional Statistics* (database). *http://dx.doi.org/10.1787/data-00531-en* (accessed 20 June 2016).

StatLink *http://dx.doi.org/10.1787/888933411622*

national economies. The international links of these cities in the knowledge economy, combined with the international mobility of financial capital and of highly-skilled workers, also mean that large metropolitan areas have to adapt to competition at the global level.

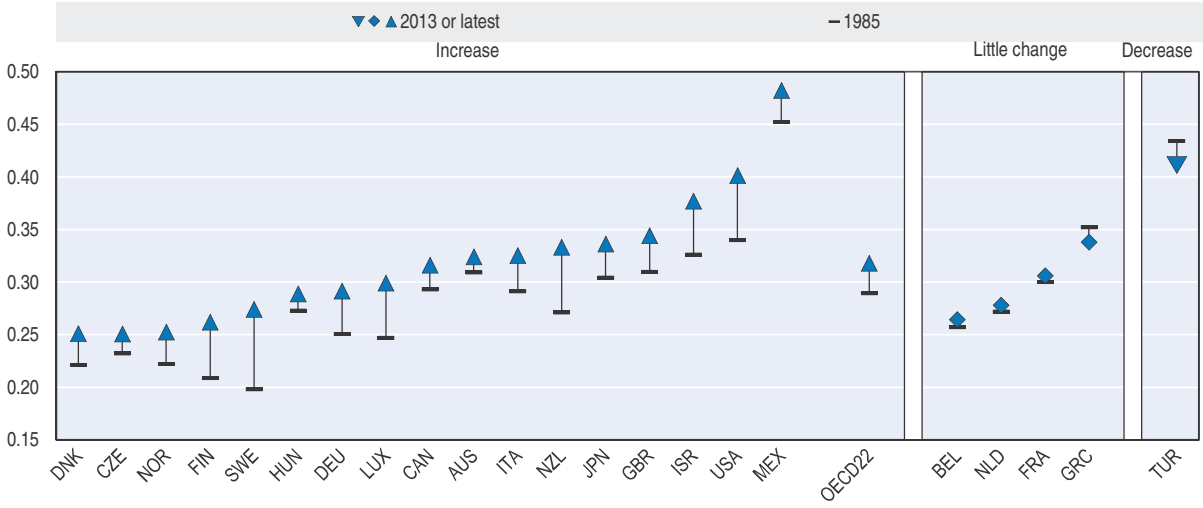
Growing inequality across regions is mirrored by growing inter-personal income inequality in most countries. Since 1985, income inequality across households, measured as the Gini coefficient of disposable household income, has decreased in only 1 out of 22 OECD countries with available long-term data (Figure 1.5).[2] In four more countries, inter-personal inequality changed only marginally. The majority of countries, as well as the OECD average, experienced a significant increase in income inequality. Aggregate inequality hides strong growth in the disparity between the top and the bottom of the income distribution. The recent crisis amplified the growing gap in some countries. In Spain, for instance, incomes of the poorest 10% dropped by almost 13% per year, compared to a drop of 1.5% for the richest 10%. In about half of the countries where incomes continued to grow, the gap nevertheless widened as the top 10% did better than the bottom 10%. In some countries, including Austria, Denmark, and the United States, top incomes grew, while bottom incomes declined in real terms (OECD, 2015b).

The regional "catching-up machine" needs to be fixed

Regions with lower GDP per capita in their countries are not sufficiently benefiting from their catching-up potential. While the absolute convergence of regional per capita GDP and productivity is not an aim in itself, the fact that many "lagging" regions are not catching up indicates an untapped growth potential. Despite the overall increase of regional disparities across the OECD, in terms of per capita GDP, some convergence forces were at work in intermediate and rural regions during the period 1995-2007.[3] In other words, those categories of regions with lower initial levels of per capita GDP experienced higher growth

Figure 1.5. **Income inequality increased in most OECD countries, but the crisis halted the trend in some countries**

Gini coefficients of income inequality, mid-1980s and 2013 (or latest date available)



Note: "Little change" in inequality refers to changes of less than 0.015 points in the Gini coefficient.
Source: OECD (2015b), *In It Together: Why Less Inequality Benefits All*, *http://dx.doi.org/10.1787/9789264235120-en* based on OECD (2016d), *Income Distribution (IDD)* (database), *www.oecd.org/social/income-distribution-database.htm*.

StatLink *http://dx.doi.org/10.1787/888933411632*

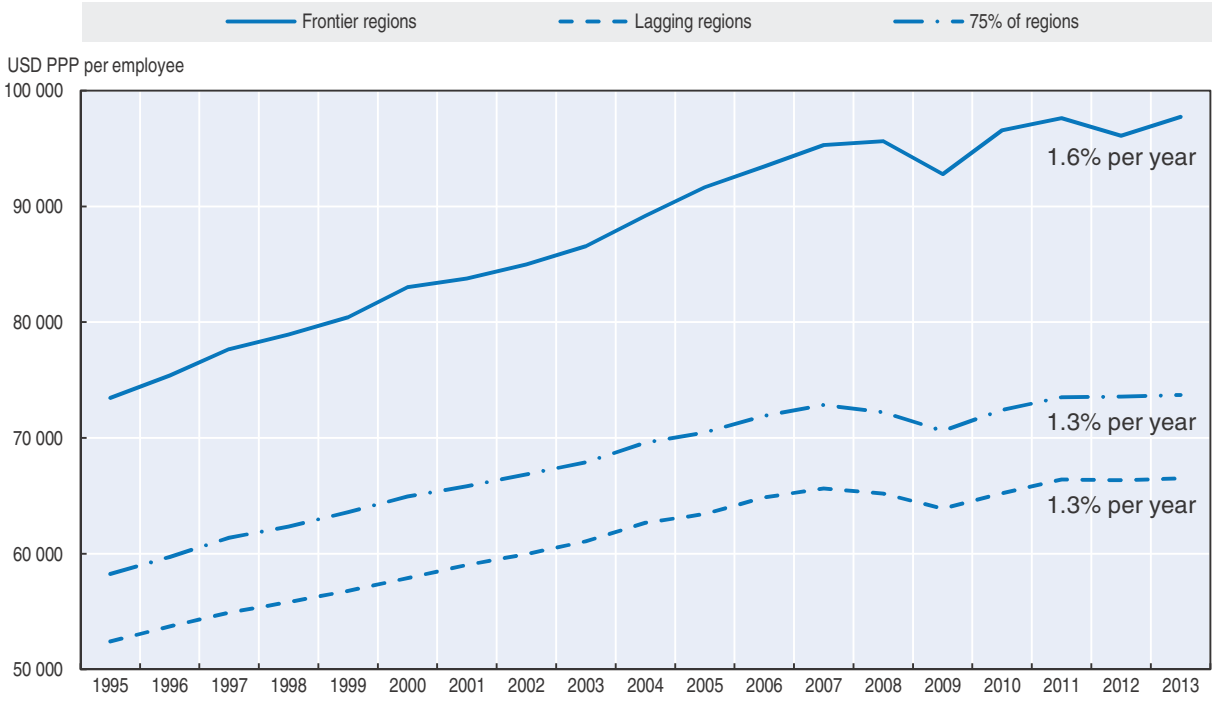
rates. In urban regions two different types of dynamics were observed: i) there was a catching up of lagging urban regions in some cases (convergence forces), while ii) certain leading regions experienced higher growth rates (agglomeration forces) (OECD, 2011a).

The crisis appears to have stalled interregional catching up. With the recent crisis, these regional convergence trends appear to have broken down (OECD, 2014a). The slowest growing regions (in terms of per capita GDP) experienced low growth rates in productivity and in labour utilisation that have hindered the catching-up process (OECD, 2016b). In contrast, labour productivity has continued to be the main driver of per capita GDP growth for the 50 fastest growing OECD regions. In 41 out of the top 50 regions, labour productivity growth accounted for 75% or more of the rise in per capita GDP during the period 2000-13.

The productivity gap between the "frontier" regions and the majority of other regions has widened over the last two decades. From 1995 to 2013, labour productivity (as measured by per worker GDP)[4] across the OECD grew by 1.6% per year among those "frontier" regions with the highest labour productivity (Box 1.2). The lagging regions at the bottom of the labour productivity distribution fell further behind the frontier as productivity grew by less than 1.3% per year.[5] While the difference (0.3% per year) may not seem high, over time, these productivity growth differentials have translated into substantial gaps. Over the last two decades (1995-2013), the gap widened by almost 50%, from USD 21 000 to USD 31 000 PPP per worker. However, it is not only the lagging regions that experienced lower growth rates, as productivity in the bottom 75% of regions (i.e. in the vast majority) also grew by only 1.3%, which widened the gap between the top 10% and the bottom 75% regions by nearly 60% (from USD 15 200 to USD 24 000) (Figure 1.6). In other words, the problem seems to be the lack of catching up, rather than a lack of growth in the frontier. The leaders are breaking away from the pack. This trend is consistent with the findings of the aforementioned OECD study on the "Future of Productivity" (OECD, 2015a).

Figure 1.6. **Productivity growth of frontier regions in a country outpaces that of most other regions**

Averages of top 10% (frontier), bottom 75%, and bottom 10% (lagging) regional GDP per employee, TL2 regions



Note: Average of top 10% and bottom 10% TL2 regions, selected for each year. Top and bottom regions are the aggregation of regions with the highest and lowest GDP per employee and representing 10% of national employment. Due to lack of regional data over the period, only 19 countries are included in the averages. GDP per employee in constant PPP and constant prices 2010 USD.

Source: OECD (2016b), *OECD Regions at a Glance 2016*, *http://dx.doi.org/10.1787/reg_glance-2016-en*.

StatLink http://dx.doi.org/10.1787/888933411648

Box 1.2. **Defining the productivity frontier**

Productivity measures how much can be produced with a given amount of inputs, i.e. capital and labour. Improvements in productivity therefore mean that more can be produced with the same inputs or the same amount of output can be produced with fewer inputs. For example, a delivery driver does not become more productive by working an additional hour, but rather by optimising the delivery route to finish in a shorter amount of time, which allows for additional deliveries without working more hours. In other words, it means working smarter, not working more.

Raising productivity is essential for long-term growth and increases in living standards. Capital investment and improvements in human capital (e.g. through raising educational attainment) can create growth, but returns to investment are typically decreasing, i.e. each additional increase yields a smaller benefit than the previous investment. This is why the Nobel Prize winning economist Paul Krugman famously remarked: "Productivity isn't everything, but in the long run it is almost everything. A country's ability to improve its standard of living over time depends almost entirely on its ability to raise its output per worker." (Krugman, 1997).

The labour productivity "frontier" captures the potentially attainable productivity level of a region. "Potentially attainable", as of course many factors, such as the sectoral composition, geographic characteristics and the distance to markets all influence the ability for a region to reach that frontier potential, at least in the short term. The frontier is based on observed levels of productivity in the most productive region(s) in each country. The focus on the within-country frontier (rather than a global frontier)

Box 1.2. **Defining the productivity frontier** *(cont.)*

accounts for institutional and country-level differences that might affect the productivity potential. The frontier is defined by the productivity level in the most productive region(s) in a country accounting for 10% of the country's total employment. This option was chosen to ensure that the frontier in any country did not represent only one region with a small population size. In some countries, therefore, the calculation of the frontier is the weighted average (based on employment) of more than one region. The region(s) that form the frontier can change over time. To ensure that the group of "frontier regions" is not affected by time-dependent outliers, only regions that contribute a non-negligible percentage of their employment for several years during the 2000-13 period are labelled as "frontier regions".

The discussion in this chapter focuses on labour productivity measured as real gross domestic product (GDP) per employee. There remains room to improve the measurement of labour productivity at the subnational level. Typically labour productivity is measured in terms of hours, rather than in terms of the number of employees. This measure takes into account productivity improvements that allow for the reduction in the time each employee spends at work. Differences between the two measures arise when there is a high incidence of part-time employment, such as in Germany or the Netherlands, or low statutory hours, such as in France (OECD, 2016e). But estimates for the total number of hours worked are often unavailable at the subnational level. As regions in this chapter are compared to their national frontier, cross-country differences (such as statutory hours) should not affect the analysis. A similar issue arises for subnational price indexes. Typically only national level price deflators are available and used to calculate real GDP at the regional level. This result can confound price changes with productivity changes if a region's sectoral specialisation differs strongly from the national average. Price fluctuations that disproportionately affect some regions can erroneously be measured as changes in labour productivity. For the most part, the measurement error should be minor, but could be relevant for small and resource-intensive regions. In some cases, industrial level price deflators can be used to alleviate the potential error (e.g. when considering real gross value added by sector), but these are not consistently available for all OECD countries.

Source: Krugman, P. (1997), *The Age of Diminished Expectations: U.S. economic policy in the 1990s*, 3rd edition, MIT Press; OECD (2016e), *OECD Compendium of Productivity Indicators 2016*, *http://dx.doi.org/10.1787/pdtvy-2016-en*.

A region's productivity growth does not automatically benefit from strong frontier performance

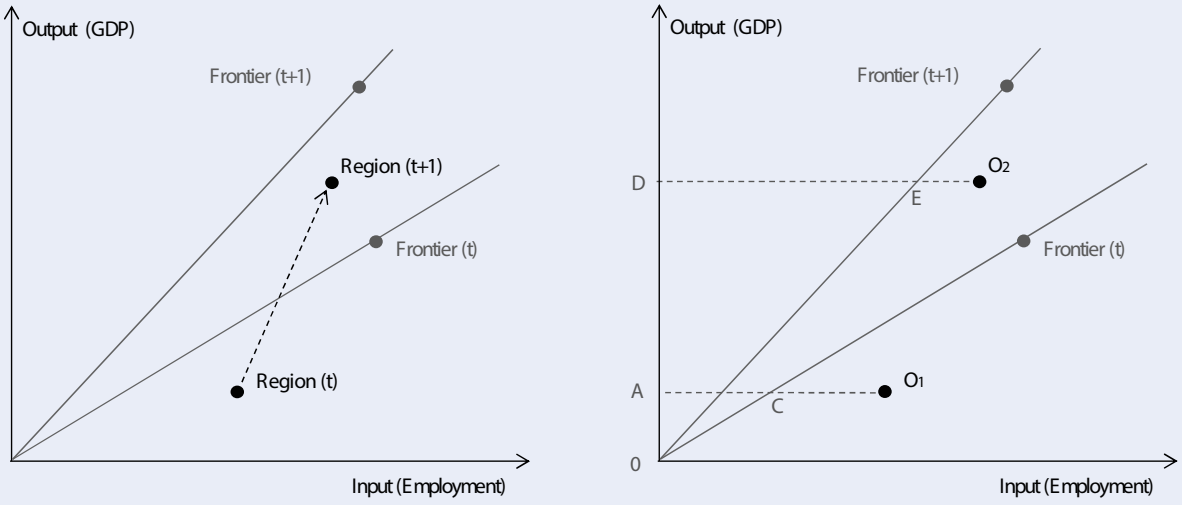
Despite the widening average gap between the frontier and the bottom distribution of regions across the OECD, many regions are still catching up *vis-à-vis* their country-specific frontier. A specific indicator was computed to measure this within-country convergence effect. It is based on the Malmquist Index (see Box 1.3) and generalises the idea that a region needs to grow faster than the national frontier to reduce its productivity gap. Using this indicator, regions can be classified as those that are catching up (converging) and those that are falling further behind (diverging) (Figure 1.7, Table 1.A1.1). Furthermore, this productivity growth performance can be decomposed into a "frontier" and a "catching-up" effect. If productivity growth rates do not change, catching-up regions will not be able to close the gap to their frontier, on average by 2050. But without a change, this also means that during the same period diverging regions will have fallen to about 50% of the productivity in the frontier. To close the gap in the next 34 years, diverging regions would need to outgrow their frontier by about 1.2 percentage points. Put differently, the average labour productivity growth in diverging regions would need to increase to 2.8% per year, quadruple the current rate.

Box 1.3. **How to measure regional catching up**

A simple and often used way to measure the performance of a given region is to assess whether it grows faster than the country average. However, this measure can be quite misleading. Ultimately, the "frontier", i.e. the most productive region, sets a precedent for the potential levels of productivity that regions can achieve. Suppose that in many regions productivity grows slowly, but the most productive region is outperforming, the average might indicate that there is general convergence, but regions are de facto diverging from the frontier. The right measure of performance in this case is whether there is any region growing faster than that frontier, potentially benefiting from innovations produced there.

A concise measure for the "catching up" of a region is the ratio between its own productivity growth and the productivity growth in the country's frontier. The ratio measures by how much the "gap" between the frontier and the region has narrowed (or widened). Assuming that both regions produce with constant returns to scale, i.e. a doubling of inputs leads to a doubling of output, the "gap" has two interpretations. It captures how much more the frontier region would produce with the same input as the other region, and the inverse captures how much less factor inputs the frontier would have required to produce the same amount of output as the other region. The narrowing of the "gap" and therefore the concept of convergence or "catching up" towards the frontier can be computed as illustrated in the figure below.

Schematic representation of regional catching-up dynamics



Assume that regional GDP is produced with employment only. In period t, a given lagging region is below the frontier, as displayed in the left panel. In the next period (t+1), both the frontier and the lagging region move upwards on the chart, increasing their productivity. If the lagging region is catching up, the distance between the frontier and the lagging region is smaller in period t+1. The productivity gap can be measured in two ways: i) productivity increased by increasing output, maintaining the same level of employment (output-oriented), or ii) the same level of output was obtained with less employment (input-oriented). If one assumes a linear frontier (in other words, if the technology exhibits constant returns to scale) both measures are equivalent. With constant returns to scale, this "catching up" of a region is also equivalent to the Malmquist Index (cf. Malmquist, 1953 and Caves, Christensen, Diewert, 1982) and can be computed as follows (right panel of the figure):

$$CU = \frac{DE}{DO_2} / \frac{AC}{AO_1}$$

Box 1.3. **How to measure regional catching up** *(cont.)*

When the index CU is bigger (smaller) than 1, the region is catching up to (diverging from) the frontier. Given that the shift in the frontier corresponds to the change in the slope from 0C to 0E, the increase in productivity of the region can be decomposed as:

1 + regional productivity growth = (1 + productivity growth of the national frontier) x CU

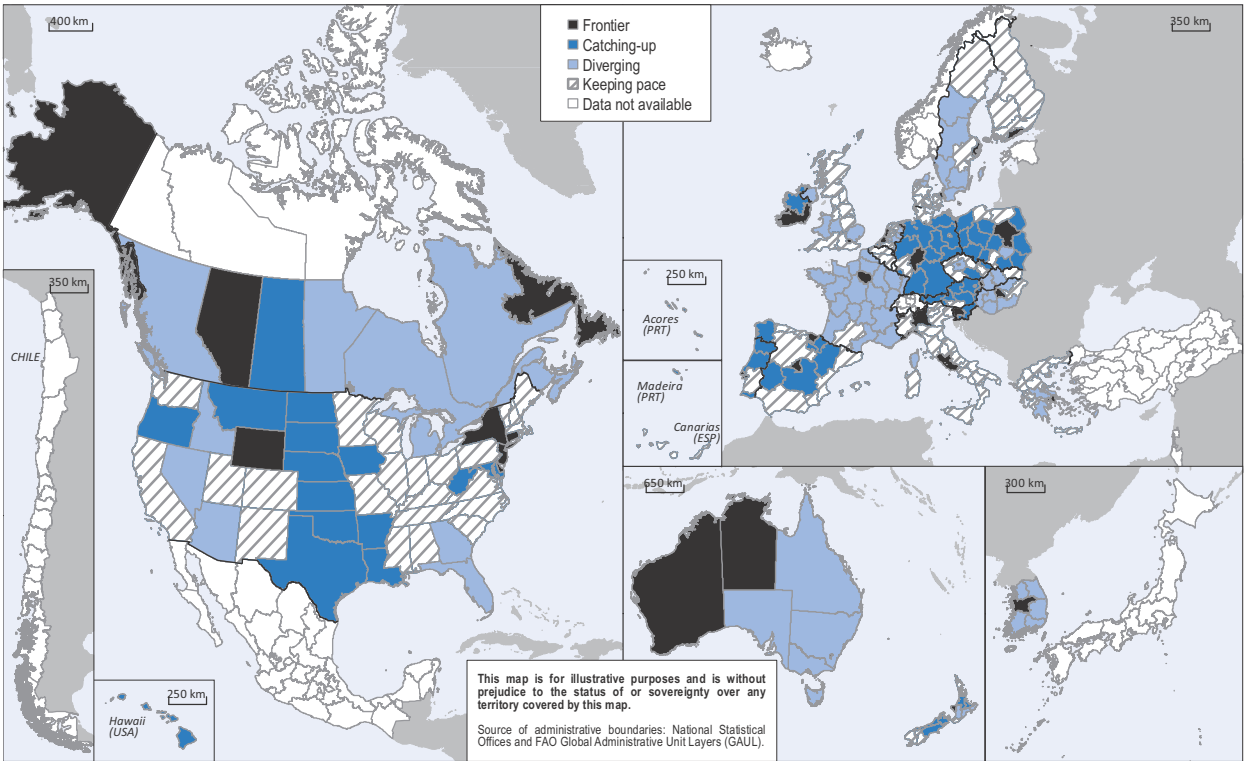
Taking the natural logarithm on both sides of the equation then results in a sum with each term measured in percentages.

These calculations are then used to derive the categories of regions based on their productivity performance. To avoid threshold effects around the value of 1 for the catching-up indicator, "catching-up regions" are defined as outgrowing the frontier by 5 percentage points and "diverging regions" as growing more slowly than the frontier by at least 5 percentage points between 2000 and 2013, i.e. the catching-up regions correspond to a Malmquist index of 1.05 or higher and the diverging regions to an index of 0.95 or less. Keeping-pace regions are those that had an indicator value of between 0.95 and 1.05.

Source: Elaboration based on Malmquist, S. (1953), "Index Numbers and Indifference Surfaces", *Trabajos de Estatistica*, Vol. 4, pp. 209-242 and Caves, D., W.L. Christensen and E. Diewert (1982), "Multilateral Comparisons of Output, Input, and Productivity Using Superlative Index Numbers," *Economic Journal, Royal Economic Society*, Vol. 92(365), pp. 73-86.

Figure 1.7. **Patterns of catching up and divergence differ across countries**

Classification of TL2 regions according to their labour productivity growth relative to their country's frontier, 2000-13



Note: The classification of regions is outlined in Boxes 1.2 and 1.3. The period covered is 2000 to 2013 (or closest available year) and countries included are Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Korea, Netherlands, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom and United States. For New Zealand TL3 regions and for Belgium, 10 provinces and the capital city region instead of TL2 regions are used. Exclusions of OECD countries are due to missing data or due to data only being available for a single region.

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 30 May 2016), using national boundaries provided by National Statistical Offices and FAO Global Administrative Units Layer (GAOL).

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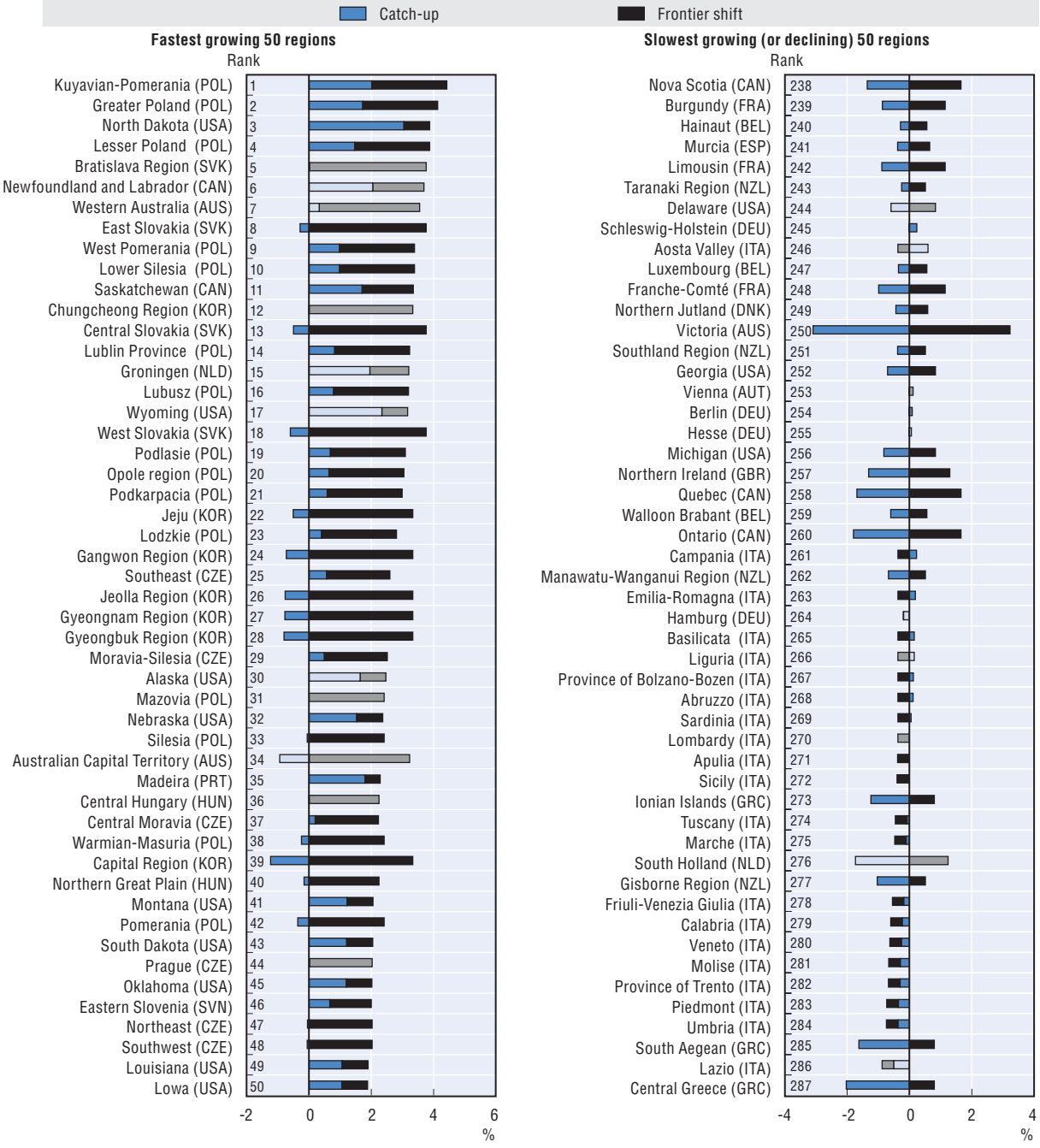
Regions with high productivity growth are located in countries with fast-growing frontiers. The productivity growth of the top 50 regions across the OECD is decomposed between the effect of the national frontier shift and the catching-up dynamics (Figure 1.8). Most of the regions with high productivity growth rates have benefited from the potential pulling effect of the frontier region(s) to which they have converged. Many Polish regions, for example, experienced strong productivity growth alongside the strong growth of the country's frontier. Only in Portugal and the United States is the frontier effect relatively small. In contrast, for the bottom 50 regions, most of their poor productivity performance is the combined result of a low performance of the national frontier region(s) and the lack of catching up. The notable exceptions are regions in the bottom 50 from Canada, Australia and the Netherlands that performed poorly due to the lack of catching-up effects. What unifies these regions is that the part of the frontier growth in productivity is driven by regions that are relatively specialised in resource extraction. Without an endowment in similar resources, imitation and adoption of frontier technologies is likely to yield lower returns in other regions since they require a transfer across sectoral boundaries. For example, optimisation of supply chain management in the mining sector, might be transferable to manufacturing, but likely not to its full extent and other innovations, e.g. a new drilling technology, might benefit an even smaller group of sectors in other regions.

However, a region's productivity growth does not automatically benefit from strong frontier performance. Considering the top 50 and bottom 50 regions in terms of catching up to their country's frontier, there are examples of strong catching-up dynamics that are supported by a strong frontier, such as in Poland and the United States (Figure 1.9). But there are also cases of regions catching up in countries where the frontier regions are underperforming and the region grows at a moderate pace, such as in Germany or Austria. Importantly, several Spanish and Portuguese regions are among the top 50 catching-up regions, defying the weak aggregate growth in their countries. This is contrasted by Greece, where most regions are slowly falling behind their frontier and two regions (Central Greece and South Aegean) are among the 10 fastest diverging regions. The bottom 50 regions also include those in Canada and Australia, where transfers from the frontier are less direct than in other countries. Examples of some of the catching-up regions are described in Box 1.4.

Rather than curtailing the performance of the high productivity (frontier) regions, policies should aim to encourage diffusion. The large share of French regions among the bottom 50 stands out: 12 of the 22 French regions are among the fastest diverging regions in the OECD. In contrast, only 2 of the 12 UK regions are part of the bottom 50, despite similar productivity growth in Greater London (1.3%) and Île de France (Paris, 1.15%). Nevertheless, the productivity gap between Greater London and Wales is 1.6 times the size of the gap between Île de France and Limousin. Both cases show how important it is to consider the system of regions when analysing and designing policies for regional convergence. Ensuring that the frontier regions play fully their role and continue to perform should be part of any strategy to promote catching up among the lagging regions. However, it is unlikely that catching up happens automatically. Unlocking catching-up potential requires policies that facilitate the diffusion of innovation and support regional development in general (see Chapter 2).

Figure 1.8. **The top 50 OECD regions for productivity growth tend to be in countries with a strong frontier**

Top 50 and bottom 50 regions in the OECD in terms of productivity growth by source, 2000-13



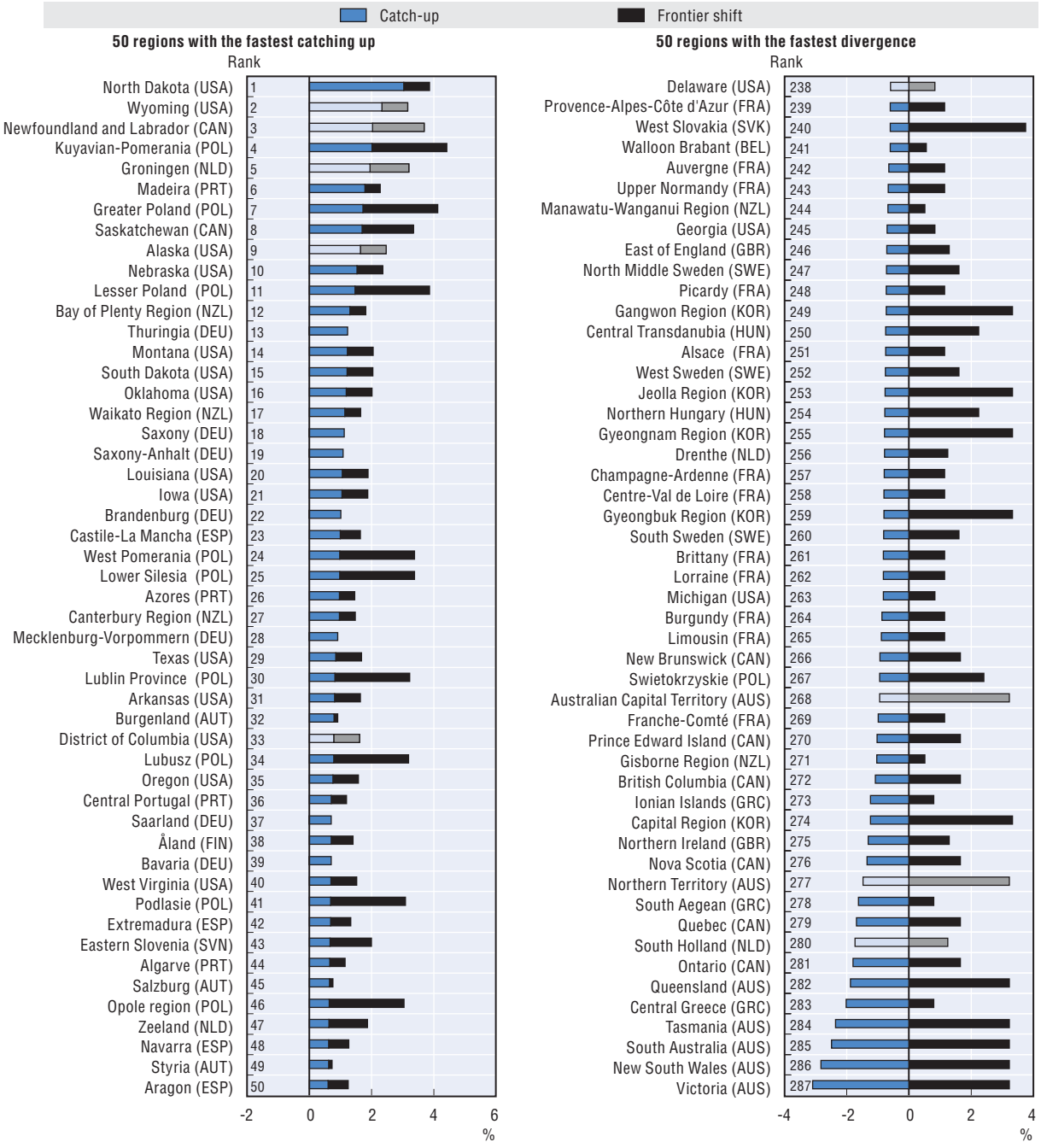
Note: Lighter coloured bars indicate regions that are part of their country's labour productivity frontier (see Box 1.2 for a detailed description). The productivity growth is decomposed into a frontier-shift and a catching-up effect (see Box 1.3 for details). In some countries, the frontier consists of more than one region. In those cases, frontier regions can catch up or diverge from the (composite) frontier if they grow faster or slower than the other frontier regions.

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

StatLink http://dx.doi.org/10.1787/888933411666

Figure 1.9. **The frontier does not necessarily stimulate catching-up dynamics in all regions**

Top 50 and bottom 50 regions in the OECD in terms of catching up and divergence, 2000-13



Note: Lighter coloured bars indicate regions that are part of their country's labour productivity frontier (see Box 1.2 for a detailed description). The productivity growth is decomposed into a frontier-shift and a catching-up effect (see Box 1.3 for details). In some countries, the frontier consists of more than one region. In those cases, frontier regions can catch up or diverge from the (composite) frontier if they grow faster or slower than the other frontier regions.

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

StatLink http://dx.doi.org/10.1787/888933411674

Box 1.4. **Catching up regions: Examples from Poland and Spain**

Productivity in Poland has increased rapidly between 2000 and 2013. Among the fastest growing TL2 regions is *Małopolska Voivodeship* ("Lesser Poland") and its main city Krakow, the third largest metropolitan area in Poland (OECD, 2016c). Labour productivity in the region grew by nearly 4% per year, which was supported by a fast growing frontier (2.4%). Many factors contribute to the successful growth in Lesser Poland, but two factors stand out.

First, the sectoral structure is gradually shifting towards higher value-added activities in the tradable sector. By 2012, the share of employment in agriculture fell to less than half of the share in 2000 and the contribution of manufacturing and tradable services increased. Manufacturing plays a less important role in this shift than in other Polish regions. Instead IT and business services have been rapidly expanding in the region. Employment in the sector increased by 19% per year from 16 000 to 38 000 employees in 102 major IT and business service centres in Krakow alone (ASPIRE, 2015).

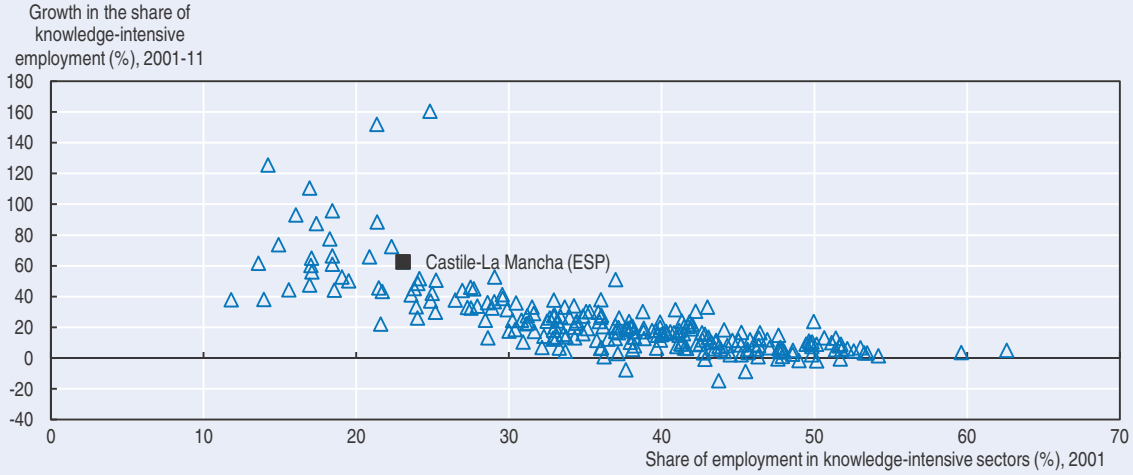
The second factor is the role of educational institutions in the region. The vocational school system in the region is leading across Poland in terms of achieving the highest results in professional examinations in Poland (OECD, 2013a). But, it is the university system that stands out for research and innovation. Lesser Poland's R&D expenditure rate was 1.3% in 2013, higher than the Polish average and the second highest rate in the country. More than one-third of the total expenditure comes from the higher education sector, which used to be the main major contributor. Since 2012, business expenditure on R&D caught up to the same level as R&D in higher education and the two account for about 80% of the total (OECD Regional Statistics database). The higher education sector also accounted for more than 70% of funding allocated to projects in the region from the European Union's 7th framework programme for European Research and Technological Development (EC JRC IPTS, 2015).

Labour productivity in Castile-La Mancha, a rural Spanish region in the centre of Spain that surrounds Madrid to the east and south, grew by 1.6% per year between 2000 and 2013. While overall productivity growth was significantly slower than in Poland, the "catching up" to the Spanish frontier was fast, at an annual rate of about 1% (compared to 1.5% in Lesser Poland). As in most rural areas, agriculture plays an important role, but the contribution and growth of manufacturing and services stands out compared to other parts of Spain and Europe. The concentration of traditional manufacturing (in particular textiles, food and beverages and products for the house) was a strong driver of growth in the 1990s. Out of 52 industrial districts in rural areas in Spain, 32 were located in the region and the employment growth in these clusters added 57 000 jobs between 1991 and 2001 to the regional economy (OECD, 2009).

Since the 2000s there has been a shift away from traditional manufacturing and the service sector has gained momentum. Between 2001 and 2011, the share of employment in knowledge intensive services increased by more than 60%, one of the fastest expansions of the sector across Europe, albeit starting from one of the lowest levels of concentration (23%) in 2001 (see the figure below). The shared border with Madrid (part of Spain's productivity frontier, together with the Basque country) creates the potential for significant spillovers. The fastest productivity growth within Castile-La Mancha occurred in Guadalajara, where the western part of the region is part of the OECD metropolitan area of Madrid. But direct connections are not the only factor that supports growth in labour productivity, Albacete was the second fastest growing TL3 region within Castile-La Mancha and it is also the part of Castile-La Mancha that is the furthest away from Spain's capital city (OECD Regional Statistics database).

Box 1.4. **Catching up regions: Examples from Poland and Spain** *(cont.)*

Castile-La Mancha has one of the fastest growing knowledge-intensive service sectors in Europe



Source: Calculations based on Boix, R. (2014), *Background report: OECD Territorial Review of Bergamo*, mimeo and EUROSTAT (2014), *Structural Business Statistics – Regional Data – All Activities* (database), EUROSTAT.

StatLink http://dx.doi.org/10.1787/888933411680

Source: Elaboration based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 30 May 2016); OECD (2016c), "Metropolitan areas", OECD Regional Statistics (database). http://dx.doi.org/10.1787/data-00531-en (accessed 20 June 2016); ASPIRE (2015), "ASPIRE Headcount Tracker, 2015", *www.aspire.org.pl/ht2015/*; EC JRC IPTS (2015), *Stairway to Excellence – Facts and Figures: Małopolskie*, Institute for Prospective Technologies, Joint Research Centre, European Commission; Perek-Białas J., C. Martinez-Fernandez and T. Weyman (2013), "Malopolska Region Demographic Transition: Working for the Future", *OECD Local Economic and Employment Development (LEED) Working Papers*, No. 2013/06, *http://dx.doi.org/10.1787/5k4818gwg2jk-en*; Boix, R. (2014), *Background report: OECD Territorial Review of Bergamo*, mimeo; EUROSTAT (2014), *Structural Business Statistics – Regional Data – All Activities* (database), EUROSTAT; OECD (2009), *OECD Rural Policy Reviews: Spain 2009*, *http://dx.doi.org/10.1787/9789264060074-en*.

Different forms of proximity may facilitate diffusion of innovation from the frontier to increase productivity, such as geographic and technological proximity. For example, recent work finds that GDP per capita growth in regions[6] is higher in regions within short drives from large metropolitan areas (Ahrend and Schumann, 2014a). The benefit declines by about 0.3 percentage points of annual GDP per capita growth with each doubling of the time it takes to access the metro area. But, distance is not only physical distance, sectoral distance can be a hindrance as well. There are many forms of proximity relevant to the innovation process in firms (Boschma, 2005). There is also a large amount of literature on the role of spatial proximity in innovation diffusion, typically referring to knowledge spillovers with respect to a concentration of firms (often in the same sector), human capital characteristics, R&D activities, or patents and patenting citations.[7] General purpose technologies, including ICT, are able to boost productivity across sectors, facilitating innovation diffusion (Box 1.5) and inventions in one area can be adopted for others, such as the use of drones in agriculture. However, product innovations in high-tech and medium-high-tech firms are often complex and require a variety of specialised skills. Even the adaption of these innovations might not be straightforward and replication more complex than in the past (as discussed above). Taking again the case of Canada and

Australia, the more limited impact of the frontier may be related to such factors. In both cases, the frontier regions in those countries are relatively specialised in mining, gas or oil production which may limit the transmission of productivity benefits. In addition, the economic centres of frontier regions are located far from other regional centres.

Box 1.5. **ICT: Spillovers across sectors to boost productivity**

The gains from ICT innovation are not limited to the ICT sector. More "traditional" sectors such as manufacturing are also absorbing innovations and are contributing to overall productivity gains while also innovating themselves. What do these innovations look like? In the manufacturing sector, a leading utility vehicle maker is incorporating new technologies and processes into its products. It is integrating sensors in existing equipment, which will help farmers reduce the downtime of their equipment, leading to more efficient use. Also, by synchronising tractors with GPS technology, the firm enables productivity increases and fuel savings due to better pathfinding. Other innovations allow better monitoring and tailoring of agricultural practices, leading to better use of resources and higher crop yields.

This example shows how some innovations are not limited to some sectors, but rather spillover into other sectors to boost productivity. ICT technologies improved products essential to agricultural production, improving productivity in the primary sector, linking services to manufacturing and finally agriculture. This only works, however, with sufficient absorption capacity. Firms and employees from various sectors need to have the skills and the institutional setup enabling them to make the most of new technologies.

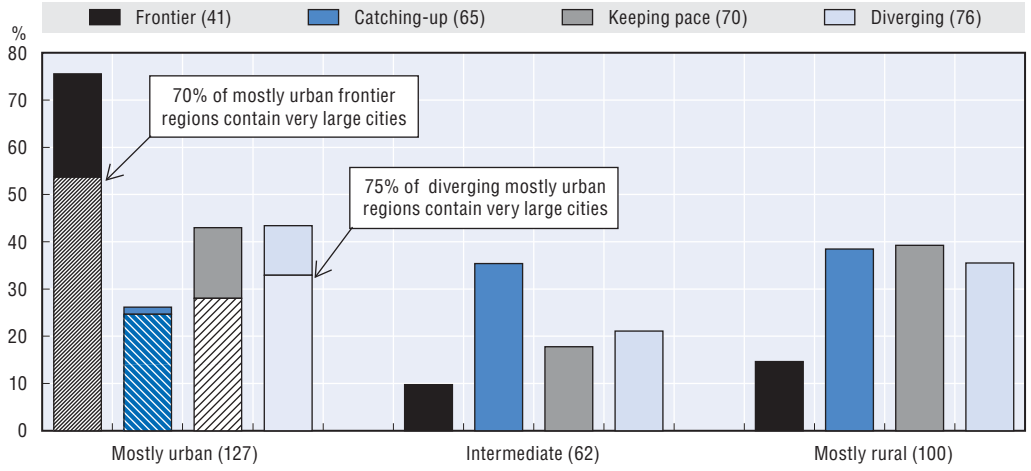
Source: OECD (2015c), *Data-Driven Innovation: Big Data for Growth and Well-Being*, *http://dx.doi.org/10.1787/9789264229358-en*.

Drivers of growth and catching up are different in urban and rural areas

The productivity frontier is mostly urban. Three-quarters of the most productive regions in the 24 OECD countries with available data are mostly urban regions. Among mostly urban frontier regions 70% contain a large metropolitan area, which is often also the capital city (Figure 1.10). Another 20% also contain their capital city, but the capital itself has less than 1.5 million inhabitants. The remaining quarter of frontier regions are intermediate or mostly rural regions, which are typically resource rich regions (mining, oil and gas extraction), e.g. in Australia and Canada.

However, catching up and divergence dynamics arise in all types of regions. While the frontier is mostly urban, many regions with large rural populations tend to do well and have been catching up to the national frontier (see also Chapter 3). The potential for catching up is present in all types of regions, but the levers to unlock and sustain growth are quite distinct as economic models and local fundamentals differ significantly between regions. Among the regions that are catching up to their country's frontier, 39% are mostly rural (less than 50% of residents live in a functional urban area with more than 50 000 inhabitants and no part of the region belongs to a large metropolitan area with more than 1.5 million inhabitants) and 35% are "intermediate" with between 50-70% of residents living in urban areas (Figure 1.10). Only 26% of catching-up regions are "mostly urban", and conversely the mostly urban regions make up 43% of diverging regions. In other words, those falling behind the national frontiers include many urban regions.

Figure 1.10. **Frontier regions tend to be urban, but catching-up regions tend to be rural or intermediate**



Note: Numbers in parentheses indicate the number of regions in the group. For mostly urban regions the patterned part of the bar indicates the share of regions that contain (part of) a large metropolitan area with 1.5 million or more inhabitants. The classification of regions is outlined in Boxes 1.2 and 1.3. The period covered is 2000 to 2013 (or closest available year). The 24 countries included are: Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Korea, Netherlands, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom and United States. For Belgium, 10 provinces and the capital city region are used. Exclusions of OECD countries are due to missing data or due to data only being available for a single region.

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

StatLink http://dx.doi.org/10.1787/888933411698

Productivity growth in urban areas benefits from agglomeration economies. Workers in larger cities tend to be more productive. Partly this is due to the greater share of highly-skilled and educated workers in larger cities, but in part this is due to "agglomeration economies" that arise from living and working in large cities (see e.g. Ahrend et al., 2014). Three forces create agglomeration economies (Duranton and Puga, 2004). First, by locating in close proximity, firms can share suppliers, thereby allowing them to specialise and through that specialisation become more productive. Second, large cities are home to a variety of workers and firms, which creates more opportunities for workers to find the ideal job and for firms to find the "best-matching" – most productive – employee for a job. Third, informal interaction and learning from others is facilitated by proximity. This creates knowledge spillovers and therefore better diffusion of ideas and technologies. Especially in economies that move further into knowledge-intensive production, the availability of skilled workers and the knowledge that can be shared locally is becoming increasingly important. This poses a challenge for rural – by definition "low-density" – economies (Chapter 3).

Rural areas need to leverage other competitive advantages. Some agglomeration economies can be achieved by focusing on sectoral specialisation. But without an initial entrepreneurial impetus, the creation of a strong niche sector is difficult. To assess what strategies could be successful in creating convergence, it is useful to take a stylised view of the economy. In this view, output is produced with labour, natural resources and physical capital, which are combined using different production technologies. This stylised view offers insight into three avenues for convergence for both urban and rural areas: maximising the return to capital investment, technological diffusion and sectoral change.

First, the differential returns to capital investment can create convergence, but can fall short without adequate human capital development. In regions that attracted less investment in the past, the returns from new investments (capital deepening) are often greater. This means that poorer regions (in terms of GDP per capita output) should receive more investment, which raises their output potential and results in convergence. Importantly, investment often requires complementary human capital, i.e. the capacity and knowledge of workers and managers to ensure that the potential is fulfilled. Often this is where this first convergence force loses its momentum. For example, the reunification of Germany created tremendous investment opportunities as the capital stock of East German firms was often outdated and no longer competitive. But, convergence requires more than physical capital investment, it also requires the training of workers, the development of entrepreneurial spirit and managerial skills, for example.

Second, agglomeration economies support the diffusion of innovation through knowledge spillovers, but in less-densely populated areas additional efforts might be required. Technological adoption raises productivity as less productive firms learn from frontier firms and imitate their processes. But imitation might not be straightforward. For example, new drilling technologies that create opportunities to tap into oil or gas reserves that were inaccessible before can create substantial productivity growth, but might not translate easily into innovative ideas in manufacturing or services. Another barrier can be found in local framework conditions. For example, a firm that considers developing an international product portfolio might need specialised marketing and sales employees. If employment protection legislation is stringent, the willingness to hire new staff might be reduced, as firing costs in the case of failure of the experiment are very high. Supporting the diffusion of best practices that can lead to innovation and improving the capacity to adopt them, are essential for catching up. National and regional level institutional frameworks and policies can cultivate this diffusion potential.

Third, a change in the sectoral composition of a region's economy towards higher productivity sectors can also raise overall productivity levels. One of the secular trends that accompany economic growth is the gradual shift of employment into more productive sectors. Labour-intensive agricultural production was replaced by manufacturing, which is increasingly surpassed by knowledge-intensive services. This change in sectoral composition can be a strong driver for growth and convergence, but also poses challenges in lagging regions. The skills required in manufacturing do not lend themselves readily for work in knowledge-intensive services and workers moving from manufacturing into other sectors tend to end up in low-end consumer services.

Building on local competitive advantages is essential in all types of economies, as regions fall at different points in between the stylised extremes of metropolitan areas and the most remote rural regions (Table 1.1). At one end of the spectrum are the large urban centres, like London, New York or Tokyo, that are home to some of the most productive and innovative firms. They are mainly focused on services, often business services, but also health care, higher education and information and communications technologies (OECD, 2014b). Manufacturing firms located in large cities are typically focused on innovation- and skill-intensive production and often only parts of the company (e.g. the headquarters) remain in the city. The size of the city allows for a high degree of diversification and redundancy in the labour and local goods and service markets. At the other extreme are rural economies that are concentrated in agricultural production or natural resource exploitation. Manufacturing in these areas tends to be in "mature" parts

of the product-cycle and the relatively small number of available workers requires specialisation in few activities. While it is certainly possible to find examples for the stylised extremes, the reality of rural areas is more diverse and most regions mix rural and urban elements (Chapter 3). But, a lack of diversification in less densely populated areas requires a careful assessment and support of local strengths and weaknesses that can be leveraged to support growth.

Proximity to large cities can support growth and catching up, but divergence in productivity is not necessarily driven by distance from those cities. Smaller cities and rural towns can "borrow" agglomeration effects by being more closely connected to other cities (Ahrend and Schumann, 2014a, OECD, 2015d). Importantly, functionally defined metro areas typically extend beyond their administrative boundaries and include significant parts of the surrounding – mostly rural – areas, which are connected to the local urban centre via daily commuting flows. These rural areas both benefit and support the growth of their core cities. But governance problems, such as a lack of local co-ordination, low levels of institutional capacity, the absence of a well-designed and implemented regional strategy or a piecemeal policy approach, can limit the benefits and hinder the catching-up process (OECD, 2012).

Table 1.1. **Stylised models of urban and rural economies**

Urban: The high-density economy	Rural: The low-density economy
• Led by the service sector, especially producer services • Manufacturing is high end, innovation intensive • High diversification of economic activity and redundancy in markets • Network economy – internet, computers, telecommunication (ICT) • Highly skilled core workforce, with growing gap between skilled and unskilled • Economic growth driven by innovation and productivity • Job creation driven by entrepreneurs and SMEs • Growth driven by large conurbations • Competition is intense in most product/services markets, thanks to globalisation • Growth driven by internal factors (endogenous)	• Most employment in services, but mainly low-end consumer services, with larger employment shares in the primary sector • Manufacturing tends to be "mature" in product-cycle terms • Limited diversification of economic activity, long supply chains • Weaker transport and communications connectivity, often lagging in internet connections and computer use • Weak skills, youth outmigration and an ageing workforce • Low productivity, except in the primary sectors, and limited entrepreneurial activity • Low levels of patenting and formal R&D • Local markets tend to be thin, with weak competition • Firm population dominated by SMEs but often low-growth firms • Growth driven by external factors (exogenous)

Source: Adapted from OECD (2014b), *Innovation and Modernising the Rural Economy*, *http://dx.doi.org/10.1787/9789264205390-en*.

A prominent tradable sector is a common characteristic of both urban and rural catching-up regions

Several characteristics could be associated with a stronger regional catching-up process. A larger share of the tradable sectors could favour productivity convergence. Tradable sectors are those that must compete in global markets and are therefore better able to catch up to the productivity frontier. The tradable sector allows greater opportunities to catch up through "unconditional convergence", meaning convergence to the global frontier is less dependent on a country's particularities or institutional weaknesses (Box 1.6). Population density could also determine the capacity of a given region to benefit from the diffusion of technology, in particular in the service sectors. Another element is the level of education of the regional workforce. R&D expenses should be a factor promoting the adoption of innovations. Finally, the quality of regional and local governments should contribute to the adoption of good policies and investment choices.

Box 1.6. **Convergence and the tradable sector**

Economic theory posits that countries that have access to the same production technologies have the potential to grow towards a common level of wealth. This "absolute" or "unconditional" convergence means that less-developed economies with initially lower levels of per capita income should experience faster growth than economies that have already reached higher income levels. But growth experienced by many countries is often less in line with absolute convergence, and rather supports "conditional" convergence towards different levels of GDP per capita.

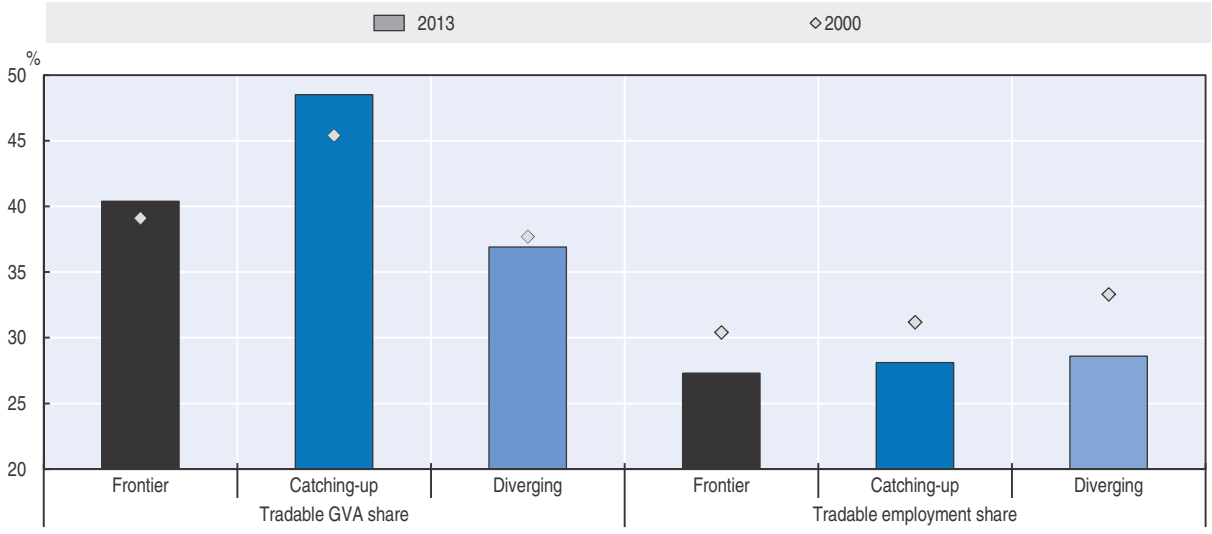
While conditional convergence is predominant among economies as a whole, the tradable (industry) sector deviates from the pattern and shows absolute convergence across economies. Based on a sample of more than 100 countries, Rodrik (2013) finds absolute convergence in labour productivity in the manufacturing sector across the world. But the strong push of the tradable sector that supports the catching up of less-developed economies does not translate into absolute convergence for the economy as a whole, as the contribution of manufacturing to the economy tends to be small in less-developed economies. Recent evidence (Rodrik, 2016) suggests that the current shift away from manufacturing is not only a challenge for most OECD countries. Some developing countries seem to experience deindustrialisation at relatively low levels of wealth, which might prematurely reduce growth opportunities in the tradable sector. Notably, the shift away from manufacturing is strongest for Latin American countries and largely absent in Asian countries.

Several characteristics of the tradable (manufacturing) sector give rise to its special role for economies. First, it tends to be an innovative and dynamic sector, which adopts to and pushes the technological frontier. Second, manufacturing has traditionally employed not only the highly skilled, but also a large number of medium- and low-skilled workers at relatively high wages, which sets it apart from other high-productivity sectors such as mining or finance (Rodrik, 2016). Third, the growth and success of the tradable sector is not limited by the size of the local market, which decouples its growth, to a certain degree, from the rest of the economy. Fourth, the tradable sector creates significant spillovers to other, localised, sectors. Moretti (2010) finds substantial job creation multipliers associated with the tradable (manufacturing) sector in the United States. For each job created in manufacturing, the number of local jobs in non-tradable goods and services increases by 1.6. In Sweden, Moretti and Thulin (2013) find a smaller multiplier, with estimates ranging from 0.4 to 0.8 jobs.

Source: Moretti, E. (2010), "Local Multipliers", *American Economic Review*, Vol. 100(2), pp. 373-77; Moretti, E. and P. Thulin (2013), "Local multipliers and human capital in the United States and Sweden", *Industrial and Corporate Change*, Vol. 22(1), pp. 339-362; Rodrik, D. (2016), "Premature deindustrialization", *Journal of Economic Growth*, Vol. 21(1), pp. 1-33; Rodrik, D. (2013), "Unconditional Convergence in Manufacturing", *Quarterly Journal of Economics*, Vol. 128(1), pp. 165-204.

The tradable sectors seem to play a key role in all region types. The tradable share in gross value added (GVA) is (statistically significantly) higher in catching-up regions (Figure 1.11).[8] This is not only the case in large regions (TL2), but also for smaller TL3 regions (Figure 1.13). Employment levels are similar and declined by the same margin in both types of regions, but catching-up regions experienced an increase in the contribution of the tradable sector to GVA. That contribution remained constant for diverging regions. This pattern highlights the increase in productivity in catching-up regions and its positive effect on the tradable sector. A closer look at the contribution from different tradable sectors shows two very different drivers at the TL2 level and a third when "zooming in" to the smaller TL3 level.

Figure 1.11. **The tradable sector plays a critical role in regional productivity trends**



Note: Catching-up/diverging regions grew by at least 5 percentage points more/less than their national frontier over the 2000-13 period. The frontier is defined as the aggregation of regions with the highest GDP per worker and representing 10% of national employment. Due to lack of regional data over the period, only 24 countries are included in the averages. Tradable sectors are defined by a selection of the 10 industries defined in the SNA 2008. They include: agriculture (A), industry (BCDE), information and communication (J), financial and insurance activities (K), and other services (RSTU). Non-tradable sectors are composed of construction, distributive trade, repairs, transport, accommodation, food services activities (GHI), real estate activities (L), business services (MN), and public administration (OPQ).

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

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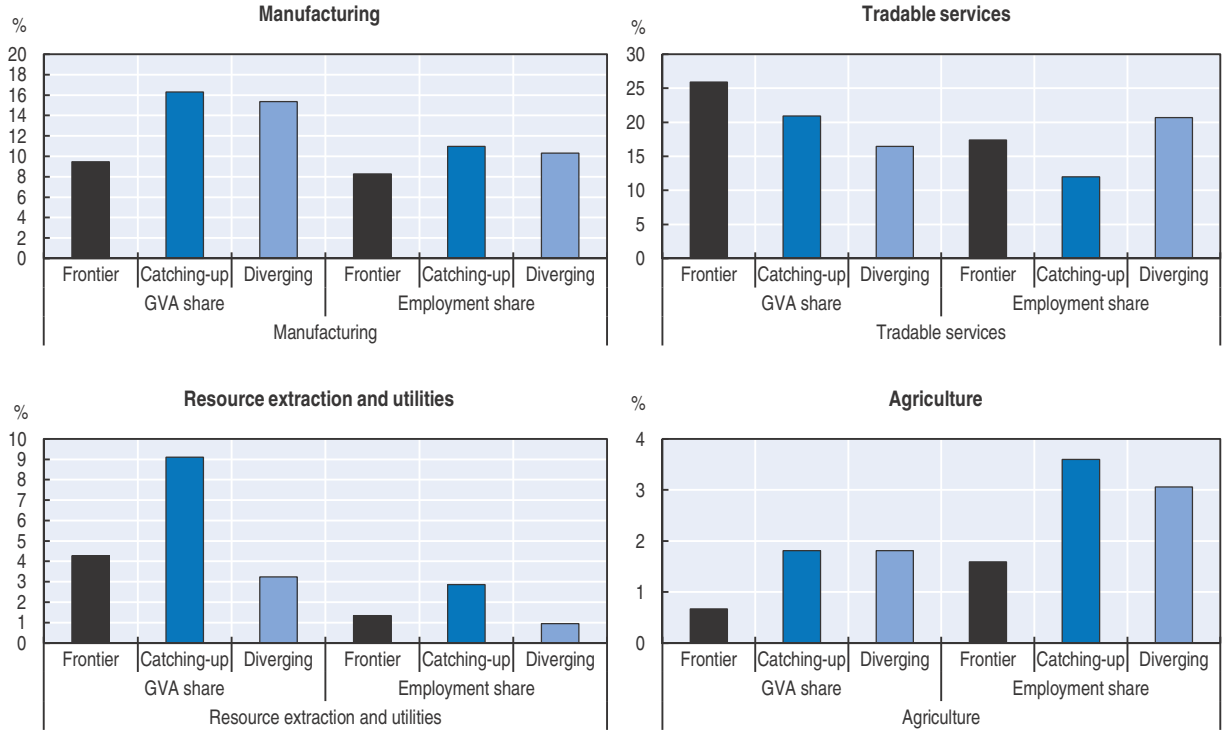
Tradable services and resource extraction are the elements of the tradable sector that account for most of the difference in the catching-up and diverging regions. The contributions to GVA from tradable services and from resource extraction (i.e. mining and drilling) in catching-up regions exceed the contributions in diverging regions, tradable services by about 5 percentage points and resource extraction by even more in 2013 (Figure 1.12). In comparison, the gap in manufacturing between catching-up and diverging regions is comparatively small (1 percentage point). There is no difference with respect to the contribution of the agricultural sector, which accounts for only a small, and declining, percentage of total GVA in all types of regions. The importance of the tradable sector results in greater exposure to changing macroeconomic conditions. This can be an advantage when there is an increase in demand, but also a risk when prices are volatile. The vulnerability to global shocks might be particularly relevant for rural economies, being more reliant on local assets and global commodity prices, as they may lack a diversified economy to absorb those shocks by creating opportunities in other sectors.

Figure 1.12. **Tradable services and resource extraction contribute to catching up**

GVA and employment shares by type in TL2 regions, 2013



Note: Catching-up/diverging regions grew by at least 5 percentage points more/less than their national frontier over the 2000-13 period. The frontier is defined as the aggregation of regions with the highest GDP per worker and representing 10% of national employment. Due to lack of regional data over the period, only 2013 values are used. Resource extraction and utilities are the aggregate of mining and quarrying (B); electricity, gas, steam and air conditioning supply (D); and water supply, sewerage, waste management and remediation activities (E). Tradable services are the aggregation of information and communication (J); financial and insurance activities (K); and other services (R to U).

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

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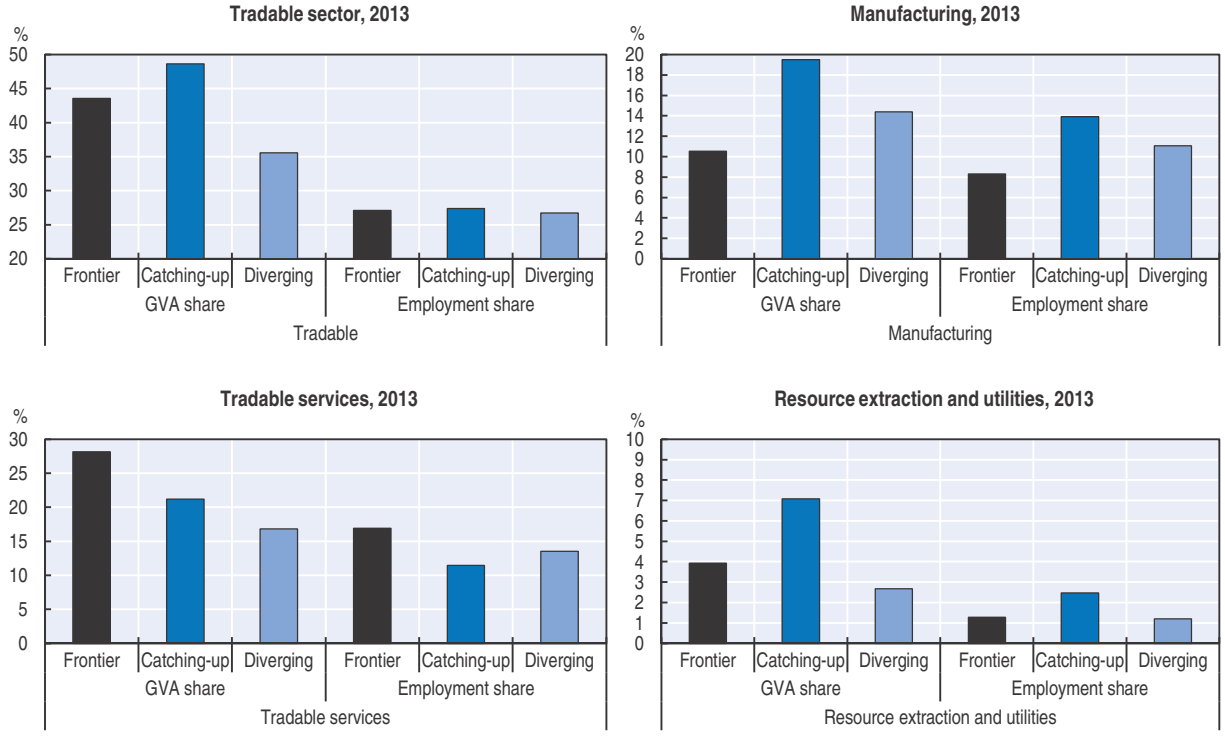
The important role of the manufacturing sector becomes apparent at the smaller regional scale. When smaller regions (TL3 versus TL2) are considered, the contribution of manufacturing to GVA in catching-up regions is more than 5 percentage points higher than in diverging regions (Figure 1.13). Manufacturing activities are often locally concentrated and the combination of manufacturing-oriented TL3 regions with those specialised in other sectors results in a seemingly less important role for the manufacturing sector at TL2 level.

The types of jobs that drive productivity growth differ depending on the type of tradable sector. The main divide is between resource extraction, utilities and manufacturing on the one side and tradable services (and agriculture) on the other. In manufacturing and resource extraction, workers are relatively more productive than the average in the region's economy, as the percentage of employees working in the sectors is lower than the percentage contribution to GVA (Figure 1.12). The opposite is the case for tradable services in diverging regions and in agriculture. For tradable services in catching-up regions, the employment share is more than 8 percentage points lower than in diverging regions. In manufacturing and resource extraction, workers with low levels of formal education can achieve high levels of productivity. This is in contrast to the service

Figure 1.13. **Manufacturing also observed to promote catching up, but at a smaller regional scale**

GVA and employment shares by type in TL3 regions



Note: Catching-up/diverging regions grew by at least 5 percentage points more/less than their national frontier over the 2000-13 period. The frontier is defined as the aggregation of regions with the highest GDP per worker and representing 10% of national employment. Due to lack of regional data over the period, only 24 countries are included in the averages. Tradable sectors are defined by a selection of the 10 industries defined in the SNA 2008. They include: agriculture (A), industry (BCDE), information and communication (J), financial and insurance activities (K), and other services (RSTU). Non-tradable sectors are composed of construction, distributive trade, repairs, transport, accommodation, food services activities (GHI), real estate activities (L), business services (MN), and public administration (OPQ).

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

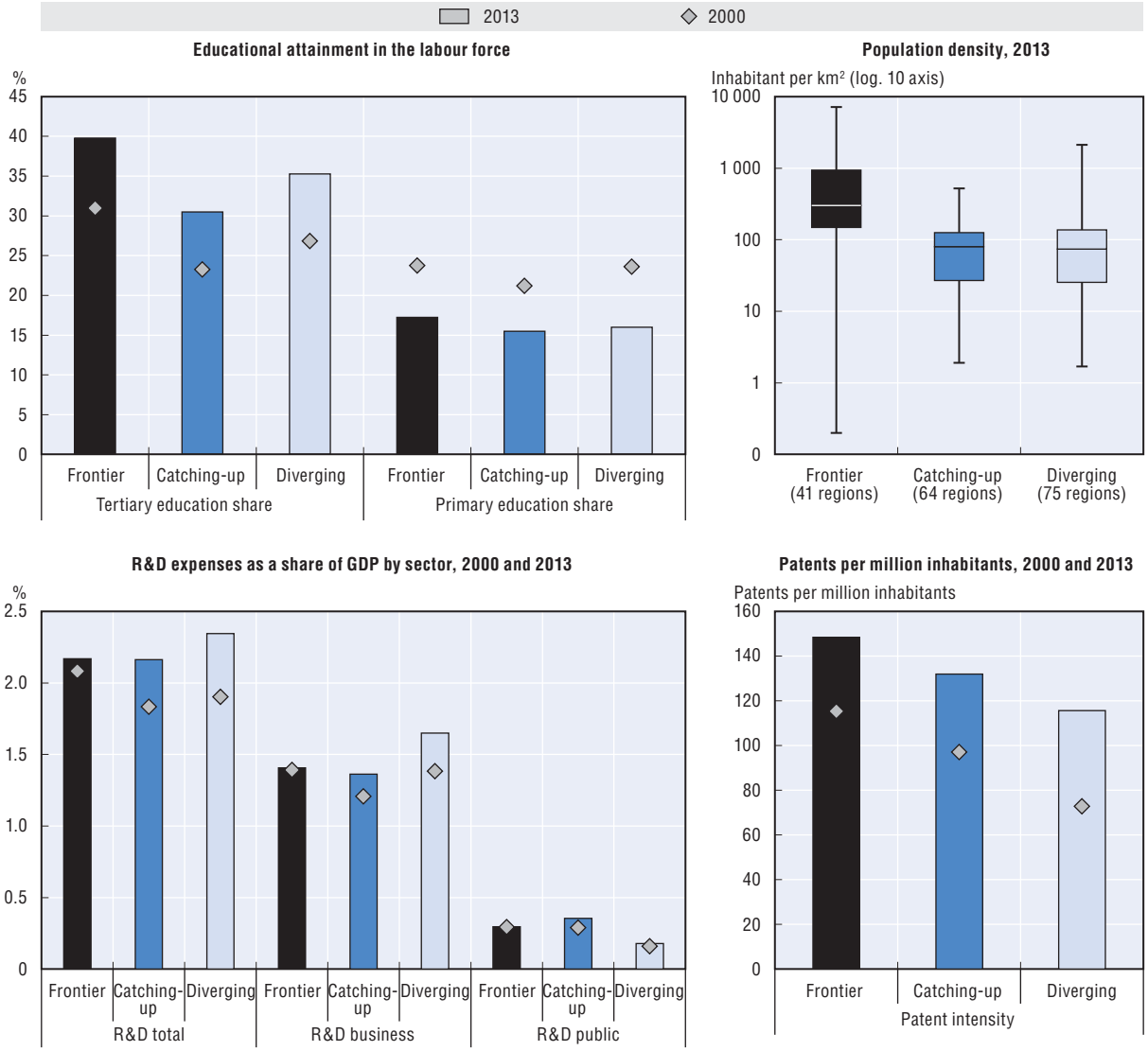
StatLink *http://dx.doi.org/10.1787/888933411729*

sector and agriculture, where aggregate labour productivity is comparatively low. But tradable services combine a wide range of jobs and some tradable services have very high levels of productivity, and unlike in traditional manufacturing, these jobs are mainly focused on knowledge-intensive services that require highly-skilled workers. Therefore, transitioning workers from manufacturing or resource extraction sectors to knowledge-intensive services is not straightforward and requires substantial adjustments.

The differences concerning other characteristics are much less marked. The population density in catching-up regions is only slightly higher than in diverging regions (Figure 1.14). Levels of tertiary education are slightly higher in diverging regions, but both types of regions experienced reductions in the share of workers with only primary education, and the shares are virtually identical in 2013. This is consistent with prior evidence that often it is the large share of workers without secondary education that constitutes a greater bottleneck to growth than a relatively low share of tertiary educated workers (OECD, 2012).[9] Total R&D expenditure was very similar, with business R&D slightly higher in diverging regions, while public R&D is higher in those that were catching up, and

values for R&D expenditure in the frontier regions falling in between the two (Figure 1.14). These averages combine values for regions that are catching up using different types of growth models, some that are more intensive in skilled labour and other sectors that are more or less R&D intensive. Only for patents is a slightly more pronounced gap between diverging and catching-up regions evident, but both groups reduced their gap with the frontier. To sum up, apart from the share of tradable sectors and higher public R&D, the catching-up regions have very close fundamentals to the ones that have diverged.

Figure 1.14. **Other growth-related factors do not differ between catching-up and diverging regions**



Note: The graph for population density depicts five characteristics of the distribution of population density across regions. The lower and the upper edge of the box show the first and last quartile, i.e. 25% of regions have density below (above) the value at the first (third) quartile. The horizontal line within the box shows the median (50% of regions have a population density below/above the value). The "whiskers" at the end of the vertical lines indicate the minimum and maximum values in the group.

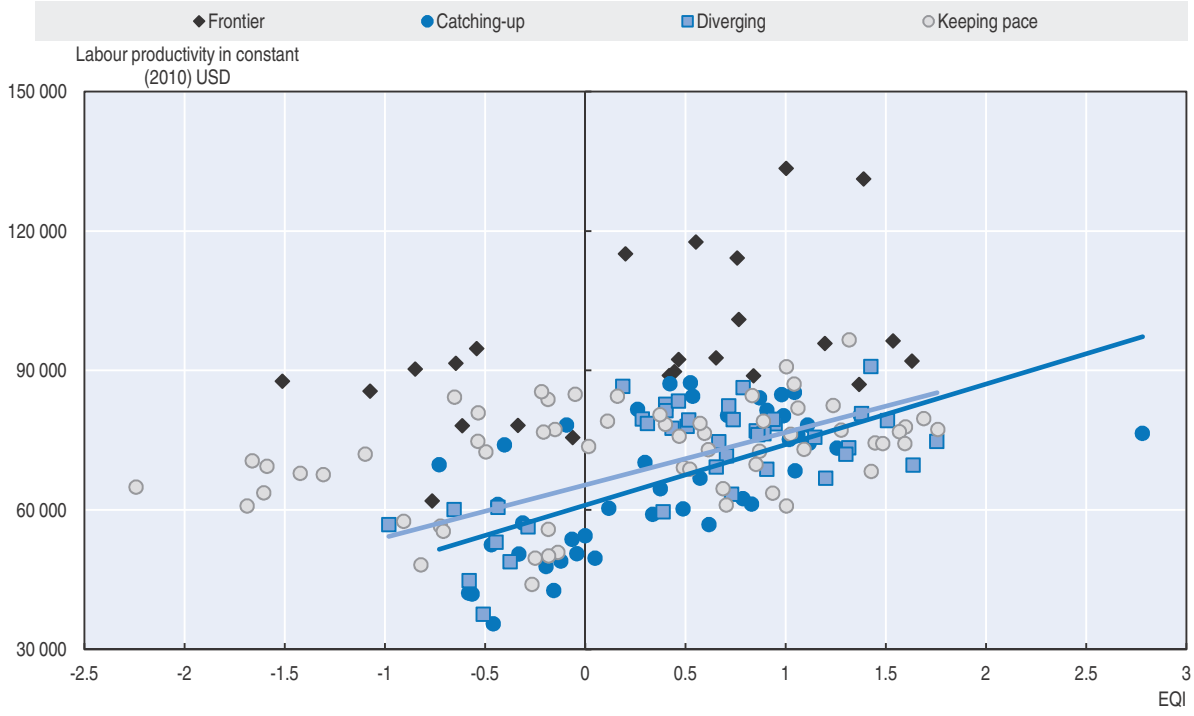
Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

StatLink http://dx.doi.org/10.1787/888933411736

The quality of government is good for productivity, but does not differentiate the catching-up regions from those that are diverging. Using European data, the governmental quality measured by the Gothenburg European Quality of Government Index (EQI) is higher in more productive regions (statistically significant correlation with a correlation coefficient between 0.3 and 0.4, Figure 1.15). However, there is no differential pattern in this positive relationship between regions that are catching up and those that are diverging. It is possible that the EQI is too narrowly defined to capture all the relevant institutional characteristics in a region. Recent empirical work on regional development suggests that informal governance factors, such as the participation in organisations that are inclusive, has a more significant impact than formal governance measures on sectoral changes in the regional economy (Cortinovis et al., 2016). However, an improvement in government quality, measured by the change in EQI during the period 2010-13, shows a positive correlation between the improvement in EQI and labour productivity growth for regions that are catching up, but not for those that are diverging (Figure 1.16). But, this result is not very robust in statistical terms. These results underscore the need for more empirical work on both formal and informal governance and the relationship with productivity.

Figure 1.15. **Regions with high levels of productivity are also regions that are better governed**

European Quality of Government Index (EQI) and labour productivity levels, 2013

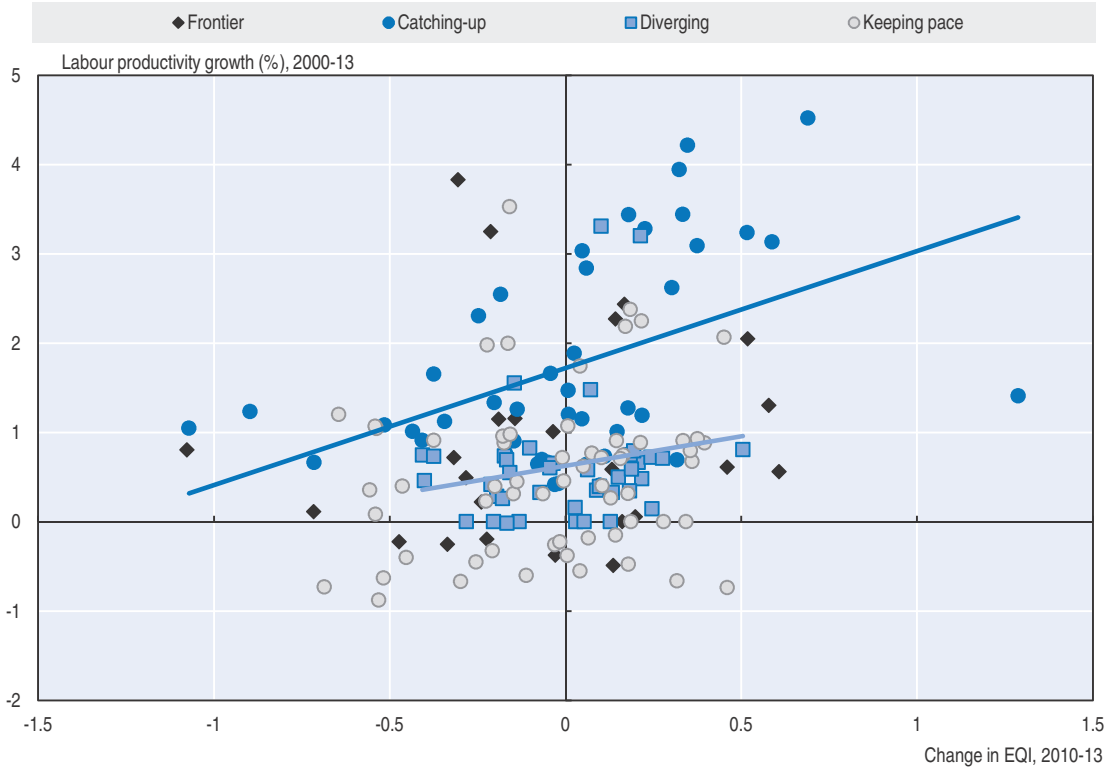


Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016) and the University of Gothenburg (2013), *European Quality of Government Index (EQI)*, *http://qog.pol.gu.se/data/datadownloads/qog-eqi-data*; Charron, N., L. Dijkstra and V. Lapuente (2014), "Mapping the Regional Divide in Europe: A Measure for Assessing Quality of Government in 206 European Regions", *Social Indicators Research*, *http://dx.doi.org/10.1007/s11205-014-0702-y*.

StatLink http://dx.doi.org/10.1787/888933411740

Figure 1.16. **Catching-up regions for productivity also experienced modest improvements in governance quality**

Change in the European Quality of Government Index (EQI) and productivity growth, 2010-13



Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016) and the University of Gothenburg (2013), *European Quality of Government Index (EQI)*, *http://qog.pol.gu.se/data/datadownloads/qog-eqi-data*; Charron, N., L. Dijkstra and V. Lapuente (2014), "Mapping the Regional Divide in Europe: A Measure for Assessing Quality of Government in 206 European Regions", *Social Indicators Research*, *http://dx.doi.org/10.1007/s11205-014-0702-y*.

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Countries display different patterns of catching-up dynamics

There is no unique pattern that links regional catching up or divergence with labour productivity growth in a country or its frontier. But a growing divide between productivity in the frontier and other regions raises the concern of a "two-tier" economy, with strong performance at the top and the rest of the country falling behind. In Figure 1.17, regional productivity growth patterns are compared with national average productivity growth.

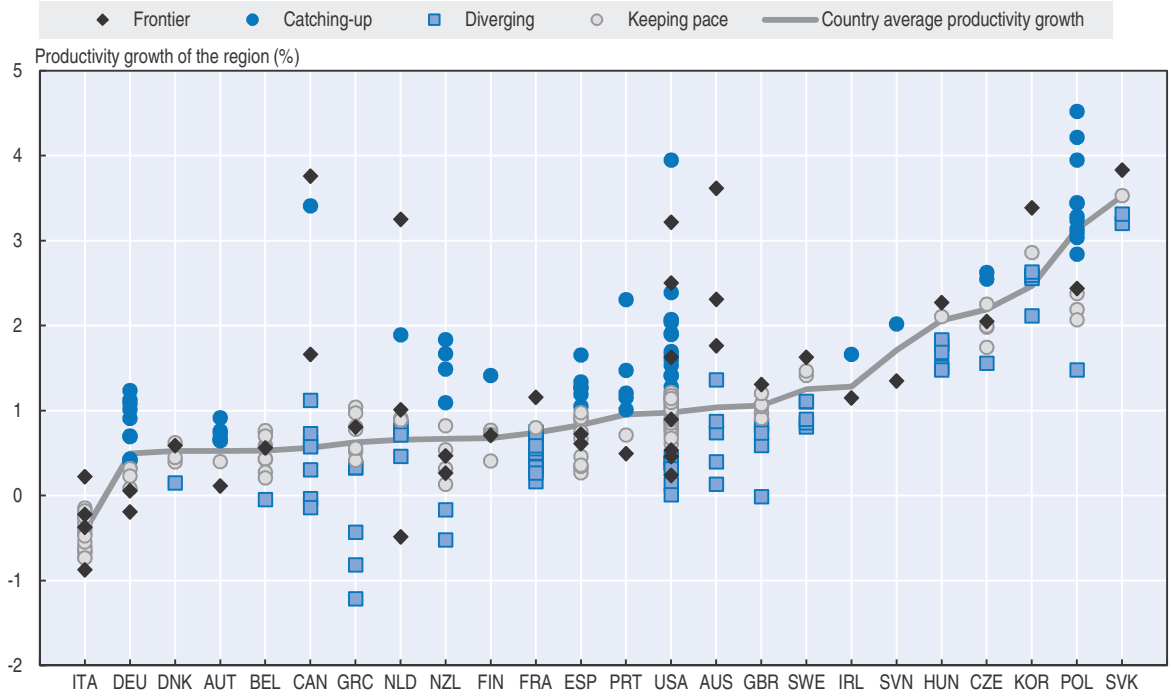
- **Low productivity growth countries:** towards the left of Figure 1.17 are countries with an overall low productivity growth performance. Nevertheless, in some countries the regional catching up was a key factor in driving national productivity growth. For example, Germany and Austria combined relatively low country-level productivity growth with a frontier that grew slowly, but the catching up of other regions sustained overall productivity growth.
- **High productivity growth countries:** on the right side of the graph, there are countries like Poland and the Czech Republic that combined high aggregate productivity growth with strong catching-up dynamics in some regions. In contrast, in countries like the Slovak Republic, Hungary and Korea, it is the frontier region that dominates the productivity growth performance of the country.

- **Moderate productivity growth countries:** in the middle of the graph there are countries such as France, the United Kingdom and Australia, that grew at moderate levels with relatively large gaps between the frontier and the other regions in the country. The value of the difference in growth rates may seem small, but over time they are quite substantial. For example, productivity growth in Île-de-France (Paris) was, on average, only 0.4 percentage points higher than in Nord-Pas-de-Calais, a large, traditionally industry-focused region in the north of France and the French entrance to the Eurotunnel which connects France with United Kingdom. But, over a period of 20 years, this difference adds up to almost 10 percentage points.

In addition, in many countries it is not only the gap between the frontier and other regions that tends to be wide, the range of growth rates across countries is often substantial. Greece's top-performing region grew above the country average, but most other regions in the country have diverged. Large gaps are more the norm than the exception across the OECD, with some countries exceeding a productivity growth gap of 4 percentage points annually between their fastest and slowest growing regions (e.g. Canada and the United States).

Figure 1.17. **Regions in both fast and slow growing countries can catch up (or fall behind) their frontier**

Labour productivity growth in TL2 regions, 2000-13



Note: Annual average growth in real per worker GDP between 2000 and 2013 (or closest year available). Catching-up/diverging regions are defined as those with 5 percentage points more/less cumulative labour productivity growth over the 14-year period compared to the frontier regions (defined as those with the highest GDP per employee until the equivalent of 10% of national employment is reached), with regions that are "keeping pace" falling within the +/- 5 percentage points band. The solid line indicates the country-level annual average productivity growth over the same period. Countries excluded due to lack of data or an insufficient number of regions include: Chile, Estonia, Iceland, Israel, Japan, Luxembourg, Mexico, Norway and Turkey.

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

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Labour productivity growth is essential for GDP growth, but needs to be accompanied by employment growth to create substantial benefits and contribute to social inclusion. In the Netherlands, the three frontier regions, Groningen, North Holland (includes Amsterdam) and South Holland (includes Rotterdam and The Hague) exhibit very different trends (see Box 1.7 for details on the trend decomposition). Groningen and North Holland contributed more than 50% to the Dutch growth in GDP, while South Holland's decline exerted a significant drag on growth (Figure 1.18). The right panel of Figure 1.18 shows the critical role that labour productivity plays in contributing to the trends. While productivity in Groningen and North Holland improved relative to the rest of the Netherlands, South Holland has started to fall behind. In Germany, more than 80% of GDP growth is generated by the regions that are catching up to the frontier's productivity levels (Figure 1.19). The single largest contributor is Bavaria, which generated more than 25% of Germany's GDP growth in the 2000-13 period, even though less than 17% of employees work in the *Land*.

The key difference between the German and Dutch frontier performance lies in their employment dynamics. The frontier can be a driver for productivity growth, as is the case for North Holland and Groningen, two parts of the frontier in the Netherlands. Conversely, a lack of productivity growth in the frontier can hold back the whole country, as is the case in South Holland, the third part of the Dutch frontier. The frontier is even less dynamic in Germany: Hesse and Hamburg recorded the lowest productivity growth rates over the 2000-13 period. But the economic impacts of the slow growing frontiers in

Box 1.7. **The contribution of regions to GDP and labour productivity growth**

The contribution of a region to its country's economic (GDP) growth can be decomposed into the weighted sum of the GDP growth in each of its regions. The weights are equivalent to each region's initial percentage contribution to the country's total GDP. The relationship can be expressed as a formula, with $Y_{r,t}$ the GDP in region r in period t and $Y_t = \sum_{r=1}^{R} Y_{r,t}$ the national GDP, which is the sum of the GDP produced in all R regions within the country.

$$\frac{Y_t - Y_{t-1}}{Y_{t-1}} = \sum_{r=1}^{R} \frac{Y_{r,t} - Y_{r,t-1}}{Y_{r,t-1}} * \frac{Y_{r,t-1}}{Y_{t-1}}$$

From this, the contribution of any region r to its country's GDP growth can be expressed as:

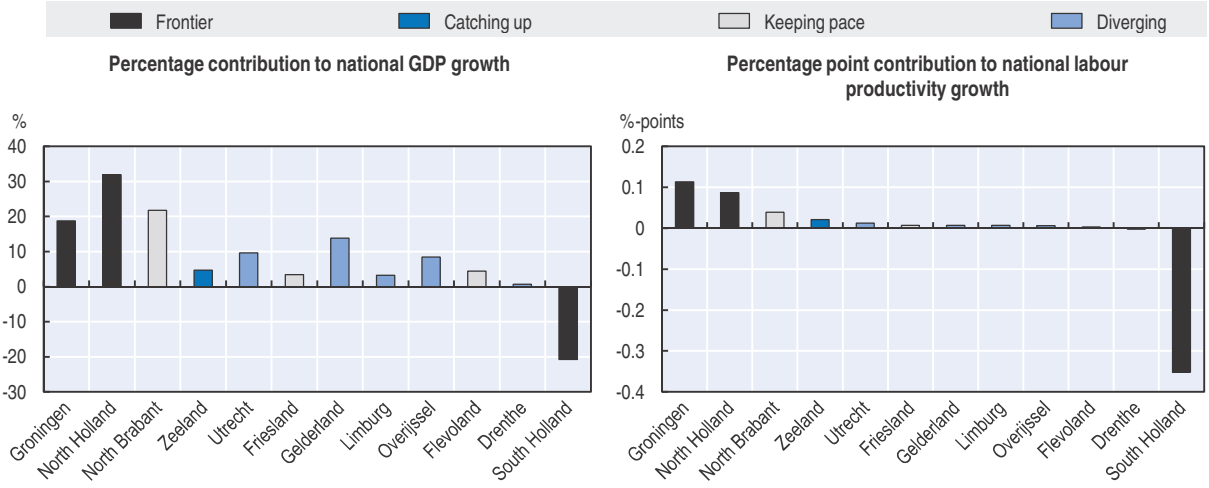
$$GDP\,contribution_r = \frac{Y_{r,t} - Y_{r,t-1}}{Y_{r,t-1}} * \frac{Y_{r,t-1}}{Y_{t-1}} / \frac{Y_t - Y_{t-1}}{Y_{t-1}}$$

A similarly straightforward decomposition of a region's contribution to labour productivity growth is not available. To calculate an alternative decomposition, it is useful to consider the hypothetical scenario "how much would labour productivity in the country have grown if the region had not contributed". The difference between labour productivity growth in the hypothetical scenario and the actual labour productivity growth can then be used as an indicator for a region's contribution. With E indicating total employment, and $Y_{-r,t} = \sum_{s \neq r}^{R} Y_{s,t}$ the sum of GDP from all regions except region r (analogously for employment), the contribution of each region to labour productivity growth can be expressed as:

$$Labour\,productivity\,contribution_r = \frac{Y_t / E_t - Y_{t-1} / E_{t-1}}{Y_{t-1} / E_{t-1}} - \frac{Y_{-r,t} / E_{-r,t} - Y_{-r,t-1} / E_{-r,t-1}}{Y_{-r,t-1} / E_{-r,t-1}}$$

Figure 1.18. **Frontier regions in the Netherlands experience both high and low rates of productivity growth**

Contribution of Dutch regions to labour productivity and GDP growth, 2001-13



Note: Regions are ordered by their labour productivity growth rates. The left panel depicts the percentage contribution of each region to national GDP growth. The right panel depicts the percentage point difference between actual labour productivity growth (GDP per employee growth) and a hypothetical scenario that considers the labour productivity growth that would have occurred if the region were not part of the country. See Box 1.5 for detailed definitions.

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

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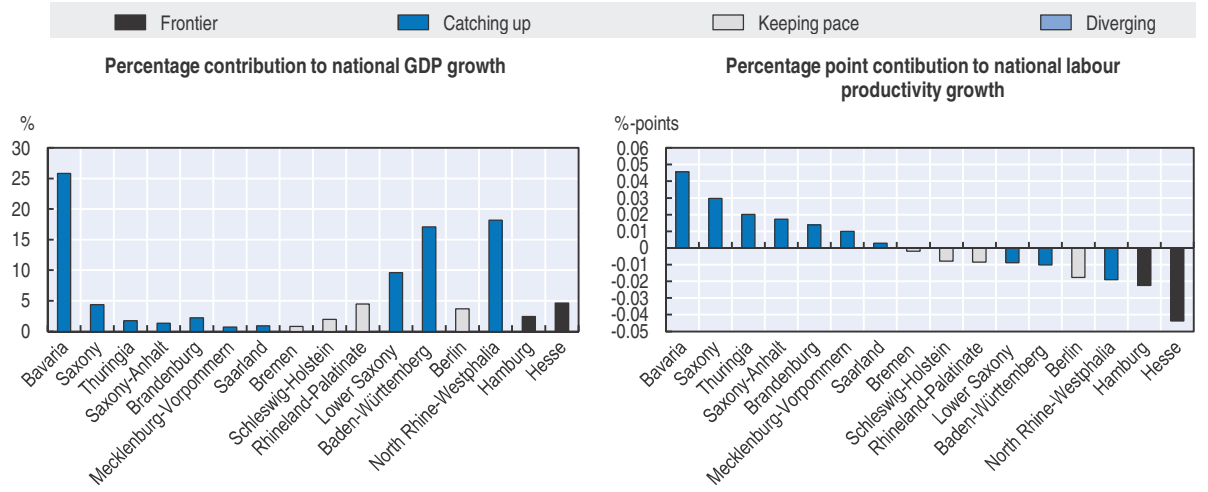
Figure 1.19. **Hamburg and Hesse attract employment, but struggle to utilise it productively**

Contribution of German regions to labour productivity and GDP growth, 2000-13



Note: Regions are ordered by their labour productivity growth rates. The left panel depicts the percentage contribution of each region to national GDP growth. The right panel depicts the percentage point difference between actual labour productivity growth (GDP per employee growth) and a hypothetical scenario that considers the labour productivity growth that would have occurred if the region were not part of the country. See Box 1.5 for detailed definitions.

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

StatLink http://dx.doi.org/10.1787/888933411789

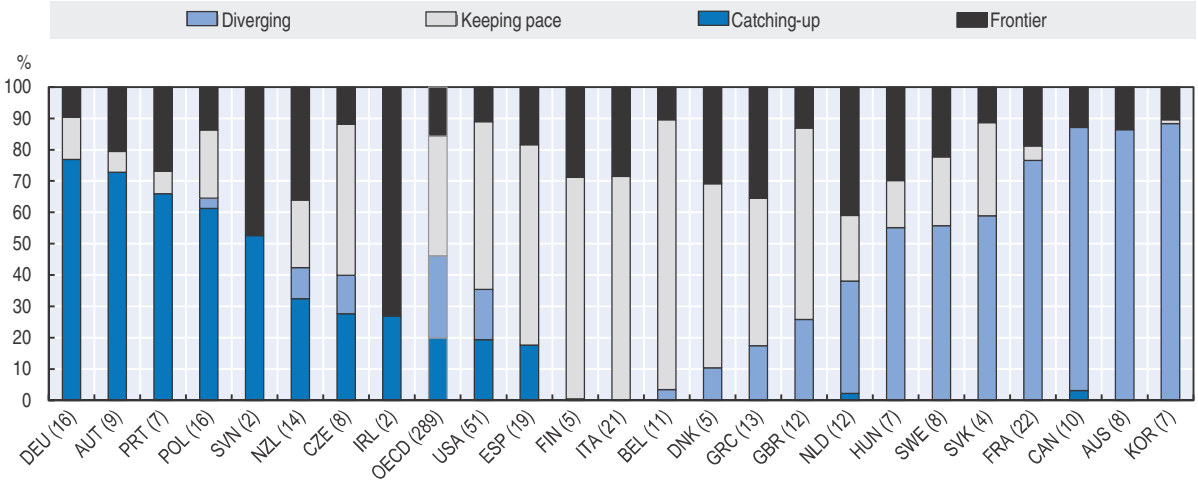
the Netherlands and in Germany are very distinct. South Holland contributed negatively to GDP growth and total employment declined between 2001 and 2013. The German frontier regions contributed positively to GDP growth, which was accompanied by an increase in employment. Hamburg and Hesse added more than 300 000 jobs between 2000 and 2013 and Hamburg's employment was the fastest growing in Germany over that period. (See the country pages that accompany this publication for details in the different OECD countries.)

These country patterns result in very different distributions of the population according to catching-up and divergence patterns. Figure 1.20 provides the shares of the population living in frontier, catching-up, diverging or keeping-pace regions (those that neither gained nor lost significant ground relative to the frontier). The OECD countries split nearly completely into two groups: those countries where many people were living in regions catching up and those where people mainly saw their region diverging from the frontier. Few countries show intermediate positions, the notable exceptions being the Czech Republic, New Zealand and the United States. The percentage of the population living in regions falling behind ranges from 0% to over 80% depending on the country. The net result is that over one-quarter of the population across the OECD (26.4%) is living in regions that are falling behind (diverging) relative to their national frontiers, which translates into hundreds of millions of people.[10] The rest of the OECD population is split between those living in frontier regions (15.6%), catching-up regions (19.7%) or regions that are keeping pace with growth in the frontier (38.3%).

The share of the population residing in regions falling further behind needs to be considered in light of interregional mobility trends. It is expected that some regions will gain and lose population based on the opportunities they provide to residents. Interregional mobility rates differ by country. For example, almost 5% of the population in Korea and Hungary, and less than 0.5% in the Slovak Republic, changed regions from 2011-13. The vast majority of migration occurs within a country. In total, around 2% of the OECD area's population changed regions, which is more than four times the value of

Figure 1.20. **One in four OECD residents lives in a region that is falling behind the frontier**

Regional shares of population by type of convergence performance, 2014



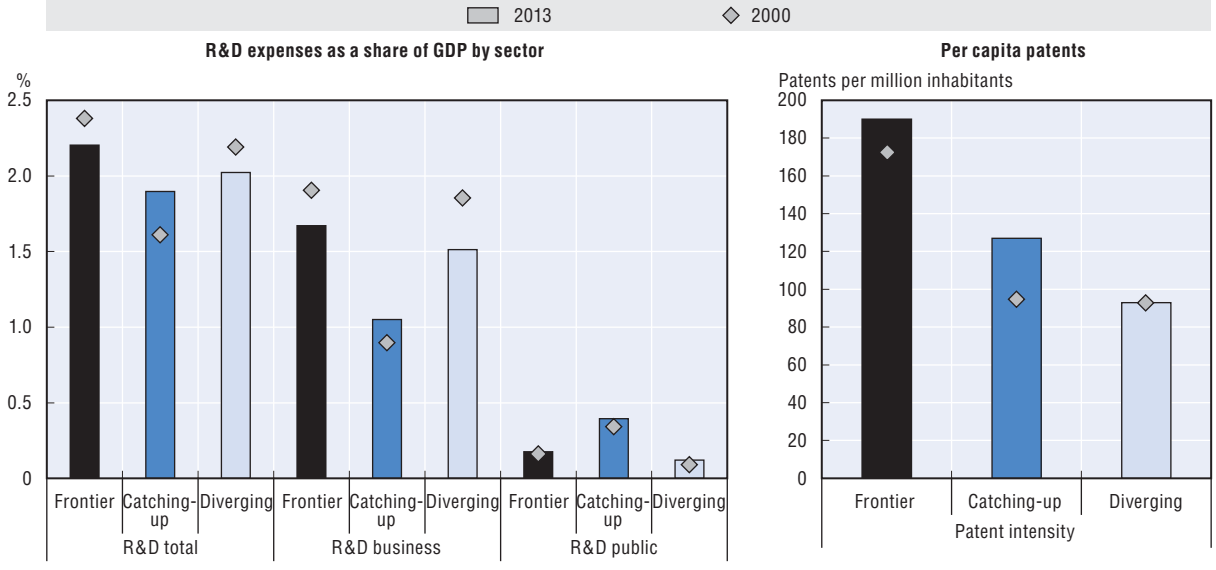
Note: Countries excluded due to lack of data or an insufficient number of regions include: Chile, Estonia, Iceland, Israel, Japan, Luxembourg, Mexico, Norway, Switzerland and Turkey. Numbers in parenthesis indicate the number of TL2 regions in the country.
Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).
StatLink http://dx.doi.org/10.1787/888933411795

international migration to OECD countries (OECD, 2016b). Given the growing economic divide within countries, internal migration rates might seem low, but often there are a variety of impediments that curtail mobility. The less skilled are, at least on average, less likely to move within a country (e.g. Machin, Salvanes and Pelkonen, 2012). Local social ties and housing markets tend to also limit mobility (e.g. Antolin and Bover, 1997). Differential migration trends create an additional challenge for different types of regions. In most countries it is urban regions that benefit from net inflows, however in some countries rural regions are gaining (OECD, 2016b; BBSR, 2015).[11] Those rural regions that lose too many of the higher-skilled workers may suffer from a cascading effect that limits growth potential for the remaining residents (Chapter 3).

Interregional differences in innovation-related factors have nevertheless narrowed in many countries and for several indicators

As noted in the analysis above, innovation-related factors (R&D and patents) do not seem to show marked differences between catching-up and diverging regions on an OECD-wide basis. However, an analysis at the country level indicates that innovation-related factors may play a role. For example, in the case of the United States, there is a clear pattern of stronger patenting activity in the frontier regions, given the spatial concentration of patenting activities in some metropolitan areas. There are also differences in the intensity of patenting in the catching-up and the diverging regions. Indeed, the intensity has increased over time in the catching-up regions, while it has remained stable in the diverging group (Figure 1.21). Concerning R&D intensity, it is only with respect to public R&D that catching-up regions display better performance than those that are diverging, as noted above on an OECD-wide basis. While private R&D was, on average, lower in catching-up regions than in diverging regions, the change between 2000 and 2013 within the two groups shows an increase in catching-up regions, but a decline both in the frontier and in diverging regions.

Figure 1.21. **Innovation-related activities and productivity trends: United States**



Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

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The mechanisms by which innovation-related activities and policy influence productivity and regional growth are not fully understood (OECD, 2011b). As in the United States, regions at the frontier often outperform others on many innovation-related indicators, such as R&D investment and patents. In an analysis of regional drivers of per capita GDP growth, this was found to be particularly important for OECD regions with relatively high income levels in their country context. However, the relationships of R&D and patents with catching up were not as strong for lower income regions (OECD, 2012). Additional S&T-related investments may require more skilled human capital (a "social filter") to make the most of these investments (Rodríguez-Pose and Crescenzi, 2008). However, even a combination of skilled workers (share of workforce with tertiary education) and R&D investment may not be enough for growth among less-developed regions (Sterlacchini, 2008). There may also be other bottlenecks to growth in those most lagging regions that need to be addressed to trigger catching-up dynamics and to create benefits from additional skilled workers and R&D investment.

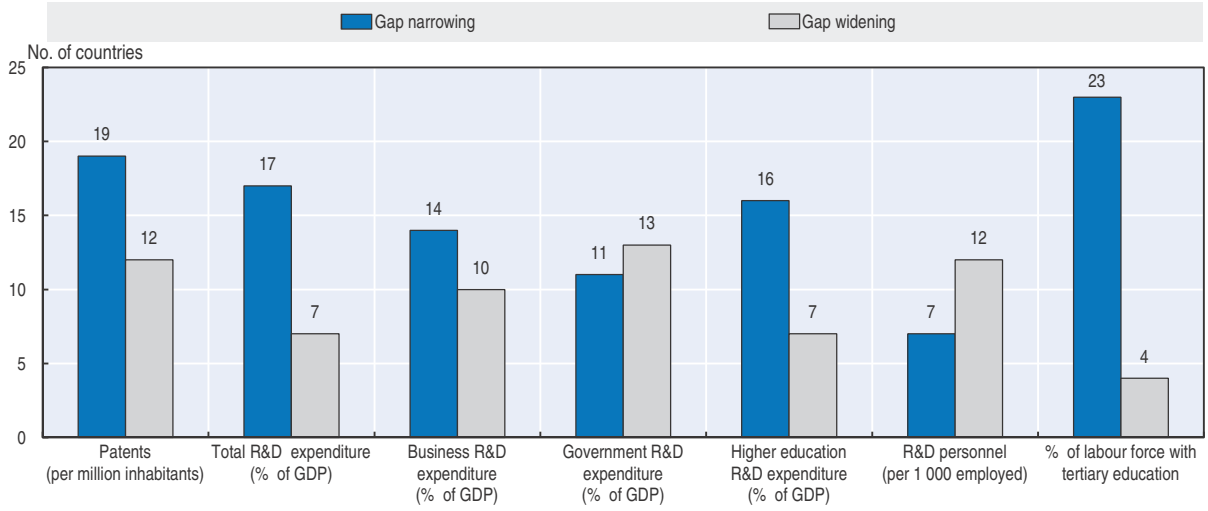
Many other forms of innovation or firm practices which are important to productivity are simply not captured by measures of R&D and patents. The propensity to patent and conduct R&D does vary by economic sector. Organisational and marketing innovations, for example, are not typically captured by these statistics, but can have notable impacts on productivity. One study using a sample of 330 firms in the United States found that those engaging in data-driven decision-making could expect to have 5-6% increases in output and productivity compared to the others that did not (Brynjollfson, Hitt and Kim, 2011).The share of business investments in intangible assets, as opposed to other investments such as machinery and equipment, have been steadily rising over the last two decades. These different forms of knowledge-based capital can include software, organisational capital, and training, as well as R&D (OECD, 2015d).

There has been some convergence of the intensity of innovation-related activities across regions within countries. For example, gaps in the performance of the top 20% over the bottom 20% of regions (i.e. each accounting for 20% of the population) have narrowed between 2000 and 2013 in more than half of the countries for most innovation-related variables considered (Figure 1.22).[12] While interregional gaps in tertiary education have declined in the vast majority of countries (23 out of 27 with data), the same is not true for R&D personnel (per 1 000 employees), an indicator for the most innovation-intensive workers. The gap in the performance of top and bottom regions actually increased in more countries than it declined (12 versus 7). This is in contrast to most forms of R&D intensity (R&D as a share of GDP), for which the gap narrowed in more countries than it increased. Patenting intensity (patents per million inhabitants) shows more mixed results, as only just over half of the countries showed a reduction in the gap (17 out of 31 countries), likely given the more technology-intensive requirements in patent-related innovation that are specific to certain industries and their spatial concentration. Where the gap narrowed, the reduction was generally due to greater improvements among the bottom 20% of regions relative to the top 20%.[13] Public policy has likely contributed to this trend of reducing gaps across regions on these innovation-related factors. However, the results may not yet have fully materialised as there is always a time delay between investment in innovation inputs and the results in terms of productivity gains.

As a result of these trends, the spatial concentration of resources in the top 20% of regions has declined (Figure 1.23). This is particularly striking for business R&D expenditures, where that concentration in the top regions declined in 20 out of

Figure 1.22. **Interregional gaps in innovation-related performance show mixed results, often narrowing**

Changes in performance between the top and bottom 20% of TL2 regions in a country, 2000-13



Note: The top 20% of regions are defined as those with the highest value of the indicator until the equivalent of 20% of the national population is reached. The same calculation is made for the bottom 20%. For all graphs, Estonia and Luxembourg are excluded as both have only one TL2 region. Other countries are excluded due to lack of data or comparable years. For total, business, government and higher education R&D expenses: Chile, Denmark, Iceland, Israel, Japan (included for government R&D), Mexico, New Zealand, Switzerland (included for business and total R&D) and Turkey. R&D personnel also excludes: Australia, France, the United Kingdom and the United States. Tertiary educated labour force also excludes Australia. Patents per million also excludes New Zealand. The last year of available data for Greece, Japan, the Netherlands, Norway and Switzerland is 2011.

Source: OECD (2016b), *OECD Regions at a Glance 2016*, *http://dx.doi.org/10.1787/reg_glance-2016-en*.

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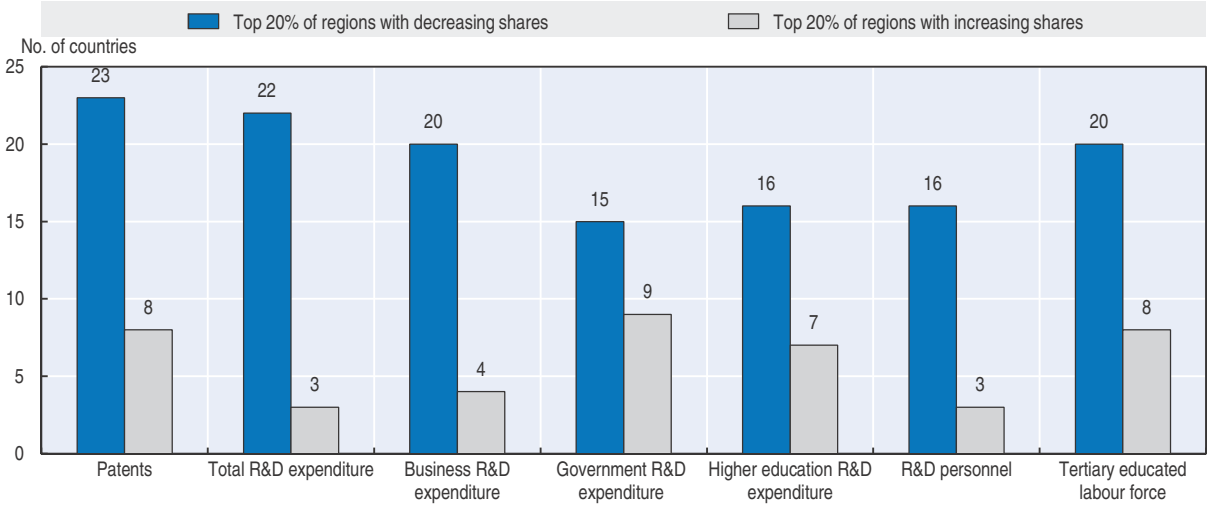
Figure 1.23. **Regional concentration of innovation-related resources within countries generally declining**

Changes in the share found in the top 20% TL2 regions in a country, 2000-13



Note: The top 20% regions are defined as those with the highest value of the indicator until the equivalent of 20% of the national population is reached. For all graphs, Estonia and Luxembourg are excluded as both have only one TL2 region. Other countries are excluded due to lack of data or comparable years. For total, business, government and higher education R&D expenses: Chile, Denmark, Iceland, Israel, Japan (included for government R&D), Mexico, New Zealand, Switzerland (included for business and total R&D) and Turkey. R&D personnel also excludes: Australia, France, the United Kingdom and the United States. Tertiary educated labour force also excludes Australia. Patents per million also excludes New Zealand. The last year of available data for Greece, Japan, the Netherlands, Norway and Switzerland is 2011.

Source: Maguire, K. and J. Weber (forthcoming), "Should we care about gaps in regional innovation capacities?", *OECD Regional Development Working Papers*, OECD Publishing, Paris..

StatLink *http://dx.doi.org/10.1787/888933411821*

24 countries with data from 2000-13.[14] Using the HHI index[15], the same general trends of declining levels of concentration are observed, and for this index it is true for an even greater number of countries relative to the indicator considering the top 20% of regions only.

However, venture capital (VC) follows a different path, implying that some aspects important for innovation activity are not easy to reproduce outside of the top regions. The case of the United States illustrates that the leading regions have continued to attract more VC than other regions. The share of VC in the United States in the top 20% regions (out of the PWC-defined 20 US regional groupings: Silicon Valley, New York Metro, New England and Los Angeles/Orange County) increased from 51% in 1995 to 76% in 2014 (PWC, 2015). Many of these same metro areas are found in states with a high rate of business R&D. A wide disparity in the share of total VC can also be observed across regions within other countries (OECD, 2016b).

From productivity to inclusion and well-being in regions and cities

Productivity growth matters because it helps determine wage levels and the types of jobs available that determine to a significant extent well-being. Material and non-material elements of well-being depend on one's personal characteristics, as well as the characteristics of the places where one lives and works (OECD, 2014c). Interregional differences within countries in some areas of well-being, such as unemployment rates, are higher than across countries. Residents in some regions live, on average, several years longer than their counterparts in other regions. While there is mobility across different regions, often the least skilled are the least mobile and may remain in those places with fewer opportunities. The results are gaps for people living in different regions and cities in different dimensions of well-being, with some gaps being more persistent than others.

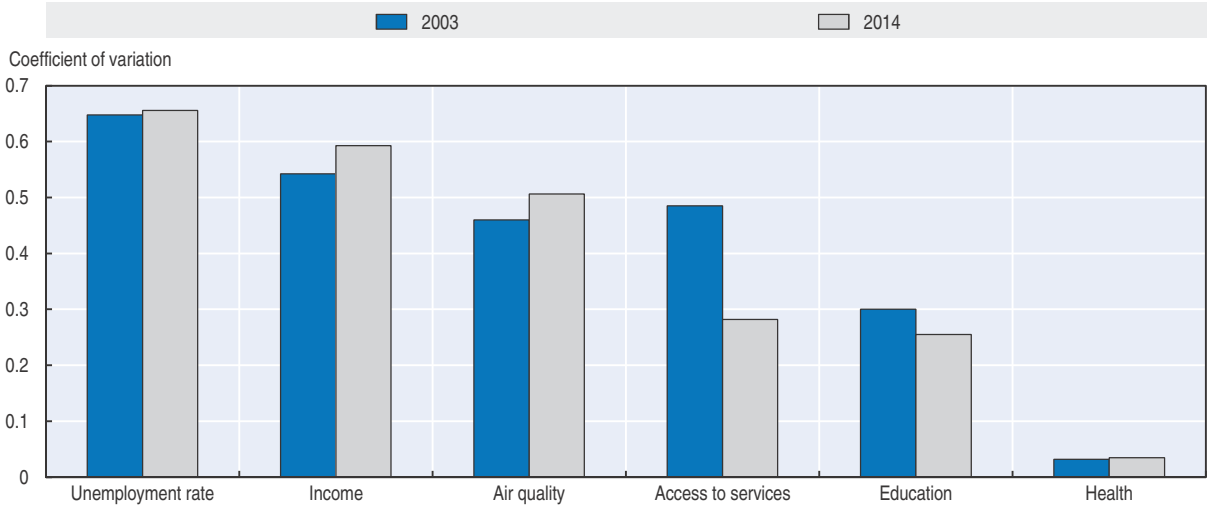
Well-being differences across regions have both increased and decreased depending on the dimension

The degree of interregional disparities in well-being and the progress made in closing interregional gaps depends on which dimension of well-being is considered. Across all regions in 33 OECD countries, the largest regional disparities are those associated with unemployment rates, household income levels and air quality (PM2.5 levels). In other factors, such as life expectancy, the interregional variations within the OECD are less pronounced in terms of the coefficient of variation (Figure 1.24). Such differences might seem small in statistical comparison, but may be substantial for individuals. Across OECD countries, the difference in life expectancy is eight years (between Japan and Mexico). Within countries, that interregional difference can be up to six years of greater life expectancy, e.g. in Australia between the Australian Capital Territory and the Northern Territory or in the United States between Hawaii and Mississippi. Another factor that also shows stark interregional variations across the OECD is that of safety (as measured by homicide rates) (OECD, 2016b).

The progress in reducing disparity in well-being also depends on the dimension, and some dimensions are easier to influence through policy. Over the last decade, regional disparities across the OECD have decreased in the two indicators that are most directly affected by policies: access to services (measured by broadband access) and education. Conversely, disparities in household income, air quality, unemployment and life expectancy have increased to different degrees (Figure 1.24). Safety is another well-being

Figure 1.24. **The degree of interregional variation depends on the well-being dimension**

Regional disparities in well-being dimensions OECD (TL2) regions



Note: The higher the coefficient of variation, the higher the degree of regional disparities.
Source: Calculations based on OECD (2016f), OECD 2016, Regional Well-Being, *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

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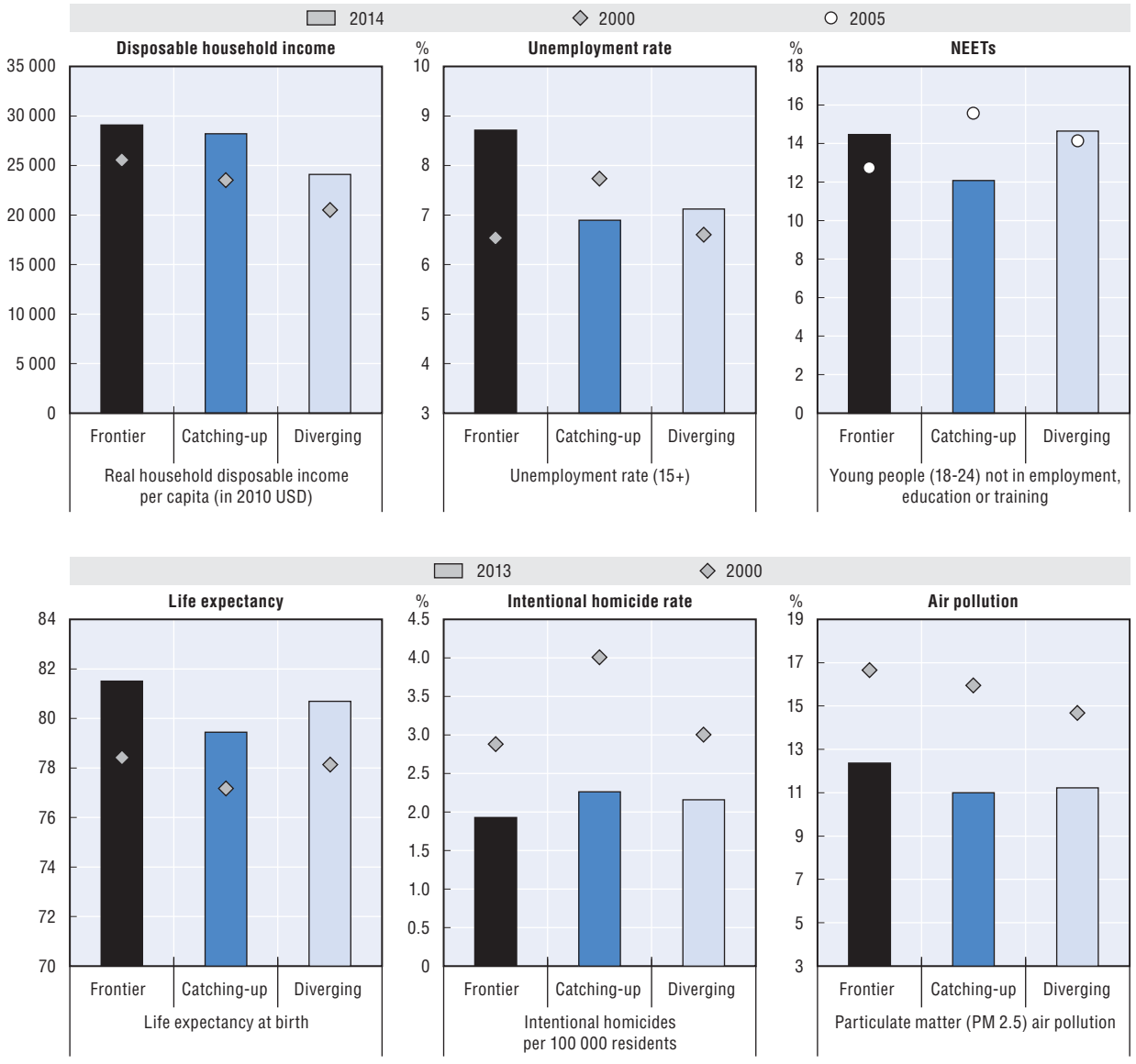
dimension that has experienced an increase in inequality across the OECD over the last decade (OECD, 2016b). Well-being differences are observed between urban and rural areas, the latter generally being better off in terms of housing and the environment (see Chapter 3).

The catching-up performance of regions in terms of productivity supports economic dimensions of well-being and can create benefits in other dimensions of well-being. As expected, higher productivity performance in terms of catching up is associated with higher levels of household income, both in terms of levels and growth rates (Figure 1.25). More striking is the impact of catching up on employment. Average unemployment in catching-up regions declined between 2000 and 2014, while diverging regions and the frontier experienced increases in unemployment. The large increase in the frontier reflects a rise in unemployment across a range of countries in Southern, Western and Northern Europe, but also in the United States. Catching up benefited the young as well, as the average rate of 18-24 year olds who are not employed, in education or in training (NEETs) declined on average in such regions. For other dimensions of well-being, such as safety and environmental quality, all types of regions improved and in approximately the same proportions in different region types. The levels of life expectancy tend to be lower in the group of catching-up regions (on average 1 year less), however such an indicator changes much slower than other dimensions of well-being. With respect to air pollution, often a negative externality of economic growth, there was nevertheless a greater reduction in particulate matter in catching-up regions as compared to other regions.

Frontier and catching-up regions tend to create income benefits for their residents. Nearly 60% of the most productive (frontier) regions are also regions that belong to the top 10% of regions in terms of disposable household income (Figure 1.A1.1 in Annex). The importance of productivity for household disposable income is also evident in the

Figure 1.25. **Well-being indicators and productivity performance**



Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

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widening gap between diverging and catching-up regions. Diverging regions account for 45% of the regions where the income gap to the country's wealthiest regions widened, but only for 20% of regions that narrowed the disposable income gap. This is in stark contrast to regions that are catching up in productivity. These regions make up only 15% of regions where income gaps widened, but more than 30% of regions that improved relative to the highest income regions. The patterns indicate general trends, but are not necessarily deterministic, e.g. redistribution can alleviate the impact of diverging economic growth on household incomes. But labour productivity is essential to create redistributable wealth.

Productivity growth can be accompanied by job creation. As firms become more productive, their competitiveness increases, leading to more demand and incentives to hire more workers. At the regional level, productive firms create more demand for local products and therefore more employment opportunities. These effects can be very large. For US metropolitan areas, estimates suggest that a new job in the tradable sector eventually results in the creation of up 1.6 jobs in the non-tradable sector (Moretti, 2010). For Swedish labour market regions the impact is slightly lower, 0.5 jobs per new job in the tradable sector (Moretti and Thulin, 2013). In both the United States and Sweden, the strongest impact, or "local multiplier", is found for the creation of high-skilled jobs in the tradable sector. A new employee with tertiary education is, on average, associated with about 3 new jobs in the non-tradable sector in the city or labour market region (ibid.). The reasons are two-fold. First, firms that create tradable-sector jobs require services from other local industries, services such as catering or maintenance at the lower end of the skill spectrum, but also legal advice and marketing at the high end. In addition, the workers who fill the new jobs create demand for local services, such as nannies, cafés or personal trainers. In some cases however, productivity growth may be accompanied by job destruction.

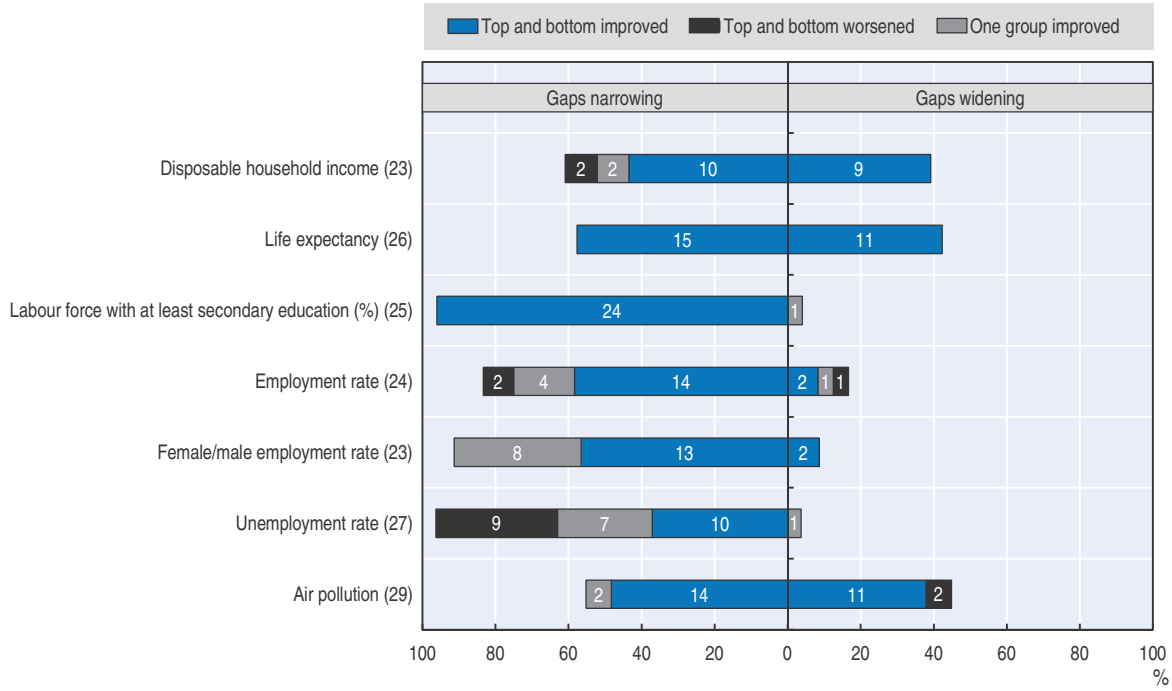
While information and communications technologies have created a large number of jobs, many highly-valued companies create their services with relatively small numbers of in-house staff. Young and fast growing firms account for a disproportionate share of total job creation (Criscuolo, Gal and Menon, 2014). This is also the case in ICT sectors, but many innovative internet-focused firms create rapid economic growth with a small workforce. Skype S.a.r.l., the voice-over-ip service company, for example, had around 140 employees with stock options when it sold to eBay in 2005-06. The price eBay paid was USD 2.6 billion.[16] In 2011, just 5 years later, Skype was sold to Microsoft for USD 8.5 billion. As of June 2010, Skype had less than 840 staff and contractors.[17] The example of Skype is by no means unique, but its incorporation in the larger tech-companies also shows that diversification of product portfolios and continued expansion of successful and fast-growing companies leads to significant job creation. This is also true for companies that focus on facilitating contact between clients and service providers, such as Airbnb for holiday rentals or Uber for transport services. Founded in 2008, Airbnb had already around 600 employees in 2013 and about 1 600 by 2015.[18] But these jobs are not directly related to the services that are being traded on the company's platform and pale in comparison to the number of users and listings.[19]

Most productivity growth is accompanied by employment growth, but in some regions the crisis led to significant job losses and recovery is not complete. The total number of jobs increased in most OECD regions and countries. But in many regions in Southern and Eastern Europe (in Greece, Hungary, Italy and Portugal), the number of employees declined significantly between 2000 and 2013. In some cases this decline was accompanied by increased labour productivity. In the majority of cases, labour productivity growth is accompanied by employment growth (see Chapter 3) and often the increase in productivity through reduced employment is a transitory effect that fades in the aftermath of a crisis. The high level of unemployment and the lack of job recovery suggest that this transitory effect has not been completed in some parts of Europe.

Catching-up dynamics are also possible for different dimensions of well-being, and this trend is observed in several dimensions. For the most part, well-being increased in both the top and bottom 10% of regions across the majority of OECD countries, but gaps between the best- and worst-performing regions widened in some cases. Considering the gap, defined as the ratio of the top and bottom 10% regions (i.e. the regions that account for 10% of the country's population at the top and bottom), for several indicators and in many countries there is a narrowing of the gaps in well-being (Figure 1.26). In at least one-quarter of the countries where gaps widened, the regions that were initially part of the top and bottom 10% of regions changed between 2000 and 2013. The regional disparities in several labour-force related variables (unemployment, the education level of the workforce, and the gap between the employment rate for women compared to that for men) decreased in most countries. But in nine countries a narrowing gap in unemployment was due to increased unemployment, with larger unemployment increases in the top 10% than in the bottom 10% of regions. In other words, the gap narrowed, but it was not due to a catching-up dynamic. In contrast, the disparity between the regions with the highest and lowest levels of PM2.5 air pollution increased for 45% of the countries (13 out of 29 countries). Nevertheless, in all but two countries, pollution decreased in both the regions with the highest and lowest levels of PM2.5 air pollution, thus making everyone better off. For per capita disposable household income and life expectancy, the changes are similarly split with slightly more than half of the countries showing a narrowing gap.

Figure 1.26. **Gaps between the top and bottom performing regions in many well-being dimensions generally narrowed**

Top and bottom 10% performing regions (i.e. 10% of the country's population), 2000-13



Note: The relative gap is the percentage difference between the top and bottom TL2 regions, defined as the regions with the highest/lowest value in the indicator that account for no less than 10% of the country's population in the reference year. Changes are for the period from 2000 to 2013/14, or closest year available. Only countries with at least 3 regions with data from 2005 or earlier are included. Numbers in parenthesis indicate the number of countries for which data is available. Numbers in the bar indicate the number of countries in the category.

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

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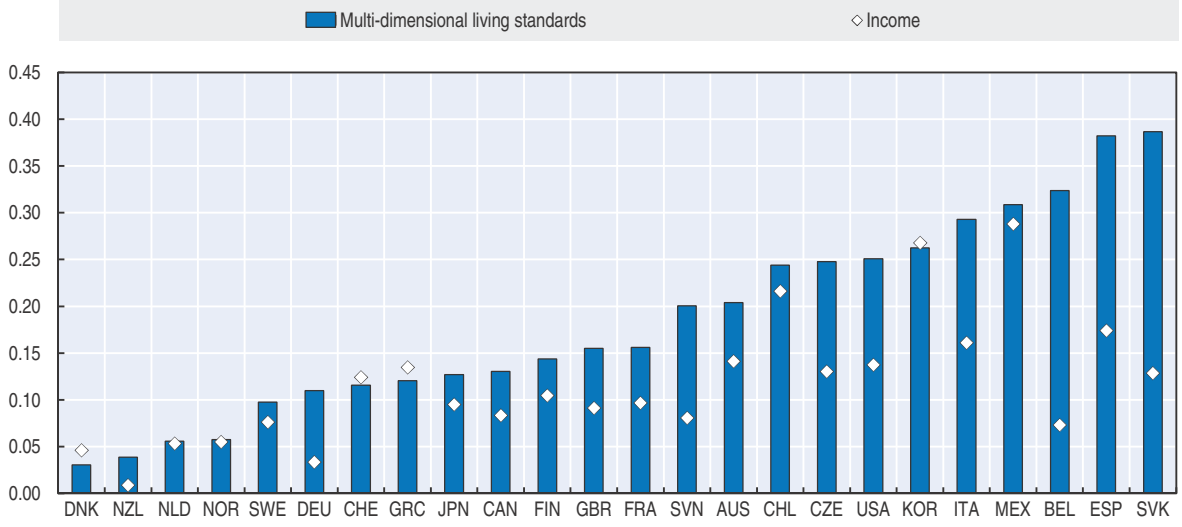
While overall convergence is observed on individual well-being dimensions at the country level, when several dimensions are combined, interregional disparities can be exacerbated. One way to combine dimensions is through a calculation of multi-dimensional living standards. The OECD has recently produced a composite indicator that combines income, unemployment and health.[20] This calculation at the regional level in a sample of 26 OECD countries finds that existing disparities in health and unemployment rates accentuate the gaps relative to household income only. When considering the changes over time, from 2003 to 2012, regional disparities between the top and bottom regions were mainly driven by trends in income and jobs (Veneri, and Murtin, 2015). Regional characteristics are also highly relevant in explaining variation in self-reported life satisfaction. In a recent study, 40% of the explained variation of OECD residents' self-reported life satisfaction can be accounted for by regional characteristics, with individual characteristics accounting for the other 60% (Brezzi and Diaz Ramirez, 2016).

Figure 1.27. **Regional disparities in multidimensional living standards are higher than for income alone**

Coefficient of variation (higher values mean larger disparities), 2012



Note: Income=disposable household income.

Source: Veneri,P. and F. Murtin (2016), "Where is inclusive growth happening? Mapping multi-dimensional living standards in OECD regions", OECD Statistics Working Papers, No. 2016/01, *http://dx.doi.org/10.1787/5jm3nptzwsxq-en*. Calculations based on OECD (2016g), *Regional Well-Being* (database), *http://www.oecdregionalwellbeing.org/* (accessed 12 June 2016) and national income surveys.

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Cities face particular challenges for inclusion across income levels and populations, such as immigrants

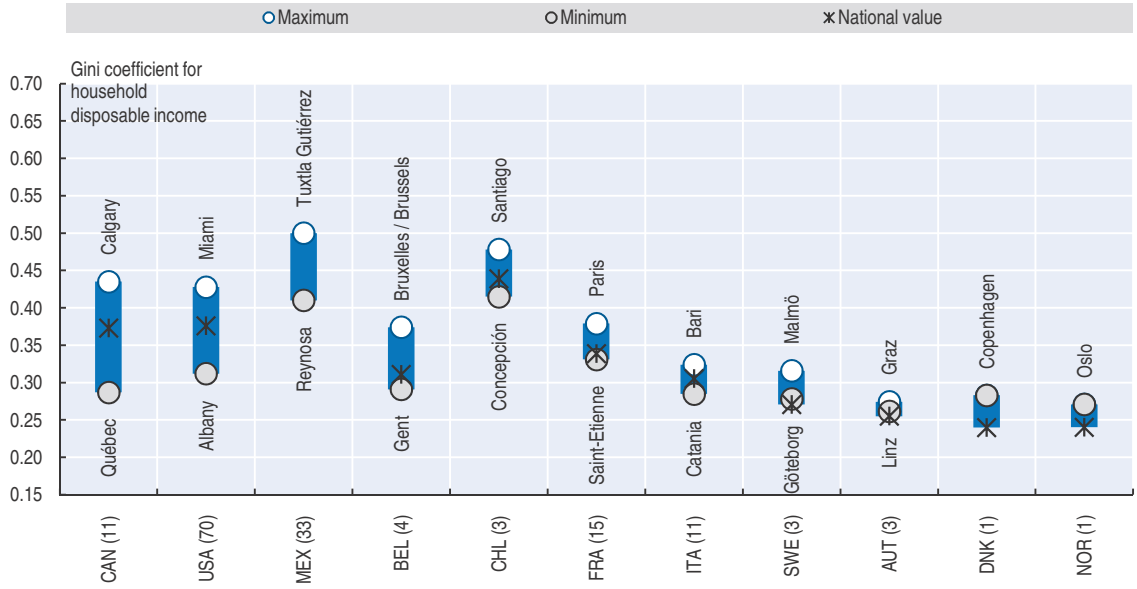
Cities generally have higher rates of productivity than other regions for a variety of reasons, but may face some trade-offs that require more integrated policy approaches. One of the drivers of these higher rates is that co-location creates "agglomeration economies". Agglomeration economies confer a productivity "bonus" to workers that depends on the size of the city. Metropolitan areas also benefit from other advantages, such as a diversity of firms in close proximity, above and beyond the density of firms in the same sectors, which can also spur more innovation. An additional factor that contributes to the success of cities is the concentration of highly educated workers. These workers are not only more

productive themselves, but create "human capital spillovers", i.e. a higher percentage of highly educated workers increases productivity (measured by individual earnings) for all workers (e.g. Moretti, 2004). In a sample of five OECD countries (Germany, Mexico, Spain, the United Kingdom and the United States) a 10 percentage point increase in a city's share of university graduates, is associated with productivity increases of about 3% (Ahrend et al., 2014). In addition, knowing that there are greater returns to education provides an incentive for further investment in one's education, creating a virtuous cycle.

However, the opportunities afforded to high-skilled workers by larger cities may also exacerbate the degree of income inequality among workers in metropolitan areas. The disparities in terms of both wage and total income can indeed be very high, and vary considerably across metropolitan areas, with some being more unequal than others (Figure 1.28). Larger cities have, on average, higher levels of income inequality (Boulant, Brezzi and Veneri, 2016). In part, this is due to metropolitan areas providing opportunities at both ends of the skills spectrum; they attract some of the highest wage earners ("bankers"), as well as workers for many lower-skilled jobs, often in the non-tradable sector ("baristas").[21] Metropolitan areas also tend to attract immigrants, whose skills might not be directly transferable to their new environment or might be undervalued in the labour market for various reasons, including lack of qualification recognition.

Figure 1.28. **The degree of metropolitan area income inequality can vary a lot in some countries**

Metropolitan areas with minimum and maximum Gini coefficients, by country, 2014 or latest year available



Note: Elaboration based on national data from tax records and household income surveys. Countries are ordered by the width of range between minimum and maximum Gini coefficients. The national Gini coefficients are estimated using the same source of data employed for the metropolitan areas. Due to sampling errors, they might slightly deviate from values provided by national surveys. Data do not allow the calculation of national Gini coefficients for Mexico. Numbers in parenthesis indicate the number of metropolitan areas (500 000+ inhabitants) in each country.

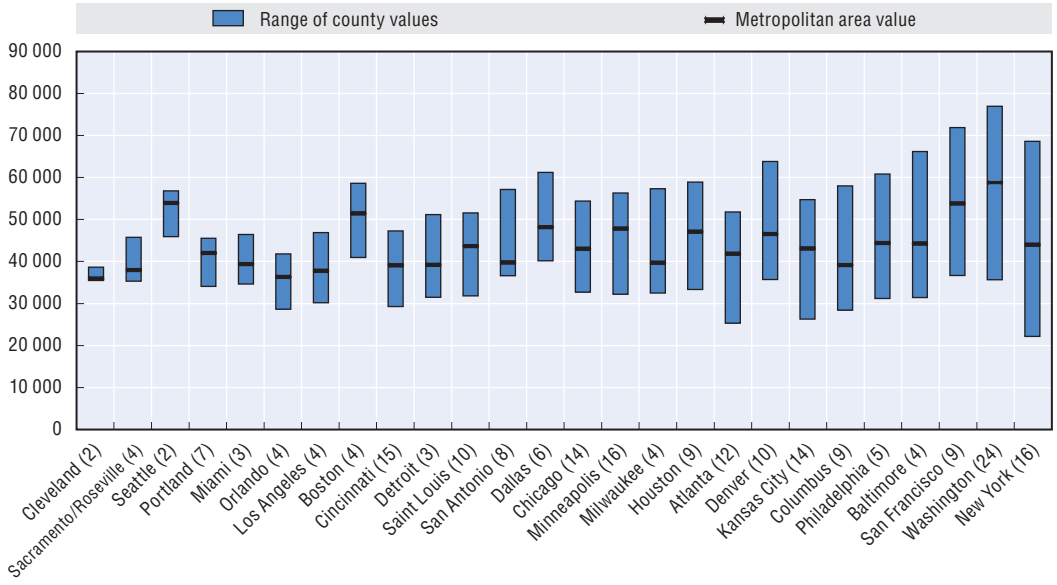
Source: Boulant, J., M. Brezzi, and P. Veneri (2016), "Income Levels and Inequality in Metropolitan Areas: A Comparative Approach in OECD Countries", *OECD Regional Development Working Papers*, No. 2016/06, *http://dx.doi.org/10.1787/5jlwj02zz4mr-en*.

StatLink http://dx.doi.org/10.1787/888933411877

In some metropolitan areas, average household income in a jurisdiction in the same metropolitan area can be double that of another, such as in the United States (Figure 1.29). The county level covers many localities; therefore those differences would be much more striking by municipality or neighbourhood. Such segregation by income or social background can limit access to jobs, particularly in cases where there is traffic congestion and poor public transport serving those locations where the lower income groups live. There may also be lower quality public services in the locations with a larger share of lower-income residents. Recent evidence for the United States shows that the impact of a lack of opportunities can have profound and lasting effects, not only for the current, but also for future generations. The intergenerational "upward mobility" of children, i.e. children improve their position in the income distribution, relative to their parents, is determined by the characteristics of the neighbourhoods in which they grew up (Chetty and Hendren, 2015). Among the characteristics, lower levels of segregation and income inequality, as well as better primary schools, improve children's chances to move up in the income distribution (Chetty, et al., 2014). As a result, policies to address inclusion need to consider not only the distribution in income across individuals, but also the disparities generated by segregation according to income level or other socio-economic factors.

Figure 1.29. **Average household income varies significantly across jurisdictions in a metropolitan area**

County-level variation of household disposable income in US metropolitan areas in 2014: constant 2010 prices USD



Note: Metropolitan areas are ordered by increasing value of the difference between the maximum and the minimum county values. The figure includes the 26 largest American metropolitan areas according to the OECD definition of functional urban areas. Data come from American Community Survey; 2014. Numbers in parenthesis after the metropolitan area's name indicate the number of counties included in a metro area.

Source: Based on Boulant, J., M. Brezzi, and P. Veneri (2016), "Income Levels and Inequality in Metropolitan Areas: A Comparative Approach in OECD Countries", *OECD Regional Development Working Papers*, No. 2016/06, *http://dx.doi.org/10.1787/5jlwj02zz4mr-en*.

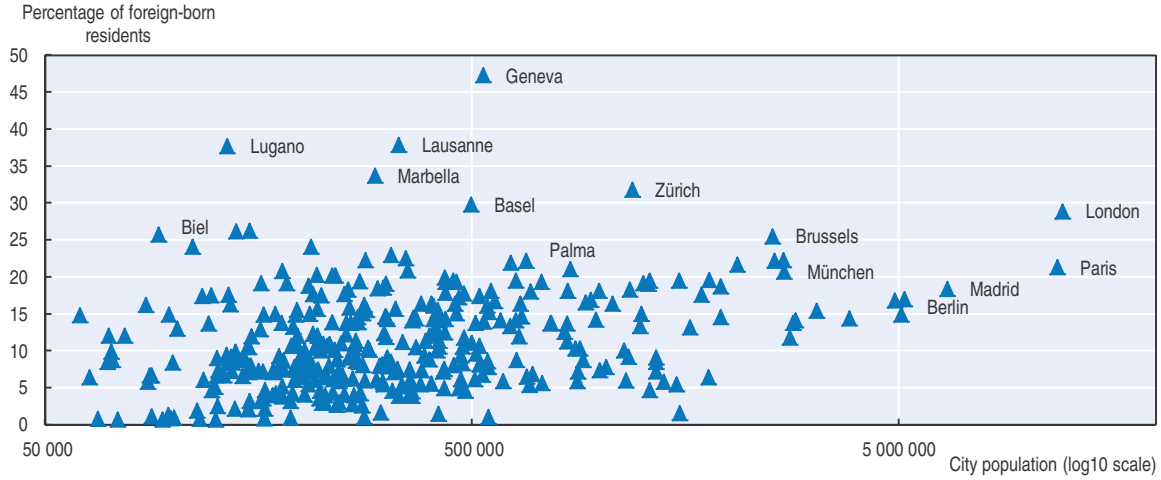
StatLink http://dx.doi.org/10.1787/888933411883

Another source of inequalities in cities is related to the integration of migrants. National government budgets may benefit from having additional workers, such as through additional contributions to pension systems, but subnational budgets bear a lot of the burden. Many of the public services that play a critical role in making integration happen are financed and delivered by local governments.[22] The right framework conditions at the local level to facilitate integration include housing, the local labour market, the supply of education, health care, and the presence of communities and strong civil societies, among others. Co-ordination with national-level policies is needed, but also across stakeholders at the local level. Fragmentation among municipal governments in the same metropolitan area can accentuate this challenge, where both "immigration-friendly" and "immigration-hostile" local governments can be co-located (Walker and Leitner, 2011).[23]

The challenge of integrating migrants has moved beyond the "gateway" or global cities to include secondary cities. While many global cities have a high share of foreign-born residents, such as Paris, London, or Brussels, dozens of smaller urban areas with between 50 000 to 500 000 inhabitants are increasingly home to a population that is 10% to 20% foreign born (Figure 1.30). Some cities like Detroit or Cleveland are pursuing aggressive pro-immigration agendas in order to fight urban blight (Tobocman, 2014). In other cases, immigrants are seen as an opportunity to fulfil needs in rural areas. In Italy, for example, migrants are a fundamental part of the emerging silver economy in suburbs and in rural areas (Çağlar, 2014). Policy approaches that allocate immigrants to locations with less expensive housing may face longer-term problems if there are insufficient jobs available in those same locations (OECD, 2016h). Among the main challenges of migration policies is the need to combine thorough integration efforts with a quick delivery, as the speed of integration allows greater benefits (Aiyar et al., 2015). Understanding the role of a locality in the global migration flows, as a destination or transit point, also allows for better policy making to support integration (IOM, 2015).

Figure 1.30. **Many small- and medium-sized cities have a significant share of foreign-born residents**

Share of population that is foreign born by size of functional urban area, Europe 2011



Source: EU Urban Audit data for 2011 or closest year available for 15 out of 28 EU countries. EU Urban Audit (n.d.), "Functional urban areas (urb_luz)", (database), *http://ec.europa.eu/eurostat/web/cities/data/database* (accessed June 2016).

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Public action to promote catching up and inclusion: structural reforms, public investment (including through place-based policies) and governance reforms

The integration of policies across sectors, levels of government and places which underpin regional development can promote catching-up dynamics and boost aggregate productivity. It is neither desirable, nor is there fiscal space, for interregional productivity gaps to be entirely compensated by redistribution. The regional development paradigm outlined in the first Regional Outlook (OECD, 2011a) highlights the importance of combining policies across different sectors to unlock regions' growth potential and ensure that growth is both inclusive and sustainable. It also stresses that policies need to take the local context, the local "eco-systems", into account. This can support the effectiveness of policy implementation, but also ensure that policy makers recognise that policies that are not spatially targeted can nevertheless have a differential impact across different types of regions and design them accordingly. Strategies that focus solely on the weakest regions are likely to miss out on potential growth compared to strategies that take an integrated regional view. The "pull" that frontier regions can exert is one of the forces that could support greater catching up, but this force does not necessarily arise automatically. In other words, what is needed are policies that boost productivity in all regions while guarding against potential adverse effects on equity, both in terms of income and non-income outcomes that matter for well-being.

Economy-wide structural reforms help regional catching up, more so if complemented by regional development policies

The current approach to structural reforms should be complemented by a regional perspective to boost productivity and the extent to which it is inclusive. The traditional view of structural policies is that the degree of structural reform will determine, in large part, the level and growth of productivity. This policy package generally concerns product markets, financial markets and labour markets, as well as selected other policies, such as for health systems and pensions. The expected impacts of these structural reforms assume that all factors are mobile. However, evidence shows that some factors are particularly "sticky" to places, most notably workers. For the United States, 89% of applications sent through an online job portal were sent to firms in the same state as the applicant, which indicates a strong "distaste for distance" (Marinescu and Rathelot, 2016). In empirical work for other countries, the estimated "distaste" tends to be even stronger, e.g. in the United Kingdom (Manning and Petrongolo, 2015). This is why active labour market policies, including those that facilitate moving to jobs, are needed to complement a labour market reform.

Certain structural reforms can benefit lagging regions even more than leading regions. Several structural policies are a greater bottleneck for the growth of lagging regions relative to frontier regions.[24] For example, product market regulations in wholesale and retail trade have greater negative impacts on the productivity growth of lagging regions. Rigid employment regulations also penalise lagging regions more than leading regions, which amplifies the challenge of lagging regions that tend to be less urban and thus have thinner labour markets with fewer high-skilled workers. Conversely, trade openness appears to help lagging regions disproportionately more than other regions. In other cases, regulatory barriers may have a greater impact on leading regions, for example product market regulations reduce labour productivity growth in financial intermediation and business services more strongly in regions that are closer to the productivity frontier (D'Costa, Garcilazo and Oliveira Martins, 2013).

To be more effective, structural reforms may also require complementary policies that take a place-based dimension into account. For example, labour market reforms will be of lesser benefit if there are no complementary measures to support better matching of workers to jobs or to facilitate physical access to jobs. Many of the labour market matching considerations, particularly for low-skilled workers, may involve efforts to tailor worker training to the needs of firms located in the area. Transport infrastructure is another tool, in both rural and urban areas, which can increase the effective size of a local labour market and therefore boost the productivity of firms and individual workers.

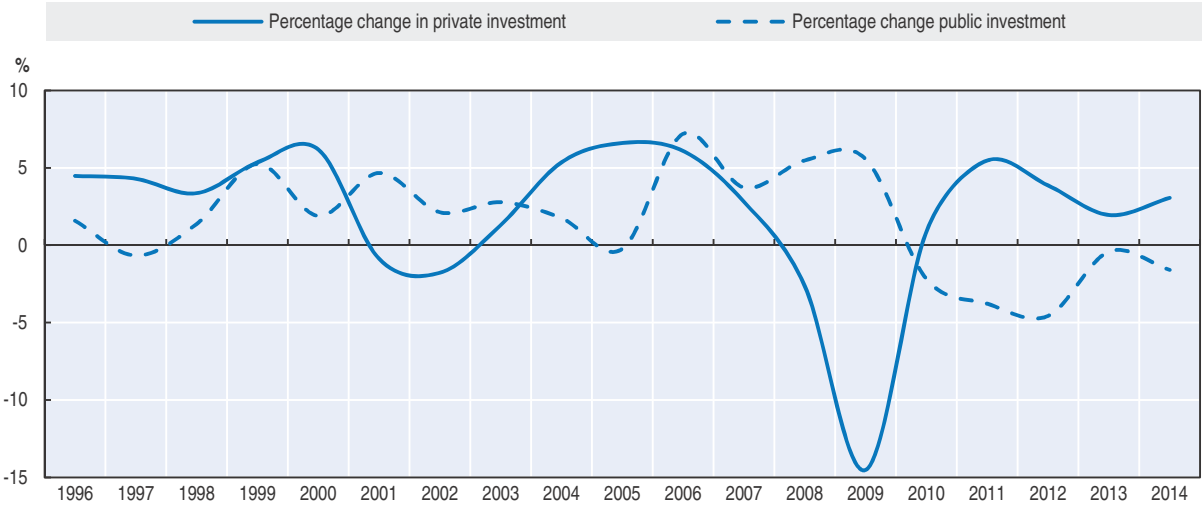
Well-designed and well-implemented public investments also support regional catching up

Public investment can make important contributions to growth, albeit research highlights some caveats. Considering 68 studies for the 1983-2008 period, the findings of one meta-analysis suggest an under-supply of public capital in OECD economies, with potential (gross) returns of USD 16-40 in GDP per USD 100 investment (Bom and Ligthart, 2014). Other findings show that the returns to investment depend on the initial level of public capital, as when already high, these effects may not be as strong (Arslanalp, 2010). The timeframe matters for observing an impact on growth, as well as whether investments are not only made within a region but also in neighbouring regions (Bom and Ligthart, 2014; Creel and Poilon, 2008). Studies on investments in transport infrastructure have shown mixed results, albeit maintenance of existing infrastructure may prove to be particularly important (Congressional Budget Office, 1991; Cullison, 1993). Different forms of network infrastructure may have growth impacts above and beyond their contributions to capital stock (Sutherland et al., 2009) and supporting investment in human capital might be important to make the most of physical capital investment.[25]

There are notable projected financing gaps to meet investment needs across the OECD and the globe. The OECD estimates annual global investment requirements by 2030 for telecommunications, road, rail, electricity (transmission and distribution) and water are likely to total around 2.5% of world GDP. If those estimates were to include electricity generation and other energy-related infrastructure investments in oil, gas and coal, the figure would increase to 3.5% of GDP (OECD, 2007). In the developing economies, where the population is expected to grow by 2 billion people between now and 2050, much new infrastructure is required. In advanced countries, the bulk of those infrastructure financing needs are for the maintenance of existing infrastructure. For example, in EU countries, maintenance and renewal of existing infrastructure accounts for around 70% of public investment.[26] There is a challenge of financing gaps from both the private and public sectors.

There has been a decline in public investment relative to pre-crisis levels with possible underinvestment. Since the crisis, year-to-year changes in public investment have been negative. Private investment year-to-year changes started to rebound in 2014 (Figure 1.31). Both public and private investment appear to follow mostly opposing trends (as one goes up, generally the other goes down). However, since private investment is more than five times greater than public, those fluctuations do not necessarily compensate for one another. For the OECD area as a whole, government spending on gross fixed capital formation as a share of total general government outlays declined from 9.5% in 1995 to 7.7% in 2014 (Figure 1.32). In EU countries, total investment in Q2 2014 was 15% less than in 2007 despite a GDP that has rebounded to pre-crisis levels, which translates into a

Figure 1.31. **Trends of weakened public and private investment may undermine productivity goals**



Note: Investment is gross fixed capital formation as reported in the national account statistics. OECD total excludes the following countries due to lack of data over the period 1996-2014: Chile, Mexico and Turkey.
Source: Calculations based on OECD (2016i), *National Accounts Statistics* (database), *www.oecd-ilibrary.org/economics/data/oecd-national-accounts-statistics_na-data-en* (accessed 2 June 2016).

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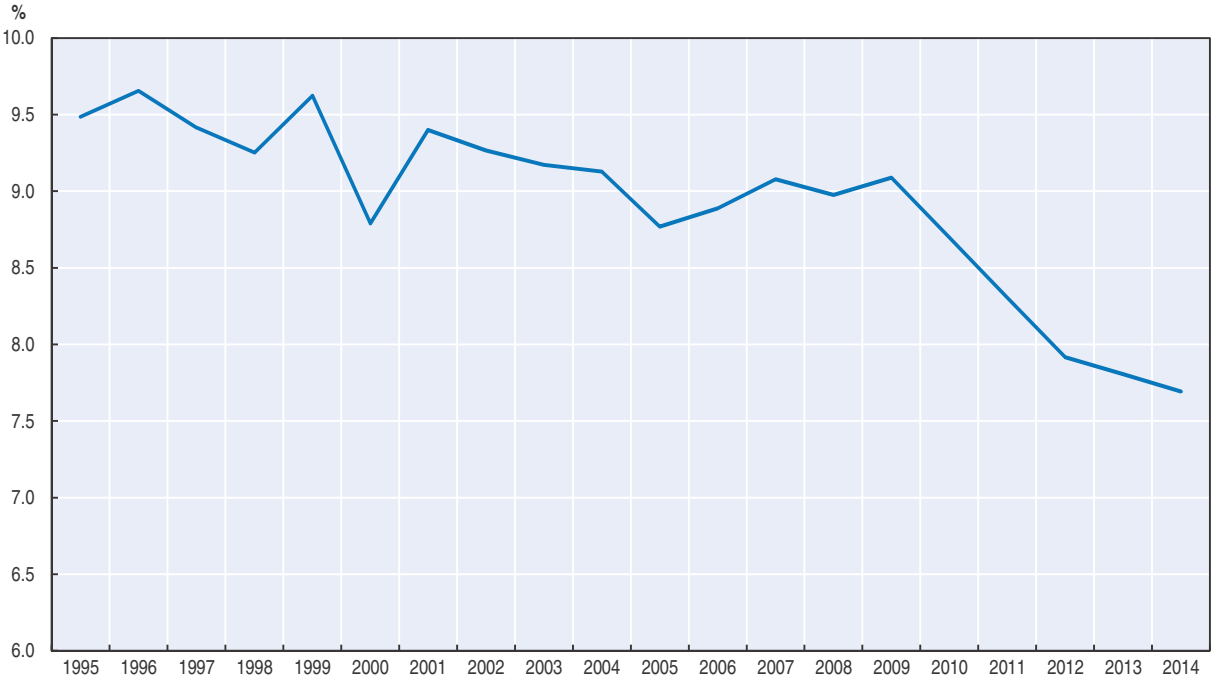
Figure 1.32. **Public investment as a share of government expenditure on a downward trend over the last 20 years**



Note: OECD total excludes the following countries due to lack of data over the period, 1995-2014: Chile, Iceland, Mexico and Turkey.
Source: Calculations based on OECD (2016i), *National Accounts Statistics* (database), *www.oecd-ilibrary.org/economics/data/oecd-national-accounts-statistics_na-data-en* (accessed 2 June 2016).

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decline of investment of EUR 430 billion. In 2013, investment accounted for 19.3% of GDP, around 2 percentage points below the longer-term average of typical years, translating into levels of EUR 230 to 370 billion below historical rates. The problem is attributed to lower investor confidence in European financial markets and not a lack of capital, per se (EC, 2015).

The impact of public investment on growth depends also on how it is managed. One calculation estimates that globally USD 1 trillion per year could be saved from better governance of expected public infrastructure investment needs (McKinsey, 2013). In addition, the capacity for public investment to leverage private investment, rather than crowd out such investment directly or through the way public investment is financed, is also critical. Several studies have also highlighted the role of different aspects of institutional quality in the effectiveness of public investment and its impact on growth at national and regional level (OECD, 2013b).

The subnational level is a critical financing partner but has additional capacity constraints. Subnational governments accounted for 40% of public expenditure, 50% of public procurement, 59% of public investment and 63% of public staff expenditure in 2014. In the period of fiscal stimulus after the crisis began, subnational governments partnered with national governments to increase public investment. However, from 2010, public investment by subnational governments was squeezed and served as the "adjustment variable". The steep drop stopped in 2013, albeit it declined another 1.2% in real terms between 2013 and 2014. Overall investment has not reached pre-crisis levels in terms of volume and as a share of GDP. In a recent survey of subnational governments in Europe, the financing gaps reported by subnational governments were driven mainly by drops in allocations from central governments and a lack of recourse to private financing. Many of the infrastructure financing gaps are in areas related to productivity drivers, such as roads, educational institutions and economic development investments (Box 1.8).

Box 1.8. **Results of the OECD-COR 2015 survey on public investment of subnational governments**

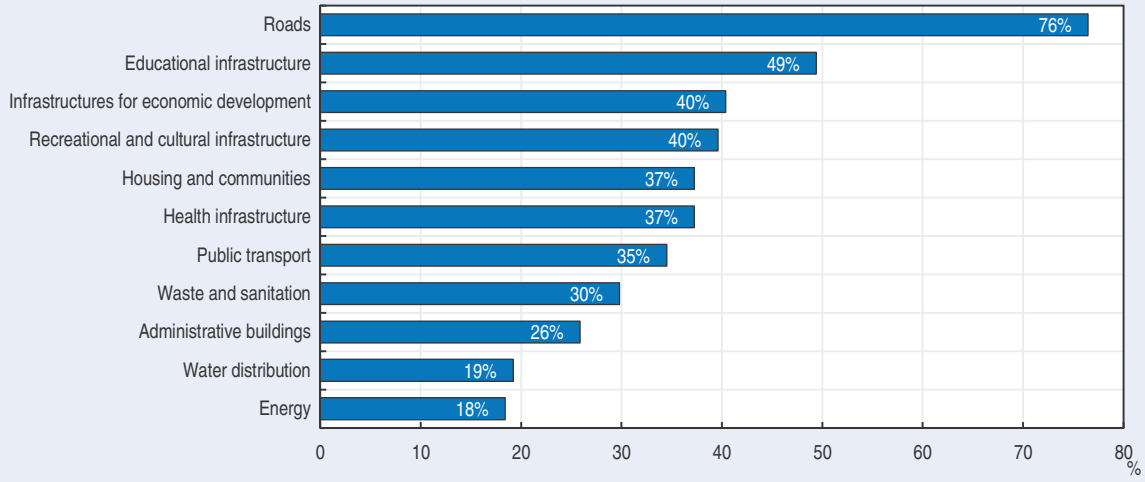
The 2015 consultation identifies the main financing and governance challenges for infrastructure investment of subnational governments (SNGs) in the European Union.[1] It also seeks to test the degree to which SNGs are facing challenges with the implementation of the principles contained in the OECD *Recommendation on Effective Public Investment across Levels of Government*.[2] This Recommendation sets out 12 principles to help governments assess the strengths and weaknesses of their public investment capacity across levels of government and set priorities for improvement.

Virtually all SNGs report investment spending gaps (96%), whether for new infrastructure or operations and maintenance. Nearly 45% of SNGs reported a drop in investment since 2010, of which more than 70% experienced a drop by more than 10%. These cuts appear to be present more in regions and counties than in municipalities. While tax revenue has not changed significantly for most SNGs, over half (53%) experienced cuts in the grants they receive from central governments and 39% indicate stable or declining use of loans. Only a minority of cities and regions (7%), essentially metropolitan areas and regions, report increasing private sources of financing since 2010. A problematic legal and regulatory environment for public-private partnerships is another major challenge for accessing private financing, as reported by 35% of SNGs.

Box 1.8. **Results of the OECD-COR 2015 survey on public investment of subnational governments** *(cont.)*

Several of the areas that are most affected by subnational funding cuts are areas that directly influence drivers of productivity. Indeed, around three-quarters of SNGs surveyed are not able to finance their road infrastructure needs, half are not able to build relevant educational infrastructure and 40% of SNGs surveyed report funding gaps for infrastructure destined for economic development purposes (see figure below).

Sectors subject to investment cuts in the last five years



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Notes:

1. The consultation took place between 31 March and 15 July 2015 and was available in all the official EU languages. In total, there were 296 respondents, 255 of which are SNGs in 27 EU Member States (Luxembourg did not participate in the survey). They represent all categories of SNGs: regions and provinces (25%); intermediary entities (e.g. county or department) (10%); small municipalities i.e. under 50 000 inhabitants (33%); medium municipalities i.e. between 50 000 and 500 000 inhabitants (22%); large municipalities with more than 500 000 inhabitants (2%); and inter-municipal co-operation bodies (8%).
2. For more information on these Principles, see *www.oecd.org/effective-public-investment-toolkit*.

Source: OECD-COR (2016), *Results of the OECD-CoR Consultation of Sub-national Governments: Infrastructure planning and investment across levels of government: current challenges and possible solutions*, *https://portal.cor.europa.eu/europe2020/pub/Documents/oecd-cor-jointreport.pdf*.

Multi-level governance and territorial reforms can unlock productivity potential and support inclusion

While subnational governance is not typically part of the productivity discussion, it should be. Given that urban areas often encompass many localities, not only the core city, the metropolitan scale is critical for policy. The more complex the metropolitan area is in terms of the number of jurisdictions, the harder it may be to reap the agglomeration benefits associated with size that translate into higher levels of productivity. Out of the 281 metropolitan areas of 500 000+ inhabitants in the OECD, one-quarter contain at least 100 municipalities, and that rises to one-third when considering those that have at least 60 localities.[27]

There is indeed a productivity penalty associated with administrative fragmentation, as measured by the number of jurisdictions. A doubling of the degree of fragmentation results in a penalty of 6% for productivity. That penalty is halved when there is a governance body for the metropolitan area (Ahrend et al., 2014). This is one of the reasons

why many countries have already, or soon will, implement metropolitan governance arrangement reforms, which are typically designed for the largest cities (OECD, 2015d). A given level of municipal fragmentation has a greater negative impact on growth in urban regions due to the higher density of interactions than in rural areas (Bartolini, 2015).

One of the critical elements of inclusion, as well as productivity, is the ability of workers to reach jobs from their homes. Commuting costs in the form of time and money influence the distance by which workers can readily reach jobs. This is true for both private transport as well as public transport options. A larger effective labour market allows workers to find better matching jobs or firms. Reduction in the time and cost of commuting can also improve quality of life. Metropolitan governance authorities typically focus on regional development, transport and spatial planning (Ahrend, Gamper and Schumann, 2014). Co-ordination across municipalities or regions can be used to improve the cost-effectiveness of public services, the quality of those services, and coherence of overall planning, among other rationales. Those metropolitan areas with a transportation authority had higher levels of satisfaction with public transport relative to those living in cities that did not (Ahrend, Gamper and Schumann, 2014).[28]

Administrative fragmentation is also associated with greater levels of segregation by income, that in turn influences access to opportunities. Across several OECD countries, a stable and positive association is found between administrative fragmentation and spatial segregation across local jurisdictions within metropolitan areas. This finding is consistent across estimates when considering a range of measures of both segregation and fragmentation.[29] Administrative fragmentation thus can contribute to the virtuous or vicious cycles associated with segregation by income (see previous section).

Conclusion

If aggregate labour productivity derives in large part from the catching up of regions, given recent trends it is not surprising that there has been slowdown of labour productivity growth and an increase in inequalities. Creating the conditions for regions to improve productivity and generate more and higher quality jobs is, however, not straightforward. As countries continue to seek structural reforms, they should consider the complementary approaches both in terms of national policies and the respective roles that national and subnational governments can play. There is also a role for public investment and reforms of subnational governance.

These three areas of public action to promote regional catch up can offer a double dividend to countries in terms of productivity and individual well-being. There is no magic bullet, and in some cases these goals will not be jointly attainable. However, it is clear that the place-based dimension of policies is insufficiently accounted for in many policy areas. The next chapter will therefore consider the objectives and instruments for regional, urban and rural development policies to guide place-based public investment, as well as some of the governance tools and reforms to accompany them, as strategies for boosting productivity and promoting inclusion.

Notes

1. Andrews, Criscuolo and Gal (2015) use harmonised cross-country firm level data to identify the globally most productive firms in each 2-digit industry based on a number of definitions (e.g. the top 100 firms in each industry etc.) from 2001-09.
2. The data for inter-personal inequality within TL2 regions is currently only available for the year 2010 in the OECD Regional Database (OECD, 2016f).
3. The OECD typology classifies regions at the TL3 level into urban, intermediate and rural regions. See OECD (2016b) for details.
4. The best measure of labour productivity available at the regional level.
5. Frontier and lagging regions are defined as the regions with the highest (lowest) GDP per employee until the equivalent of 10% of national employment is reached.
6. In this case, the analysis was on OECD TL3 regions, which are smaller in size than TL2 regions.
7. See Box 1.1 in OECD (2013c) for more details.
8. Tradable sectors are defined by a selection of the ten industries defined in the SNA 2008. They include: agriculture (A), industry (BCDE), information and communication (J), financial and insurance activities (K), and other services (R to U). Non-tradable sectors are composed of construction, distributive trade, repairs, transport, accommodation, food services activities (GHI), real estate activities (L), business services (MN), and public administration (OPQ).
9. This analysis considered GDP per capita growth.
10. This analysis excludes several countries due to lack of data or an insufficient number of regions: Chile, Estonia, Iceland, Israel, Japan, Luxembourg, Mexico, Norway, Switzerland and Turkey.
11. This is evident in the population changes at highly disaggregated levels. In Europe, for example, a recent mapping exercise of population changes between 2001 and 2011 shows clear concentration in and around cities, with some rural areas (and their towns and villages) defying the trend (BBSR, 2015). From 2000-14, net changes in the share of the population in OECD countries by region type (TL3) reveal that predominantly rural regions experienced an increase in population shares in Belgium, Chile, Ireland, Switzerland and the United States, (OECD, 2016b).
12. The top 20% of regions are defined as those with the highest value of the indicator until the equivalent of 20% of the national population is reached. The same calculation is made for the bottom 20%. For example, if the value for the top 20% was 50% of the labour force with tertiary education, and the rate for the bottom 20% was 25%, that ratio would be 2. The performance of this ratio over time is then assessed.
13. Faster catching up was the main force behind the values for total R&D expenditures, higher education R&D expenditures, R&D personnel and the share of the labour force with tertiary education. For patents, the reasons for convergence of regions were more mixed. For business R&D intensity, convergence was driven, in part, by worsening performance in the leading regions along with a simultaneous increase in values in the bottom regions.
14. Note that in two-thirds of OECD countries with data, the total volume of business R&D declined after 2008, however most of those countries showed a rebound within three years. The intensity of business R&D (i.e. as a share of GDP) shows more fluctuation, and 17 out of 31 countries showed a decline after 2008. In a few countries, the business R&D intensity in 2011 was at a lower level than in 2000.
15. The normalised HHI ranges from 0 to 1 (concentrated in one region).The normalised Herfindahl-Hirschman Index formula is $H^* = \frac{(H - 1/N)}{1 - 1/N}$, for $N > 1$, and $H = \sum_{i=1}^{N} S_i^2$, where S_i denotes the share of the chosen indicator in region i.
16. Based on ars technica (2013), available at: *http://arstechnica.com/business/2013/09/skypes-secrets/4/* (accessed 20 June 2016).
17. According to Skype S.a r.l. S-1 filing to the Securities and Exchange Commission (Skype, 2010).
18. Data from MarketWatch (2015), available at: *www.marketwatch.com/story/what-really-keeps-airbnbs-ceo-up-at-night-2015-02-13* (accessed 20 June 2016) and Wall Street Journal (2013), available at *www.wsj.com/news/articles/SB10001424127887323394504578608192000978414* (accessed 20 June 2016).

19. Many of the created jobs are related to customer services to ensure 24/7 availability and support in local languages (Business Insider, 2013), available at: *www.businessinsider.com/insane-lengths-airbnb-will-go-to-in-order-to-please-customers-2013-8?IR=T* (accessed 20 June 2016).
20. The calculation of multidimensional living standards is based on the equivalent income approach, where, for different income groups, the monetised value of health status and unemployment are added to disposable income and aggregated with a generalised mean function to allow inequality to be taken into account.
21. Manning (2004) shows that employment rates of low-skilled workers are higher (and unemployment rates lower) in US metro areas with higher percentages of college graduates. He attributes this factor to a rising polarisation in jobs driven by high-skilled jobs that create demand for local non-tradable (low skill) services.
22. See for example IOM 2015; Walker and Leitner, 2011; Rhys et al., 2013; Caponio et al., 2010.
23. This analysis was based on the United States.
24. In this paper, there is no specific cut-off value for lagging regions, but the degree to which a region is "lagging" is defined by its gap relative to its country's frontier in terms of productivity (i.e. GDP per worker).
25. See OECD (2013b) p.19 for additional discussions on the relationship between public investment and growth.
26. See OECD (2014a), based on communications with Dexia (July, 2012).
27. Data for 2014, per the OECD Metropolitan Database (OECD, 2016c).
28. Based on the share of respondents from 37 cities in the European Urban Audit Perception Survey who state that they are either "satisfied" or "very satisfied" with the public transport provision in their city. The difference between the two groups is statistically significant at the 95% confidence level.
29. See Boulant, Brezzi and Veneri (2016) for details. Most other studies of segregation are conducted at the neighbourhood level.

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ANNEX 1.A1

Table 1.A1.1. **Categorisation of OECD regions by within-country catching-up dynamics**

Productivity and employment indicators for frontier (F), catching-up (C), keeping-pace (K) and diverging (D) regions

Country	Region	Productivity typology	Productivity and Employment 2013 or closest year available			Employment growth 2000-13		Productivity growth 2000-13			Tradable share 2013	
			Productivity (USD PPP)	Employment (000)	Frontier Productivity (USD PPP)	Absolute change (000)	Employment growth (%)	Productivity annual growth (%)	Frontier shift effect	Catch-up effect	GVA (%)	Employment (%)
AUS	Australian Capital Territory	F	109 278	212	128 716	39	1.56	2.28	3.23	-0.95	13.0	12.8
	New South Wales	D	88 477	3 586	128 716	616	1.46	0.39	3.23	-2.83	36.1	26.2
	Northern Territory	F	112 262	126	128 716	35	2.52	1.74	3.23	-1.48	29.5	21.7
	Queensland	D	82 966	2 301	128 716	665	2.66	1.35	3.23	-1.88	34.5	25.0
	South Australia	D	77 663	805	128 716	131	1.38	0.74	3.23	-2.49	35.9	27.2
	Tasmania	D	69 590	232	128 716	33	1.19	0.87	3.23	-2.36	36.1	25.9
	Victoria	D	79 072	2 855	128 716	651	2.01	0.13	3.23	-3.10	34.0	27.1
	Western Australia	F	128 716	1 324	128 716	410	2.89	3.55	3.23	0.32	47.0	30.1
AUT	Burgenland	C	68 439	124	92 398	13	0.84	0.91	0.11	0.80	33.1	33.2
	Carinthia	K	72 632	275	92 398	22	0.64	0.40	0.11	0.29	35.8	33.3
	Lower Austria	C	78 299	729	92 398	68	0.76	0.66	0.11	0.55	34.6	32.6
	Salzburg	C	84 159	322	92 398	43	1.10	0.76	0.11	0.64	29.5	28.0
	Styria	C	74 339	632	92 398	67	0.86	0.73	0.11	0.62	39.4	35.6
	Tyrol	C	80 451	404	92 398	61	1.27	0.64	0.11	0.53	31.3	28.8
	Upper Austria	C	80 250	771	92 398	96	1.03	0.64	0.11	0.53	43.9	37.1
	Vienna	F	92 398	1 013	92 398	119	0.96	0.11	0.11	0.00	29.2	24.0
	Vorarlberg	C	87 364	193	92 398	25	1.07	0.66	0.11	0.55	42.0	35.4
BEL	Antwerp	K	106 924	779	115 131	82	0.86	0.42	0.56	-0.13	35.7	24.8
	Brussels-Capital Region	F	115 131	689	115 131	48	0.55	0.56	0.56	0.00	36.7	22.8
	East Flanders	K	92 185	570	115 131	65	0.94	0.74	0.56	0.18	29.1	24.4
	Flemish Brabant	K	104 585	440	115 131	45	0.83	0.76	0.56	0.20	24.5	20.5
	Hainaut	K	79 965	429	115 131	37	0.70	0.27	0.56	-0.29	26.4	21.9
	Liège	K	83 375	381	115 131	28	0.59	0.56	0.56	0.01	27.3	21.9
	Limburg (BE)	K	84 304	331	115 131	32	0.78	0.43	0.56	-0.13	29.0	26.0
	Luxembourg (BE)	K	75 598	93	115 131	9	0.80	0.20	0.56	-0.35	20.7	21.8
	Namur	K	81 722	167	115 131	20	0.98	0.70	0.56	0.14	20.5	19.6
	Walloon Brabant	D	107 970	154	115 131	33	1.91	-0.05	0.56	-0.61	40.0	24.2
	West Flanders	K	86 907	508	115 131	38	0.59	0.59	0.56	0.03	28.9	27.5
CAN	Alberta	F	117 755	2 211	117 853	628	2.60	1.65	1.65	-0.01	42.6	29.6
	British Columbia	D	76 615	2 308	117 853	377	1.38	0.57	1.65	-1.08	28.2	24.5
	Manitoba	D	74 562	633	117 853	81	1.06	1.11	1.65	-0.54	32.9	28.6
	New Brunswick	D	69 932	351	117 853	20	0.44	0.72	1.65	-0.93	28.4	25.5
	Newfoundland and Labrador	F	118 502	233	117 853	34	1.22	3.69	1.65	2.04	47.8	24.9
	Nova Scotia	D	66 412	454	117 853	42	0.75	0.30	1.65	-1.35	25.3	23.0
	Ontario	D	77 859	6 879	117 853	1 065	1.30	-0.14	1.65	-1.80	32.3	28.2
	Prince Edward Island	D	60 138	74	117 853	11	1.28	0.62	1.65	-1.03	27.4	26.3

Table 1.A1.1. **Categorisation of OECD regions by within-country catching-up dynamics** *(cont.)*

Productivity and employment indicators for frontier (F), catching-up (C), keeping-pace (K) and diverging (D) regions

Country	Region	Productivity typology	Productivity and Employment 2013 or closest year available			Employment growth 2000-13		Productivity growth 2000-13			Tradable share 2013	
			Productivity (USD PPP)	Employment (000)	Frontier Productivity (USD PPP)	Absolute change (000)	Employment growth (%)	Productivity annual growth (%)	Frontier shift effect	Catch-up effect	GVA (%)	Employment (%)
CAN	Québec	D	69 281	4 032	117 853	631	1.32	-0.04	1.65	-1.69	32.8	28.1
	Saskatchewan	C	115 384	555	117 853	82	1.24	3.35	1.65	1.70	49.5	30.0
CZE	Central Bohemian Region	D	56 378	559	78 211	71	1.04	1.54	2.03	-0.48	46.6	41.4
	Central Moravia	K	49 641	544	78 211	2	0.02	2.23	2.03	0.20	46.7	43.9
	Moravia-Silesia	C	52 511	534	78 211	9	0.13	2.51	2.03	0.49	49.6	41.9
	Northeast	K	50 098	675	78 211	-21	-0.23	1.98	2.03	-0.05	49.5	46.4
	Northwest	K	48 157	481	78 211	-13	-0.20	1.73	2.03	-0.30	47.2	40.5
	Prague	F	78 211	914	78 211	131	1.19	2.03	2.03	0.00	39.0	24.8
	Southeast	C	53 691	802	78 211	36	0.35	2.59	2.03	0.56	44.6	41.6
	Southwest	K	50 885	576	78 211	10	0.13	1.96	2.03	-0.07	46.4	43.5
DNK	Capital	F	92 078	973	92 078	51	0.42	0.59	0.59	0.00	35.2	25.1
	Central Jutland	K	77 286	620	92 078	4	0.05	0.45	0.59	-0.14	31.0	26.9
	Northern Jutland	D	74 738	276	92 078	-4	-0.11	0.15	0.59	-0.44	31.1	27.2
	Southern Denmark	K	79 653	558	92 078	-24	-0.32	0.62	0.59	0.03	31.0	26.5
	Zealand	K	74 425	316	92 078	-8	-0.19	0.39	0.59	-0.19	26.9	22.2
EST	Estonia	.	53 797	601	53 797	16	0.20	3.42	3.42	0.00	37.3	35.5
FIN	Åland	C	76 472	18	93 088	2	0.87	1.40	0.70	0.70	24.1	25.1
	Eastern and Northern Finland	K	74 265	550	93 088	44	0.69	0.72	0.70	0.01	34.8	32.1
	Helsinki-Uusimaa	F	93 088	837	93 088	89	0.95	0.70	0.70	0.00	32.3	27.3
	Southern Finland	K	77 891	509	93 088	32	0.55	0.40	0.70	-0.30	36.1	30.8
	Western Finland	K	76 809	623	93 088	73	1.04	0.76	0.70	0.06	41.1	35.7
FRA	Alsace	D	82 436	764	117 670	3	0.03	0.40	1.15	-0.75	32.1	..
	Aquitaine	D	79 523	1 339	117 670	122	0.74	0.60	1.15	-0.55	26.6	..
	Auvergne	D	76 205	530	117 670	2	0.03	0.50	1.15	-0.65	28.2	..
	Brittany	D	75 697	1 301	117 670	100	0.62	0.33	1.15	-0.82	29.0	..
	Burgundy	D	77 610	642	117 670	-11	-0.13	0.28	1.15	-0.87	28.1	..
	Centre-Val de Loire	D	78 591	995	117 670	-3	-0.03	0.35	1.15	-0.80	31.2	..
	Champagne-Ardenne	D	82 745	520	117 670	-28	-0.41	0.35	1.15	-0.80	34.8	..
	Corsica	D	78 653	124	117 670	30	2.17	0.58	1.15	-0.57	15.0	..
	Franche-Comté	D	74 703	439	117 670	-18	-0.31	0.16	1.15	-0.99	31.1	..
	Île-de-France	F	117 670	6 081	117 670	298	0.39	1.15	1.15	0.00	30.9	..
	Languedoc-Roussillon	D	79 370	961	117 670	123	1.06	0.69	1.15	-0.46	20.4	..
	Limousin	D	71 647	280	117 670	-7	-0.20	0.26	1.15	-0.89	24.1	..
	Lorraine	D	77 977	825	117 670	-50	-0.45	0.33	1.15	-0.82	26.3	..
	Lower Normandy	D	77 017	572	117 670	-5	-0.06	0.66	1.15	-0.49	27.2	..
	Midi-Pyrénées	K	79 099	1 214	117 670	140	0.95	0.79	1.15	-0.36	26.8	..
	Nord-Pas-de-Calais	D	79 567	1 509	117 670	25	0.13	0.74	1.15	-0.40	26.7	..
	Pays de la Loire	D	79 454	1 508	117 670	120	0.64	0.72	1.15	-0.43	31.2	..
	Picardy	D	81 363	661	117 670	-19	-0.22	0.42	1.15	-0.73	29.1	..
	Poitou-Charentes	D	76 437	691	117 670	26	0.29	0.65	1.15	-0.50	30.5	..
	Provence-Alpes-Côte d'Azur	D	86 596	1 997	117 670	227	0.93	0.55	1.15	-0.60	22.1	..
	Rhône-Alpes	D	86 341	2 715	117 670	195	0.57	0.73	1.15	-0.42	28.8	..
	Upper Normandy	D	83 442	700	117 670	-8	-0.09	0.48	1.15	-0.67	32.2	..
DEU	Baden-Württemberg	C	84 826	5 945	92 266	538	0.73	0.42	-0.01	0.42	..	..
	Bavaria	C	85 336	7 082	92 266	690	0.79	0.69	-0.01	0.70	..	..
	Berlin	K	75 895	1 774	92 266	182	0.84	0.08	-0.01	0.09	..	..

Table 1.A1.1. **Categorisation of OECD regions by within-country catching-up dynamics** *(cont.)*

Productivity and employment indicators for frontier (F), catching-up (C), keeping-pace (K) and diverging (D) regions

Country	Region	Productivity typology	Productivity and Employment 2013 or closest year available			Employment growth 2000-13		Productivity growth 2000-13			Tradable share 2013	
			Productivity (USD PPP)	Employment (000)	Frontier Productivity (USD PPP)	Absolute change (000)	Employment growth (%)	Productivity annual growth (%)	Frontier shift effect	Catch-up effect	GVA (%)	Employment (%)
DEU	Brandenburg	C	66 841	1 082	92 266	4	0.03	1.01	-0.01	1.01	..	..
	Bremen	K	84 640	417	92 266	24	0.46	0.31	-0.01	0.32	..	..
	Hamburg	F	101 034	1 180	92 266	125	0.86	-0.19	-0.01	-0.19	..	..
	Hesse	F	88 872	3 272	92 266	192	0.47	0.05	-0.01	0.06	..	..
	Lower Saxony	C	76 048	3 887	92 266	332	0.69	0.41	-0.01	0.42	..	..
	Mecklenburg-Vorpommern	C	61 269	730	92 266	-37	-0.38	0.90	-0.01	0.91	..	..
	North Rhine-Westphalia	C	80 367	9 038	92 266	464	0.41	0.43	-0.01	0.43	..	..
	Rhineland-Palatinate	K	76 281	1 952	92 266	167	0.69	0.32	-0.01	0.32	..	..
	Saarland	C	75 208	519	92 266	6	0.09	0.70	-0.01	0.70	..	..
	Saxony	C	62 445	2 010	92 266	17	0.07	1.12	-0.01	1.12	..	..
	Saxony-Anhalt	C	64 568	1 015	92 266	-54	-0.40	1.08	-0.01	1.09	..	..
	Schleswig-Holstein	K	73 040	1 334	92 266	73	0.43	0.23	-0.01	0.24	..	..
	Thuringia	C	60 218	1 047	92 266	-39	-0.28	1.23	-0.01	1.23	..	..
GRC	Attica	F	85 585	1 471	85 585	-124	-0.62	0.80	0.80	0.00	24.1	28.0
	Central Greece	D	61 242	188	85 585	-17	-0.66	-1.22	0.80	-2.02	40.9	44.3
	Central Macedonia	K	58 093	612	85 585	-110	-1.26	0.78	0.80	-0.03	27.7	34.7
	Crete	K	55 132	235	85 585	-36	-1.10	0.97	0.80	0.16	23.8	35.4
	East Macedonia – Thrace	K	52 075	206	85 585	-34	-1.18	0.80	0.80	0.00	26.7	42.6
	Epirus	K	54 132	115	85 585	-13	-0.82	0.55	0.80	-0.25	23.7	33.6
	Ionian Islands	D	56 746	83	85 585	-3	-0.24	-0.43	0.80	-1.24	16.7	31.0
	North Aegean	D	57 863	68	85 585	2	0.27	0.33	0.80	-0.47	17.3	26.6
	Peloponnese	D	55 975	207	85 585	-22	-0.76	0.32	0.80	-0.48	33.4	46.9
	South Aegean	D	67 219	129	85 585	6	0.39	-0.82	0.80	-1.62	14.1	22.7
	Thessaly	K	53 951	254	85 585	-25	-0.73	0.41	0.80	-0.39	30.6	40.2
	West Greece	K	56 364	223	85 585	-46	-1.43	1.03	0.80	0.23	27.1	39.7
	West Macedonia	K	66 171	87	85 585	-14	-1.12	0.51	0.80	-0.29	49.4	42.2
HUN	Central Hungary	F	61 976	1 680	61 976	85	0.43	2.24	2.24	0.00	38.3	29.8
	Central Transdanubia	D	48 789	424	61 976	-29	-0.56	1.49	2.24	-0.75	51.4	49.8
	Northern Great Plain	K	45 963	452	61 976	-43	-0.75	2.08	2.24	-0.16	40.9	42.4
	Northern Hungary	D	44 718	347	61 976	-38	-0.87	1.46	2.24	-0.78	43.8	41.9
	Southern Great Plain	D	43 551	437	61 976	-59	-1.05	1.67	2.24	-0.58	41.1	44.4
	Southern Transdanubia	D	45 793	298	61 976	-51	-1.30	1.81	2.24	-0.43	38.3	39.3
	Western Transdanubia	D	51 439	421	61 976	-43	-0.81	1.76	2.24	-0.48	52.7	48.2
IRL	Border, Midland and Western	C	81 455	433	114 234	16	0.29	1.65	1.14	0.50	43.9	30.5
	Southern and Eastern	F	114 234	1 449	114 234	170	0.97	1.14	1.14	0.00	51.9	32.8
ITA	Abruzzo	K	72 045	518	94 756	1	0.02	-0.26	-0.38	0.12	33.1	38.5
	Aosta Valley	F	92 735	60	94 756	3	0.34	0.22	-0.38	0.60	28.0	27.7
	Apulia	K	63 657	1 293	94 756	-73	-0.42	-0.38	-0.38	-0.01	27.7	35.8
	Basilicata	K	67 862	194	94 756	-15	-0.56	-0.22	-0.38	0.15	36.1	38.6
	Calabria	K	60 884	608	94 756	-14	-0.18	-0.60	-0.38	-0.23	22.6	36.2
	Campania	K	64 931	1 863	94 756	-21	-0.09	-0.15	-0.38	0.23	27.2	33.3
	Emilia-Romagna	K	85 437	2 061	94 756	69	0.26	-0.18	-0.38	0.19	38.5	39.8
	Friuli-Venezia Giulia	K	80 493	538	94 756	13	0.19	-0.55	-0.38	-0.17	36.3	39.3
	Lazio	F	87 705	2 569	94 756	363	1.18	-0.88	-0.38	-0.50	31.8	32.1

Table 1.A1.1. **Categorisation of OECD regions by within-country catching-up dynamics** *(cont.)*
Productivity and employment indicators for frontier (F), catching-up (C), keeping-pace (K) and diverging (D) regions

Country	Region	Productivity typology	Productivity and Employment 2013 or closest year available			Employment growth 2000-13		Productivity growth 2000-13			Tradable share 2013	
			Productivity (USD PPP)	Employment (000)	Frontier Productivity (USD PPP)	Absolute change (000)	Employment growth (%)	Productivity annual growth (%)	Frontier shift effect	Catch-up effect	GVA (%)	Employment (%)
ITA	Liguria	F	90 325	650	94 756	1	0.02	-0.22	-0.38	0.15	25.2	29.5
	Lombardy	F	94 756	4 647	94 756	416	0.72	-0.38	-0.38	0.00	40.1	39.7
	Marche	K	74 757	635	94 756	14	0.17	-0.48	-0.38	-0.10	37.0	42.8
	Molise	K	70 575	103	94 756	-6	-0.45	-0.66	-0.38	-0.29	28.0	34.5
	Piedmont	K	84 266	1 834	94 756	63	0.27	-0.73	-0.38	-0.36	38.8	40.6
	Province of Bolzano-Bozen	K	90 817	278	94 756	40	1.20	-0.25	-0.38	0.12	29.9	29.6
	Province of Trento	K	87 088	256	94 756	28	0.88	-0.67	-0.38	-0.30	30.4	31.6
	Sardinia	K	67 596	563	94 756	-7	-0.10	-0.33	-0.38	0.05	24.8	32.3
	Sicily	K	69 413	1 466	94 756	-50	-0.26	-0.40	-0.38	-0.02	24.1	32.2
	Tuscany	K	80 919	1 639	94 756	121	0.59	-0.45	-0.38	-0.08	34.1	37.1
	Umbria		72 507	370	94 756	20	0.43	-0.74	-0.38	-0.36	32.7	39.3
	Veneto	K	83 827	2 150	94 756	126	0.47	-0.63	-0.38	-0.26	38.1	41.3
KOR	Capital Region	D	63 932	12 528	77 259	1 631	1.56	2.09	3.33	-1.24	43.5	63.8
	Chungcheong Region	F	77 259	2 648	77 259	402	1.85	3.33	3.33	0.00	59.2	67.9
	Gangwon Region	D	58 214	698	77 259	28	0.46	2.59	3.33	-0.73	31.0	64.6
	Gyeongbuk Region	D	59 611	2 581	77 259	43	0.19	2.52	3.33	-0.81	56.2	66.2
	Gyeongnam Region	D	71 903	3 809	77 259	237	0.72	2.55	3.33	-0.78	57.7	64.5
	Jeju	K	49 809	305	77 259	27	1.02	2.82	3.33	-0.51	34.0	64.4
	Jeolla Region	D	61 895	2 499	77 259	141	0.65	2.56	3.33	-0.77	52.3	66.7
NLD	Drenthe	D	66 817	226	107 172	-7	-0.24	0.46	1.24	-0.79	33.6	22.1
	Flevoland	K	77 192	172	107 172	18	0.90	0.91	1.24	-0.34	24.7	20.6
	Friesland	K	68 285	304	107 172	-2	-0.05	0.88	1.24	-0.36	36.2	23.2
	Gelderland	D	73 359	1 026	107 172	23	0.19	0.75	1.24	-0.50	30.3	21.6
	Groningen	F	131 283	278	107 172	-9	-0.28	3.20	1.24	1.95	61.7	22.6
	Limburg (NL)	D	72 008	556	107 172	-21	-0.31	0.71	1.24	-0.53	33.5	24.3
	North Brabant	K	82 476	1 336	107 172	20	0.12	0.88	1.24	-0.36	36.5	23.7
	North Holland	F	95 829	1 517	107 172	22	0.12	1.00	1.24	-0.24	32.4	22.0
	Overijssel	D	69 682	590	107 172	17	0.25	0.81	1.24	-0.44	32.5	23.0
	South Holland	F	87 043	1 791	107 172	-28	-0.13	-0.49	1.24	-1.73	28.8	19.5
	Utrecht	D	90 910	715	107 172	-4	-0.05	0.79	1.24	-0.45	32.0	21.9
	Zeeland	C	73 290	181	107 172	0	0.02	1.87	1.24	0.63	37.1	23.6
NZL	Auckland Region	F	71 878	712	78 341	576	14.76	0.50	0.51	-0.04	38.0	27.0
	Bay of Plenty Region	C	66 064	113	78 341	60	6.46	1.97	0.51	1.30	44.0	32.2
	Canterbury Region	C	58 845	324	78 341	207	8.90	1.60	0.51	0.96	43.0	29.7
	Gisborne/Hawke's Bay	D	48 987	103	78 341	-300	-10.76	-0.57	0.51	-1.04	47.0	35.9
	Manawatu-Wanganui Region	D	51 352	112	78 341	-89	-4.76	-0.18	0.51	-0.68	40.8	31.2
	Northland Region	K	54 281	67	78 341	37	7.00	0.88	0.51	0.30	47.9	33.7
	Otago Region	K	53 242	116	78 341	-230	-8.69	0.58	0.51	0.03	42.8	28.8
	Southland Region	K	62 054	56	78 341	-148	-10.21	0.14	0.51	-0.38	61.9	44.5
	Taranaki Region	F	91 767	63	78 341	-250	-12.50	0.28	0.51	-0.25	72.1	41.3
	Tasman-Nelson-Marlb./West Coast	C	55 236	93	78 341	46	5.86	1.18	0.51	0.57	46.6	35.1
	Waikato Region	C	67 040	194	78 341	141	11.54	1.79	0.51	1.14	52.1	35.5
	Wellington Region	K	70 729	270	78 341	223	15.71	0.34	0.51	-0.20	39.6	23.5
POL	Greater Poland	C	61 200	1 359	78 130	-45	-0.25	4.13	2.41	1.72	..	45.3
	Kuyavian-Pomerania	C	50 589	759	78 130	-158	-1.44	4.42	2.41	2.01	..	44.5
	Lesser Poland	C	50 497	1 306	78 130	-24	-0.14	3.87	2.41	1.46	..	42.3

Table 1.A1.1. **Categorisation of OECD regions by within-country catching-up dynamics** *(cont.)*

Productivity and employment indicators for frontier (F), catching-up (C), keeping-pace (K) and diverging (D) regions

Country	Region	Productivity typology	Productivity and Employment 2013 or closest year available			Employment growth 2000-13		Productivity growth 2000-13			Tradable share 2013	
			Productivity (USD PPP)	Employment (000)	Frontier Productivity (USD PPP)	Absolute change (000)	Employment growth (%)	Productivity annual growth (%)	Frontier shift effect	Catch-up effect	GVA (%)	Employment (%)
POL	Lodzkie	C	41 950	1 246	78 130	120	0.78	2.80	2.41	0.39	..	45.2
	Lower Silesia	C	69 707	1 041	78 130	102	0.79	3.38	2.41	0.97	..	40.5
	Lublin Province	C	35 493	956	78 130	5	0.04	3.23	2.41	0.82	..	47.9
	Lubusz	C	47 838	398	78 130	-3	-0.07	3.19	2.41	0.78	..	39.7
	Mazovia	F	78 130	2 403	78 130	480	1.73	2.41	2.41	0.00	..	38.5
	Opole region	C	54 458	332	78 130	-11	-0.25	3.04	2.41	0.64	..	45.2
	Podkarpacia	C	42 127	799	78 130	47	0.46	2.99	2.41	0.58	..	47.3
	Podlasie	C	42 702	454	78 130	16	0.28	3.09	2.41	0.68	..	47.1
	Pomerania	K	55 814	883	78 130	178	1.75	2.04	2.41	-0.36	..	37.4
	Silesia	K	56 491	1 889	78 130	173	0.74	2.35	2.41	-0.06	..	40.9
	Swietokrzyskie	D	37 556	549	78 130	89	1.37	1.47	2.41	-0.94	..	48.5
	Warmian-Masuria	K	43 981	527	78 130	59	0.91	2.16	2.41	-0.24	..	40.7
	West Pomerania	C	57 207	563	78 130	-80	-1.01	3.39	2.41	0.98	..	35.1
PRT	Alentejo	K	63 160	275	76 493	-44	-1.14	0.71	0.49	0.22	38.2	38.9
	Algarve	C	62 320	181	76 493	-10	-0.41	1.14	0.49	0.65	18.5	22.1
	Azores	C	58 781	97	76 493	-6	-0.45	1.46	0.49	0.97	26.8	31.8
	Central Portugal	C	50 856	974	76 493	-206	-1.46	1.19	0.49	0.70	35.1	44.6
	Lisbon	F	76 493	1 288	76 493	-71	-0.41	0.49	0.49	0.00	30.6	24.4
	Madeira	C	60 681	104	76 493	-21	-1.43	2.28	0.49	1.79	18.0	26.9
	North	C	49 087	1 528	76 493	-228	-1.06	1.00	0.49	0.51	36.4	44.5
SVK	Bratislava Region	F	91 576	423	91 576	61	1.20	3.76	3.76	0.00	36.5	25.5
	Central Slovak Republic	D	53 086	519	91 576	30	0.46	3.26	3.76	-0.50	40.1	35.2
	East Slovak Republic	K	55 440	515	91 576	12	0.18	3.47	3.76	-0.29	39.6	33.0
	West Slovak Republic	D	60 602	735	91 576	65	0.71	3.15	3.76	-0.61	46.7	38.8
SVN	Eastern Slovenia	C	54 459	439	63 577	-34	-0.57	2.00	1.34	0.66	42.8	46.4
	Western Slovenia	F	63 577	485	63 577	44	0.73	1.34	1.34	0.00	35.7	34.4
ESP	Andalusia	K	73 660	2 647	89 402	230	0.70	0.74	0.65	0.10	28.7	28.0
	Aragon	C	81 663	557	89 402	16	0.23	1.25	0.65	0.60	38.1	34.9
	Asturias	K	76 516	384	89 402	14	0.28	0.46	0.65	-0.19	33.1	30.9
	Balearic Islands	K	79 118	459	89 402	52	0.93	0.31	0.65	-0.34	18.7	20.0
	Basque Country	F	89 791	978	89 402	46	0.37	0.72	0.65	0.07	38.1	35.2
	Canary Islands	K	76 788	732	89 402	69	0.76	0.36	0.65	-0.29	20.6	19.4
	Cantabria	K	78 645	213	89 402	7	0.26	0.67	0.65	0.02	34.4	32.4
	Castile and León	K	78 389	944	89 402	-10	-0.08	0.88	0.65	0.23	35.7	32.6
	Castile-La Mancha	C	78 263	672	89 402	29	0.34	1.64	0.65	0.99	39.3	34.9
	Catalonia	K	84 886	3 209	89 402	172	0.43	0.93	0.65	0.28	33.8	30.8
	Ceuta	K	79 063	27	89 402	2	0.59	0.34	0.65	-0.31	11.5	12.9
	Extremadura	C	70 223	335	89 402	-6	-0.13	1.33	0.65	0.68	30.2	30.1
	Galicia	C	74 014	1 021	89 402	54	0.42	1.04	0.65	0.39	35.0	33.9
	La Rioja	C	84 466	126	89 402	0	0.00	1.18	0.65	0.53	43.3	40.4
	Madrid	F	88 935	3 042	89 402	440	1.21	0.61	0.65	-0.04	32.0	28.3
	Melilla	K	77 067	25	89 402	0	-0.06	0.97	0.65	0.32	11.4	12.7
	Murcia	K	69 117	537	89 402	97	1.55	0.27	0.65	-0.38	31.8	34.2
	Navarra	C	87 159	280	89 402	-2	-0.06	1.27	0.65	0.62	43.3	40.1
	Valencia	K	77 343	1 747	89 402	43	0.19	0.91	0.65	0.26	31.3	30.6
SWE	Central Norrland	D	80 690	170	106 206	-2	-0.09	1.10	1.61	-0.51	40.4	27.6
	East Middle Sweden	K	81 544	714	106 206	38	0.42	1.40	1.61	-0.21	36.6	27.1
	North Middle Sweden	D	78 865	361	106 206	0	0.00	0.89	1.61	-0.72	39.0	29.6

Table 1.A1.1. **Categorisation of OECD regions by within-country catching-up dynamics** *(cont.)*

Productivity and employment indicators for frontier (F), catching-up (C), keeping-pace (K) and diverging (D) regions

Country	Region	Productivity typology	Productivity and Employment 2013 or closest year available			Employment growth 2000-13		Productivity growth 2000-13			Tradable share 2013	
			Productivity (USD PPP)	Employment (000)	Frontier Productivity (USD PPP)	Absolute change (000)	Employment growth (%)	Productivity annual growth (%)	Frontier shift effect	Catch-up effect	GVA (%)	Employment (%)
SWE	Småland with Islands	D	74 459	395	106 206	6	0.12	1.09	1.61	-0.52	39.4	33.8
	South Sweden	D	77 965	648	106 206	58	0.72	0.80	1.61	-0.81	29.6	25.5
	Stockholm	F	106 206	1 208	106 206	149	1.02	1.61	1.61	0.00	38.1	25.8
	Upper Norrland	K	83 907	245	106 206	20	0.66	1.45	1.61	-0.16	42.9	26.3
	West Sweden	D	82 100	931	106 206	103	0.91	0.85	1.61	-0.76	34.4	27.4
GBR	East Midlands	K	64 548	2 116	133 506	141	0.53	1.04	1.30	-0.26	31.2	..
	East of England	D	68 791	2 914	133 506	273	0.76	0.59	1.30	-0.71	28.8	..
	Greater London	F	133 506	3 898	133 506	539	1.15	1.30	1.30	0.00	37.6	..
	North East England	K	61 035	1 143	133 506	73	0.51	0.95	1.30	-0.34	30.8	..
	North West England	K	69 834	3 118	133 506	159	0.40	0.97	1.30	-0.32	31.0	..
	Northern Ireland	D	63 434	796	133 506	111	1.16	-0.02	1.30	-1.31	28.0	..
	Scotland	K	72 990	2 467	133 506	141	0.45	1.19	1.30	-0.10	33.3	..
	South East England	K	81 954	4 263	133 506	251	0.47	1.07	1.30	-0.23	30.7	..
	South West England	K	68 753	2 545	133 506	201	0.63	1.06	1.30	-0.23	30.2	..
	Wales	D	59 611	1 343	133 506	115	0.69	0.73	1.30	-0.56	30.9	..
	West Midlands	D	69 270	2 447	133 506	62	0.20	0.82	1.30	-0.47	31.1	..
	Yorkshire and The Humber	K	63 589	2 459	133 506	200	0.65	0.90	1.30	-0.39	31.2	..
USA	Alabama	K	72 617	2 542	108 796	147	0.46	1.20	0.83	0.37	51.2	25.8
	Alaska	F	117 589	462	108 796	72	1.31	2.47	0.83	1.64	52.7	22.7
	Arizona	D	76 819	3 392	108 796	583	1.46	0.38	0.83	-0.45	41.6	21.9
	Arkansas	C	71 264	1 578	108 796	94	0.48	1.64	0.83	0.81	48.6	24.8
	California	K	97 845	21 449	108 796	2 169	0.82	0.79	0.83	-0.04	45.4	24.4
	Colorado	K	81 585	3 352	108 796	428	1.06	0.61	0.83	-0.22	45.1	24.0
	Connecticut	F	104 838	2 233	108 796	123	0.44	0.53	0.83	-0.30	46.7	26.9
	Delaware	F	106 094	544	108 796	43	0.64	0.24	0.83	-0.59	53.7	25.9
	District of Columbia	F	125 468	844	108 796	110	1.08	1.61	0.83	0.78	53.1	16.7
	Florida	D	71 935	10 556	108 796	1 638	1.31	0.43	0.83	-0.40	36.2	22.0
	Georgia	D	78 653	5 504	108 796	631	0.94	0.13	0.83	-0.70	45.4	23.4
	Hawaii	C	81 313	876	108 796	123	1.17	1.40	0.83	0.57	37.5	15.9
	Idaho	D	64 156	903	108 796	127	1.17	0.37	0.83	-0.46	46.0	22.6
	Illinois	K	91 561	7 507	108 796	148	0.15	0.77	0.83	-0.06	44.2	25.4
	Indiana	K	80 130	3 683	108 796	37	0.08	1.06	0.83	0.23	54.0	28.1
	Iowa	C	78 350	2 019	108 796	105	0.41	1.88	0.83	1.05	56.0	27.5
	Kansas	C	72 465	1 864	108 796	105	0.45	1.27	0.83	0.44	50.1	26.6
	Kentucky	K	72 124	2 414	108 796	107	0.35	1.20	0.83	0.37	50.4	24.6
	Louisiana	C	88 866	2 632	108 796	245	0.75	1.89	0.83	1.06	53.2	24.0
	Maine	K	64 443	804	108 796	20	0.19	0.83	0.83	0.00	40.0	22.7
	Maryland	C	92 639	3 475	108 796	387	0.91	1.40	0.83	0.57	42.8	19.0
	Massachusetts	K	96 866	4 322	108 796	244	0.45	0.76	0.83	-0.07	40.4	23.1
	Michigan	D	77 646	5 309	108 796	-299	-0.42	0.01	0.83	-0.82	46.9	26.1
	Minnesota	K	82 037	3 552	108 796	225	0.51	1.04	0.83	0.21	44.6	26.1
	Mississippi	K	64 288	1 536	108 796	59	0.30	1.15	0.83	0.32	50.5	24.2
	Missouri	K	73 306	3 580	108 796	106	0.23	0.72	0.83	-0.11	45.7	23.6
	Montana	C	63 852	639	108 796	86	1.12	2.05	0.83	1.22	44.5	21.6
	Nebraska	C	82 465	1 258	108 796	85	0.54	2.36	0.83	1.53	50.6	24.7
	Nevada	D	77 827	1 560	108 796	306	1.70	0.31	0.83	-0.52	36.3	19.7
	New Hampshire	K	78 010	835	108 796	53	0.50	0.86	0.83	0.03	41.2	24.3
	New Jersey	F	99 871	5 103	108 796	366	0.57	0.46	0.83	-0.37	37.2	22.0

Table 1.A1.1. **Categorisation of OECD regions by within-country catching-up dynamics** *(cont.)*

Productivity and employment indicators for frontier (F), catching-up (C), keeping-pace (K) and diverging (D) regions

Country	Region	Productivity typology	Productivity and Employment 2013 or closest year available			Employment growth 2000-13		Productivity growth 2000-13			Tradable share 2013	
			Productivity (USD PPP)	Employment (000)	Frontier Productivity (USD PPP)	Absolute change (000)	Employment growth (%)	Productivity annual growth (%)	Frontier shift effect	Catch-up effect	GVA (%)	Employment (%)
USA	New Mexico	K	79 826	1 079	108 796	117	0.89	0.85	0.83	0.02	51.9	20.1
	New York	F	110 106	11 555	108 796	1 163	0.82	0.89	0.83	0.06	48.9	24.2
	North Carolina	K	81 240	5 452	108 796	559	0.84	1.15	0.83	0.32	52.6	23.6
	North Dakota	C	83 505	580	108 796	139	2.14	3.87	0.83	3.04	49.6	23.4
	Ohio	K	80 111	6 663	108 796	-117	-0.13	0.89	0.83	0.06	47.3	25.6
	Oklahoma	C	74 202	2 255	108 796	261	0.95	2.02	0.83	1.19	52.8	26.5
	Oregon	C	85 778	2 265	108 796	175	0.62	1.58	0.83	0.75	53.9	24.3
	Pennsylvania	K	82 936	7 322	108 796	427	0.46	0.94	0.83	0.11	42.4	24.6
	Rhode Island	K	84 696	597	108 796	18	0.23	1.10	0.83	0.27	42.3	23.9
	South Carolina	K	69 230	2 499	108 796	223	0.72	0.67	0.83	-0.16	47.6	24.7
	South Dakota	C	73 610	576	108 796	66	0.95	2.04	0.83	1.21	55.6	25.1
	Tennessee	K	74 168	3 710	108 796	246	0.53	0.99	0.83	0.16	42.9	24.3
	Texas	C	95 244	15 505	108 796	3 366	1.90	1.68	0.83	0.85	52.9	25.5
	Utah	K	73 438	1 743	108 796	366	1.83	1.14	0.83	0.31	47.4	25.4
	Vermont	K	64 194	426	108 796	25	0.47	1.00	0.83	0.17	42.1	22.9
	Virginia	K	88 070	4 899	108 796	502	0.84	1.17	0.83	0.34	42.5	20.1
	Washington	K	96 899	3 985	108 796	460	0.95	1.09	0.83	0.26	50.3	24.1
	West Virginia	C	73 118	916	108 796	40	0.35	1.52	0.83	0.69	50.7	23.0
	Wisconsin	K	76 486	3 530	108 796	124	0.27	1.14	0.83	0.31	49.9	28.8
	Wyoming	F	100 236	395	108 796	73	1.58	3.16	0.83	2.33	59.6	25.0

Note: Productivity is measured as GDP per worker. GDP and GVA are measured at constant PPP 2010 USD. Catching-up/diverging regions grew by at least 5 percentage points more/less than their national frontier over the 2000-13 period. The frontier is defined as the aggregation of regions with the highest GDP per worker and representing 10% of national employment. Regions are labelled "frontier regions" if they contribute a non-negligible percentage of their employment for several years during the 2000-13 period. The productivity of the frontier in 2013 includes only the frontier regions of 2013. Due to lack of regional data over the period, only 24 countries are included in the averages. Tradable sectors are defined by a selection of the 10 industries defined in the SNA 2008. They include: agriculture (A), industry (BCDE), information and communication (J), financial and insurance activities (K), and other services (RSTU). Non-tradable sectors are composed of construction, distributive trade, repairs, transport, accommodation, food services activities (GHI), real estate activities (L), business services (MN), and public administration (OPQ).

Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

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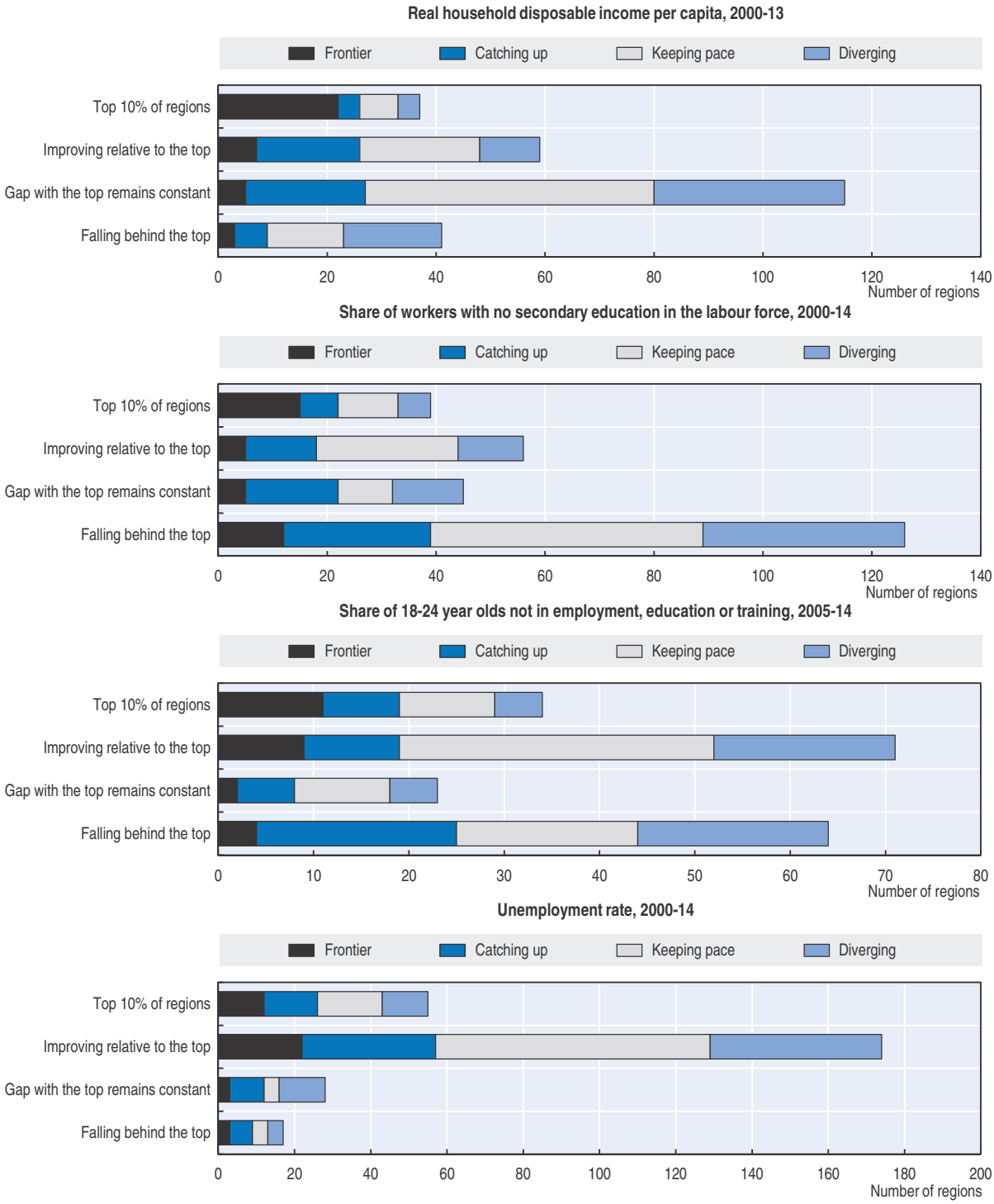
Figure 1.A1.1. **Labour productivity is mostly positively associated with economic aspects of well-being**



Note: Bars indicate the number of regions in each of four categories with regards to the well-being indicator. The top 10% are the regions with the best values that account for 10% of the country's population. Regions that are improving/falling behind are those where the gap to the frontier narrowed/widened by more than 5 percentage points over the indicated period (or the closest available years). Regions with a constant gap are those within the 5 percentage point band. Colours indicate the regions that belong to the labour productivity frontier, the group of catching-up/diverging regions and those that are keeping pace with the frontier (see Boxes 1.2 and 1.3 for detailed definitions).
Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016) and OECD (2016g), *Regional Well-Being* (database), *www.oecdregionalwellbeing.org/* (accessed 12 June 2016).

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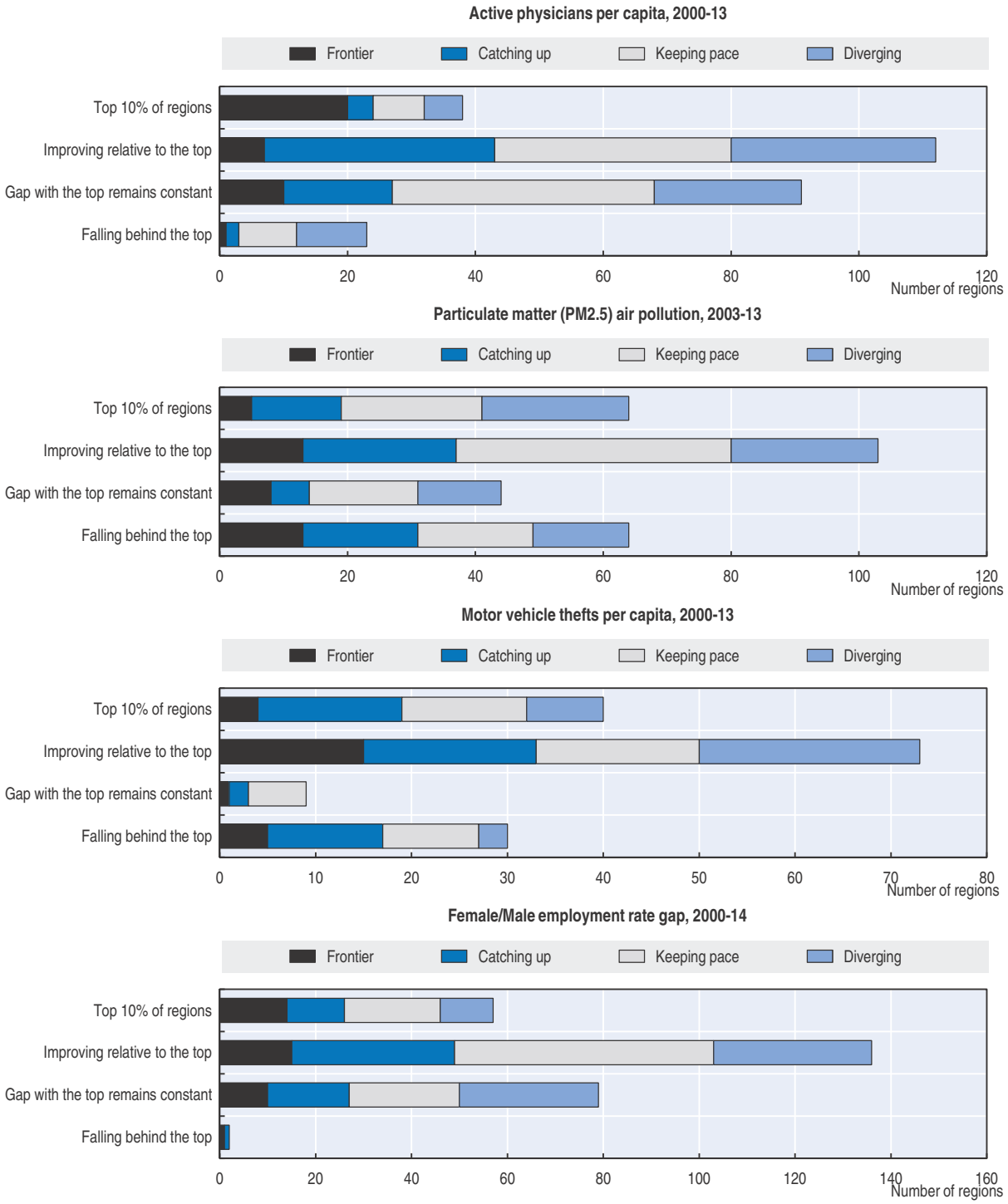
Figure 1.A1.2. **The relationship between labour productivity and well-being is often complex**



Note: Bars indicate the number of regions in each of four categories with regards to the well-being indicator. The top 10% are the regions with the best values that account for 10% of the country's population. Regions that are improving/falling behind are those where the gap to the frontier narrowed/widened by more than 5 percentage points over the indicated period (or the closest available years). Regions with a constant gap are those within the 5 percentage point band. Colours indicate the regions that belong to the labour productivity frontier, the group of catching-up/diverging regions and those that are keeping pace with the frontier (see Boxes 1.2 and 1.3 for detailed definitions).
Source: Calculations based on OECD (2016f), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016) and OECD (2016g), *Regional Well-Being* (database), *www.oecdregionalwellbeing.org/* (accessed 12 June 2016).

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PART I

Chapter 2

Regional development: Policies to promote catching up

The purpose of this chapter is to understand current regional development approaches among OECD countries to help lagging regions catch up and improve the quality of life for residents in all regions. It reviews the objectives and policy tools for regional, urban and rural development as well as trends in country practices and the nature of recent changes. It then explores the governance arrangements to underpin better policies, such as the organisation of such policies at national level, the role of national networks of regional development agencies, and reforms of regions in terms of competencies and administrative borders.

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.

Key Messages

- Regional, urban and rural development policies seek to target public investment in ways that are tailored to the economic and well-being needs of different types of regions and cities.
- Regional development policies across OECD countries are generally focusing on productivity drivers. Countries could do more to ensure a broader mix of innovation support instruments that boost productivity and to improve subnational government capacity. While in many countries regional development policies seek to reduce gaps across regions, they should avoid stifling growth in the highest-productivity regions.
- Several countries are developing national urban policy frameworks to better manage the many policies that influence urban development. Governments could do more to cultivate the economic success of the system of cities and provide frameworks for improving the governance of metropolitan areas.
- Rural development policy approaches in most OECD countries remain largely focused on agriculture. Policies should better address the diversity of rural region types, non-farm economic activity, local community needs and the ties between rural areas and cities.
- The governance arrangements to manage regional, urban and rural development can be as important as the policy itself. Many national governments are testing different methods for organising their policies across ministries, including regional development agencies. Reforms of regional and local governments can also lay the groundwork to improve conditions for productivity and social inclusion.

Introduction

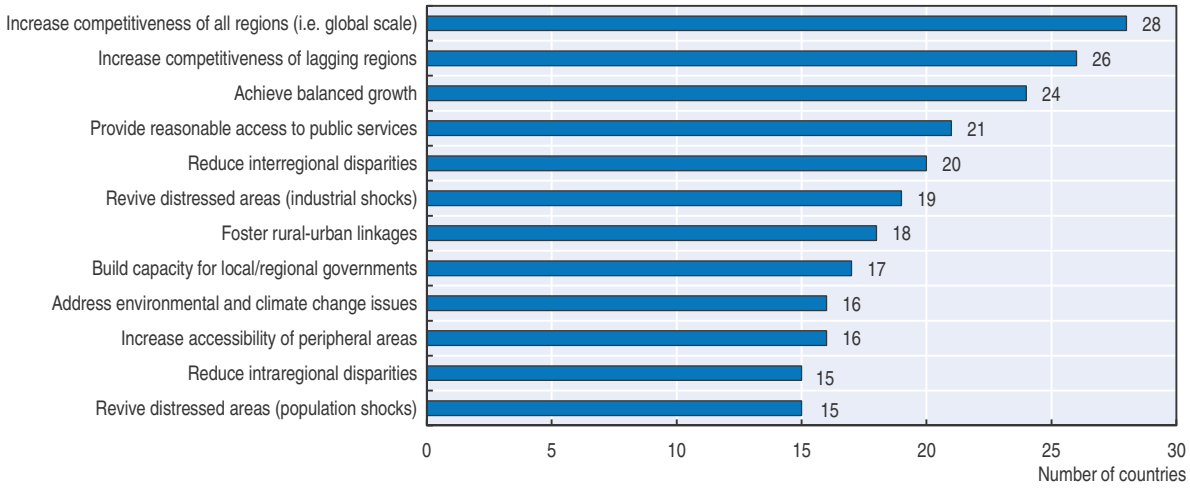
OECD countries have been implementing over the last fifteen years the regional development policy approach discussed by the OECD's Regional Development Policy Committee.[1] Nevertheless, many structural and sectoral policies have a profound and differential impact depending on the characteristics of the region. While there are certain policy strategies that can be applied in a uniform manner across a country, the specific conditions in large metropolitan areas versus remote rural areas, and the different spaces in between, warrant more tailored solutions. National approaches for regional, urban and rural development complement other national level policies in delivering on growth and well-being goals. Subnational governments are responsible for 59% of total public investment[2], therefore the ability for different levels of government to work effectively together is a condition for policy effectiveness in regional development. This chapter focuses on those policies explicitly labelled by governments as place-based policies targeting regions in general, as well as specifically urban and rural places.

Priorities for regional, urban and rural development policies: Cross-country trends

Regional development approaches focused on growth

OECD countries are prioritising the competitiveness of *all* regions (on a global scale) as their top objective, followed closely by the competitiveness of *lagging* regions and balanced development. Countries remain concerned about ensuring the contribution of all regions for national performance, with the vast majority of reporting countries (28 out of 33) ranking this as high/very high in importance (Figure 2.1). This share was around the same in 2010 (OECD, 2010). As noted in Chapter 1, a dynamic frontier region (i.e. one with strong productivity growth) is also a potential driver of catching-up dynamics among other regions. Policies to supporting lagging regions should therefore not stifle growth at the top. The traditional focus on lagging regions remains strong (26/33 countries) along with the related objectives of balanced growth (24/33 countries) and reducing interregional disparities (20/33). In some countries there is a constitutional mandate to address interregional disparities, such as in Germany, Italy, Korea and Spain (OECD, 2010). An analysis of EU countries indicates that of the 23 that are also a member of the OECD, 9 had a main objective of contributing to national growth, 5 of tapping the potential of *all* territories, 6 a dual objective of reducing economic disparities and tapping the potential of all regions and 3 a main objective of reducing economic disparities (EPRC, 2014).

Figure 2.1. **Regional development policy: Countries rating objectives as high priority**



Note: Figures based on 33 countries reporting on the importance of each priority in their regional development policy efforts on a scale of 1 (not important) to 5 (extremely important). Responses with a value of 4 or 5 are included.
Source: OECD (2015a), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris.

StatLink http://dx.doi.org/10.1787/888933411967

Some countries prioritise reviving distressed areas due to industrial shocks or demographic change. Fewer countries rate more context-specific objectives such as reviving distressed areas due to industrial shocks or addressing population shocks and demographic change as a higher priority relative to addressing regional disparities more generally. There are many countries that nevertheless have this mission as an integral part of regional policy actions. For example, the United States programmes through the Economic Development Administration focus on economically distressed areas. Some

country programmes are seeking to build an element of economic resiliency by averting shocks, such as Finland's "Proactive Approach to Structural Change" (Box 2.1). Some countries have focused on natural disasters and/or demographic change (e.g. Japan), albeit generally these policies are one component of broader regional development frameworks.

Subnational governance capacity is a growth barrier for many lagging regions, but only half of OECD countries rated it a high priority for regional development. Insufficient subnational governance capacity and other governance challenges are perhaps one of the most overlooked areas of regional development policy. One of the reasons this issue may not be as high a priority in some countries is that it is simply not part of the mandate of the ministry responsible for regional development and therefore not framed as a regional development policy issue. Among the countries reporting this as a priority are those with long-term structural weaknesses or Eastern European countries with underdeveloped subnational government capacity. However, subnational capacity is not only a matter for unitary countries, as several federal countries, including those with high GDP per capita, did rank subnational capacity as a high priority.

Box 2.1. **Proactive Structural Change programme in Finland**

Some countries, such as Finland, have adopted a proactive approach aimed at anticipating industrial shocks and at restructuring local economies towards the opportunities of the future rather than waiting for a shock to instigate change. "Proactive structural change" is the method first tested in the Lahti region for this purpose. It is based on an analytical framework that quantifies the sensitivity of a region to structural shocks based on its characteristics. Stakeholders are consulted to identify the drivers of change that could impact the region's economy and how this maps to the sensitivity analysis. This process helps to identify drivers of change that could be threats to a region's economic structure, but also opportunities for the region's development. After scenarios for the region's future(s) have been outlined, the stakeholders, including public and private actors, academia and other research institutes, devise plans to orient their region's economy. These plans seek to promote future opportunities and shift away from areas subject to threats to keep regions competitive, dynamic and sound in a changing economic environment. The stakeholder engagement process began as a pilot in the Lahti region.

Source: Hautamäki and Vesasto (ed.) (2013), "Proactive Approach to Structural Change", publication series of the Lahti University of Applied Sciences, Lahti, Finland.

Support for rural-urban linkages is gaining ground in regional development policy, albeit other policies often exacerbate instead of reduce the rural-urban divide. The performance of many rural regions may benefit from more active ties to nearby cities, particularly since almost 81.7% of OECD rural residents live in regions near cities. Recent studies have shown that rural-urban linkages are an important element for integrated development (OECD, 2013). One of the reasons they are not encouraged is precisely due to policies that tend to treat urban and rural spaces as distinct and separate. Greater recognition of the complementarities and connections among these spaces has received less attention than it should (see Chapter 4). Mexico is a country placing an increasing accent on these linkages and has introduced a definition of rural-urban systems to inform policy. Estonia has increased its focus on regional centres and travel-to-work areas for its regional policy.

For EU countries, many of the changes in regional development policy approaches (as well as rural development policy) are in large part driven by EU policy. With the current programming period 2014-20, there are new elements drawing further attention to competitiveness goals. For example, a "smart specialisation" strategy was introduced as a pre-condition for accessing funds so as to orient research and innovation investments towards strengths in the region. Such a strategy requires more active engagement of different public and private actors to identify opportunities to better target research and innovation funding. Administrative changes are also making it easier to support cities and functional areas, and thus not only at the level of administrative regions. In addition, rural development is more linked with other European Structural and Investment Funds (Box 2.2).

Box 2.2. **EU Cohesion Policy and Rural Development: Changes for 2014-20**

Many OECD country regional and rural policy frameworks are linked to EU policies. The changes in the most recent programming period include:

EU Cohesion Policy

1. **Investing in all EU regions and adapting the level of support and the national contribution (co-financing rate) to their levels of development:** i) less developed regions (GDP < 75% of EU-27 average); ii) transition regions (GDP 75% to 90% of EU-27 average); more developed regions (GDP > 90% of EU-27 average).
2. **Targeting resources at key growth sectors:** investments under the European Regional Development Fund (ERDF) will be concentrated on 4 key priorities: innovation and research, the digital agenda, support for small and medium-sized enterprises (SMEs) and the low-carbon economy, depending on the category of region (less developed: 50%, transition: 60%, and more developed: 80%).
3. **Fixing clear, transparent, measurable aims and targets for accountability and results:** countries and regions will have to announce upfront what objectives they intend to achieve with the available resources and identify precisely how they will measure progress towards those goals. This will allow regular monitoring and debate on how financial resources are used. It will mean additional funds can be made available to better performing programmes (through a so called "performance reserve") towards the end of the period.
4. **Introducing conditions before funds can be channelled to ensure more effective investments:** for example, "smart specialisation" strategies to identify particular strengths and potential, business-friendly reforms, transport strategies, measures to improve public procurement systems, compliance with environmental laws, strategies to fight youth employment, early school leaving or to promote gender equality and non-discrimination are all necessary preconditions.
5. **Establishing a common strategy for more co-ordination and less overlap:** a Common Strategic Framework provides the basis for better co-ordination between the European Structural and Investment Funds (ERDF, Cohesion Fund and ESF as the three funds under Cohesion Policy, as well as the Rural Development and Fisheries funds). This also links better to other EU instruments such as Horizon 2020, the Connecting Europe Facility or the Programme for Employment and Social Innovation.
6. **Cutting red tape and simplifying the use of EU investments** through a common set of rules for all European Structural and Investment Funds as well as simpler accounting rules, more targeted reporting demands and more use of digital technology ("e-cohesion").

Box 2.2. **EU Cohesion Policy and Rural Development: Changes for 2014-20** *(cont.)*

7. **Enhancing the urban dimension of the policy** by earmarking a minimum amount of resources under the ERDF to be spent on integrated projects in cities – on top of other spending in urban areas.
8. **Reinforcing co-operation across borders and making the setting up of more cross-border projects easier.** Also ensuring macro-regional strategies like the Danube and the Baltic Sea are supported by national and regional programmes.
9. **Ensuring that Cohesion Policy is better linked to wider EU economic governance:** programmes will have to be consistent with National Reform Programmes and should address the relevant reforms identified through country-specific recommendations in the European Semester. If necessary, the Commission can ask Member States – under the so-called "macro-economic conditionality" clause – to modify programmes to support key structural reforms. As a last resort, it can suspend funds if economic recommendations are repeatedly and seriously breached.
10. **Encouraging the increased use of financial instruments to give SMEs more support and access to credit:** loans, guarantees and equity/venture capital will be supported by EU funds through common rules, a broadening of the scope of their use and providing incentives (e.g. higher co-financing rates). The emphasis on loans rather than grants should improve project quality and discourage subsidy dependence.

EU Rural Development Policy

In line with *Europe 2020* and the overall Common Agricultural Policy objectives, three **long-term strategic objectives** for EU rural development policy in the 2014-20 period can be identified: i) fostering the competitiveness of agriculture; ii) ensuring the sustainable management of natural resources, and climate action; and iii) achieving a balanced territorial development of rural economies and communities including the creation and maintenance of employment.

The 2013 reform leaves in place many of the key features of rural development policy from 2007-13. In particular, as in the past, the policy will be implemented through national and/or regional rural development programmes (RDPs) which run for seven years. However, overall, **the 2013 reform brings change by**: i) improving the strategic approach to constructing RDPs; ii) strengthening the content of rural development measures; iii) simplifying rules and/or reducing the related administrative burden where possible; and iv) linking rural development policy more closely to the other European Structural and Investment Funds.

Member States will have to build their RDPs based upon at least four of the **six common EU priorities**: i) fostering knowledge transfer and innovation in agriculture, forestry and rural areas; ii) enhancing the viability/competitiveness of all types of agriculture, and promoting innovative farm technologies and sustainable forest management; iii) promoting food chain organisation, animal welfare and risk management in agriculture; iv) restoring, preserving and enhancing ecosystems related to agriculture and forestry; v) promoting resource efficiency and supporting the shift toward a low-carbon and climate-resilient economy in the agriculture, food and forestry sectors; and vi) promoting social inclusion, poverty reduction and economic development in rural areas. In turn, each rural development priority identifies more detailed areas of intervention ("focus areas").

Source: Excerpts from European Commission (2013) "Refocusing EU Cohesion Policy for Maximum Impact on Growth and Jobs: The Reform in 10 points", Brussels, Belgium, *http://europa.eu/rapid/press-release_MEMO-13-1011_en.htm* (accessed 25 June 2016); *http://ec.europa.eu/agriculture/rural-development-2014-2020/index_en.htm*.

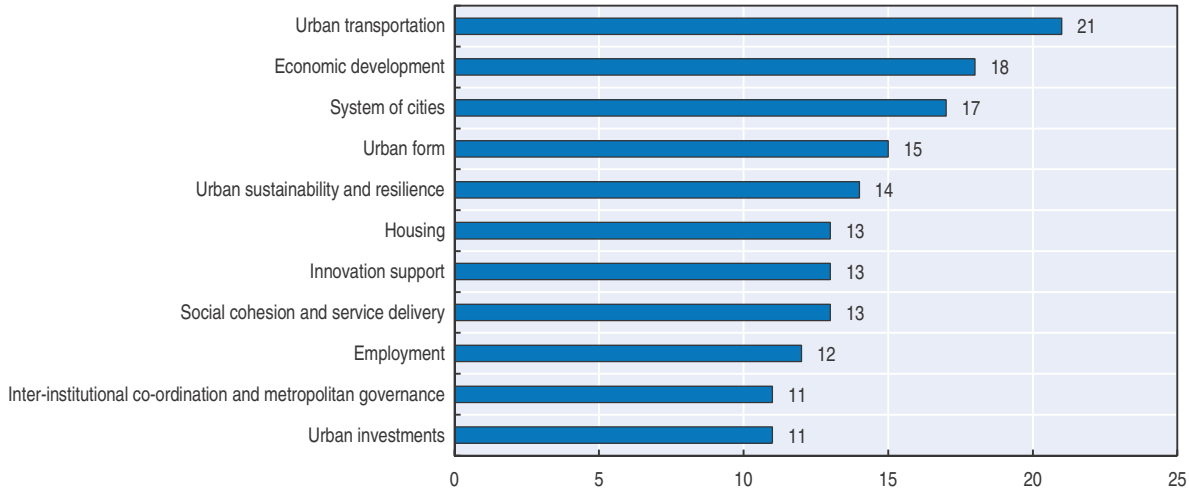
Urban policy objectives are typically related to transport, spatial planning and social inclusion

Transport is the most frequently ranked high priority among OECD countries for urban policy. Policies to improve accessibility of public transport are reported by 21 out of 25 responding countries to be of high importance (Figure 2.2). In addition, the third most frequently reported objective of high importance is that of creating a system of cities through improved inter-city transport links (17/25). Urban sustainability is also strongly linked to transport: as such these efforts tend to be focused on the spatial planning and associated transport so as to reduce greenhouse gas emissions.

Around half of responding countries rank inclusion-related objectives as high on the urban policy agenda. These include priorities such as housing (13/25), social cohesion and service delivery (13/25), employment integration (12/25), and urban investment in targeted neighbourhoods (11/25). Generally those countries that rank one of these inclusion-oriented objectives high also rank the others high.

Economic development is another top-ranked objective for urban policy, but typically for a social policy (inclusion) goal targeting specific communities as opposed to improving productivity more generally. Policies aimed at fostering economic development are the second highest ranked objective in 18 out of 25 responding countries. These policies to attract and retain firms or provide incentives for job creation tend to be targeted to specific disadvantaged urban locations, and are therefore more focused on inclusion within a city than the overall city's competitiveness. Innovation support, which is more focused on firms than low-income neighbourhoods or individuals, is ranked as a high priority for a smaller group of countries (13/25). It may also be the case that innovation is considered "easier" in cities, and therefore national support via urban policy might be less necessary. Most of the countries reporting innovation support in urban areas are also those implementing innovation support schemes in the rural areas, implying a national framing of place-based development as an innovation or productivity issue.

Figure 2.2. **Urban development policy: Countries rating objectives as high priority**



Note: Figures based on 25 countries reporting on the importance of each priority in their urban development policy efforts on a scale of 1 (not important) to 5 (extremely important). Responses with a value of 4 or 5 are included.
Source: OECD (2015a), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris

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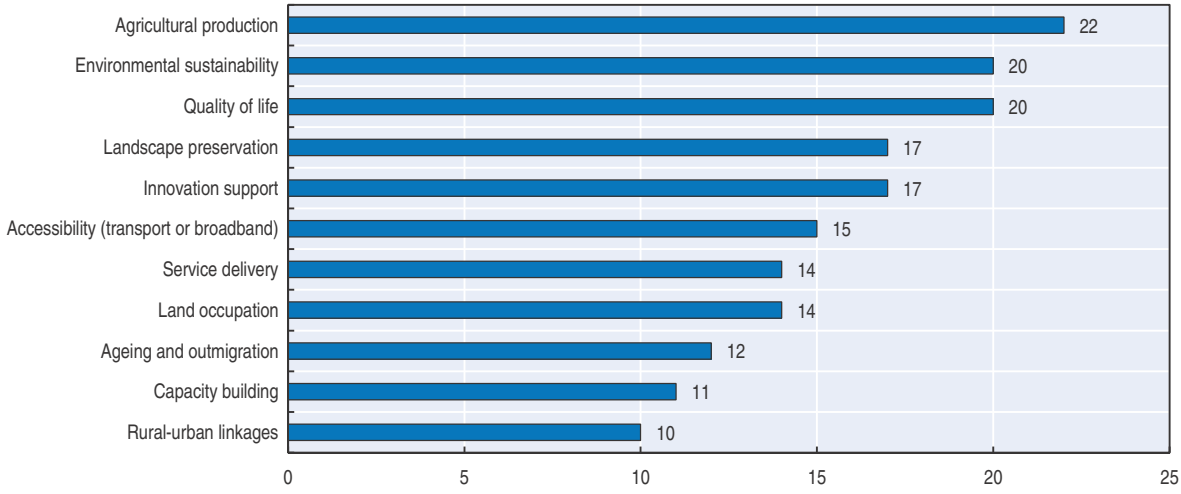
Similar to regional development policy, the least prioritised objective for urban policy is related to governance, in this case inter-municipal co-ordination and metropolitan governance. However, urban areas are plagued by co-ordination problems given the density of interactions across levels of government and jurisdictions. Fragmentation of local jurisdictions in a metropolitan area is found to penalise productivity and exacerbate spatial segregation on income that reinforces disparities in opportunities and outcomes (see Chapter 1). Policy fragmentation prevents integration in a specific place. In short, urban policies are also a governance issue. Several countries have recently implemented national level reforms on metropolitan governance (e.g. France and Italy).[3]

Rural policies are still mainly sectoral, but moving towards cross-sectoral approaches

Agricultural production is the most commonly reported high priority objective for rural development policies. This was true in 22 (out of 24) reporting countries (Figure 2.3). Considering that for most countries the lead ministry for rural development is an agriculture ministry, this result is not surprising. It is another illustration of the importance of the lead ministry in the framing of national approaches to different elements of place-based policy. So while agricultural production is no longer the core economic activity in most rural areas (OECD, 2006), it remains the cornerstone of rural policy. Agricultural production is followed by environmental sustainability (20/24). Environmental sustainability as a part of rural policies typically promotes greening of agricultural practices through a reduction in pollution and water consumption, and also the sustainable use of natural resources and amenities with regard to their economic use, such as a sustainable wood industry or other elements of the bio-economy. Some of the landscape preservation efforts (17/24) also underpin recreational use of rural amenities, which can help strengthen attractiveness and competitiveness of rural areas as well as quality of life. Innovation support is also part of the rural development picture for many countries (17/24). Often it is targeting the food sector and food value chains, or in some cases tourism. Among recent changes in rural policy, a stronger focus on innovation is not typically cited, with some exceptions (e.g. Switzerland, Box 2.3).

Figure 2.3. **Rural development policy: Countries rating objectives as high priority**



Note: Figures based on 24 countries reporting on the importance of each priority in their rural development policy efforts on a scale of 1 (not important) to 5 (extremely important). Responses with a value of 4 or 5 are included.
Source: OECD (2015a), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris.

StatLink http://dx.doi.org/10.1787/888933411986

Box 2.3. **Switzerland's New Regional Policy: Focusing on regional competitiveness**

Throughout the mid-1990s, the scope of Swiss regional policy shifted away from redistribution towards a new focus on efficiency, competitiveness and the creation of value added in rural areas. This shift was formalised with the introduction of the New Regional Policy (NRP) in 2008 which encourages an endogenous "growth-oriented" approach emphasising open markets, export capacity and competitiveness. The previous system of investment aid that began in 1974 was therefore replaced. NRP focuses in particular on rural, mountainous, and border areas. The spatial scope was expanded to go beyond the most disadvantaged and to cover a much wider range of regions. The seven urban cantons may also apply for NRP funds if they can demonstrate that the areas to be supported present the same structural challenges as the traditional target areas of NRP. The NRP also acts at a supra-cantonal level in order to enhance geographic coherence and economic functionality. The Regiosuisse network supports innovation at this cross-cantonal scale.

An evaluation carried out for the Regiosuisse network in 2012 (Regiosuisse, 2012) showed that the potential impact of individual projects was significant, but subject to the project size and scope, as well as the share of public funding compared to private funding. Small projects which had a deep level of public funding displayed the smallest impact, whereas medium-sized projects with limited scope and mixed funding showed the biggest potential impact (relative to their size). Private sector benefits seem to rise with private-sector involvement. The evaluation also mentioned that most of the funds in observed projects were benefiting small and medium-sized enterprises, showing proper targeting.

A subsequent evaluation was carried out in 2013 (Sager and Huegli, 2013) for the implementation of programming years 2008-15 that confirmed the usefulness of the NRP. The bottom-up approach for the funding and selection of local projects had positive results. The additional leeway given to cantons in the implementation of the NRP had its own challenges, but it fostered their creativity and their ability to innovate. The study suggests that the room to manoeuvre given to local governments, although potentially more sensitive to local political pressures, should be kept intact. Private sector involvement was more characterised by project-partnership rather than project leadership, due to the nature of the projects presented, questioning the goal to make private sector leadership the rule rather than the exception. Overall impact assessment (in jobs and output) was challenging due to the difficulty of measuring the qualitative impact of the NRP, for example in terms of regional (re)branding, firm networks for innovation and inter-canton co-operation. The export-oriented and competitiveness focus was very relevant for rural and mountainous areas. The weight of tourism among supported projects was high. The overall assessment of the NRP by the study is highly positive.

A preparatory evaluation for the latest period found lasting impacts for the NRP. The evaluation was mainly centred on the tax breaks offered to firms and showed that the ongoing projects in 2010 had created 12 260 jobs in structurally weak rural areas. Overall, 24 650 jobs could be linked to the ongoing projects. For the 231 ongoing projects in 2011, the value added generated was 6.5 billion Swiss Francs. No firm was reported to leave because of the tax breaks phasing out. This highlights that some temporary measures may well have lasting effects. The study shows that tax breaks were effective at creating jobs and added value in structurally weak regions.

Box 2.3. **Switzerland's New Regional Policy: Focusing on regional competitiveness** *(cont.)*

Switzerland's NRP was renewed in 2016 for another eight-year period, with an even greater focus on innovation and tourism. The three pillars address i) an increase in the economic strengths and competitiveness of regions (85% of total funding), ii) co-operation and synergies between NRP and sectoral policies (5-10% of total funding) and iii) capacity building in the knowledge system of regional policy (5-10% of total funding). In 2015, Switzerland also issued its Policy on Rural Spaces and Mountainous Regions that prioritises greater cross-sectoral and multi-level governance co-ordination and rural-urban linkages. It serves as a complement to the updated Federal Agglomeration Policy and the New Regional Policy.

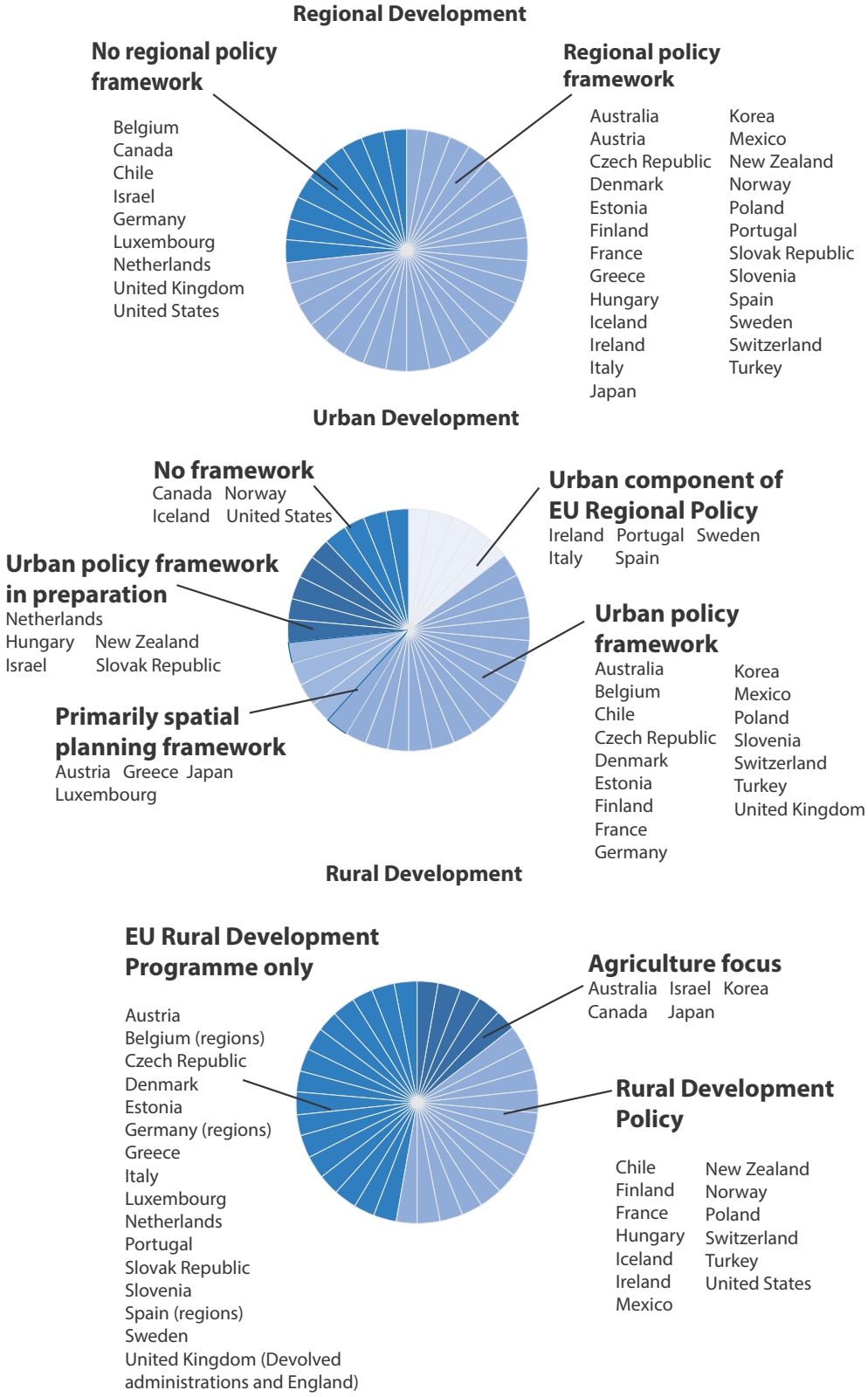
Source: OECD (2011a), *OECD Territorial Reviews: Switzerland 2011*, *http://dx.doi.org/10.1787/9789264092723-en*; European Policy Research Centre (2015) "Regional Policy Developments in Switzerland 2014-15", unpublished country note; Regiosuisse (2012), "Wirkungsmessung NRP-Projekte 2012", Synthesis, Final Report; Sager, F. and E. Huegli (2013), *Evaluation des Mehrjahresprogramm 2008-15 zur Umsetzung der NRP*, Bern: Kompetenzzentrum für Public Management der Universität Bern und Büro Vatter AG.

The importance of rural-urban linkages and subnational capacity building are underestimated in many countries' rural development policies. Rural policies, through definitions of the rural space and their orientation, may in some cases insufficiently promote the relevant connectivity. However, a few countries have highlighted these linkages as part of the national regional policy approach (see above), more so than they report it in the context of rural policy itself. Given the often greater development challenges in more remote rural regions, this may reflect the recognition that rural areas close to urban areas are doing better. Capacity-building, as in other policy fields, is ranked a high priority for fewer countries (11/24). Countries reporting this as important were almost exclusively unitary countries, with both high and low GDP per capita. However, better local decision making and improved public services is also part of competitiveness. Tools reported by countries were generally technical support, knowledge transfer and public-private partnerships. In addition, this capacity may be found in the private sector and civil society, implying a particularly important role for community capacity building (See Chapter 4).

Countries have set out these objectives in multiple national strategies

The vast majority of OECD countries are following an explicit regional development strategy, defined in one or several documents (Figure 2.4). Those not reporting an overarching strategy include federal countries for which competencies are mainly in the hands of subnational governments (e.g. Belgium, Germany and the United States). Others may have an implicit strategy through agencies (e.g. Chile). Some countries may not target an explicit regional scale per se in their policies or may focus on a local scale (i.e. the Netherlands and the United Kingdom). Most countries have more than one strategy document (on average two), in some cases a legal framework complemented by a more regularly updated plan (e.g. seven years is common in EU countries to map with the EU policy cycle), thereby keeping a balance between policy stability and flexibility to adapt to changing circumstances.

Figure 2.4. **Overarching frameworks for regional, urban and rural development**



Source: OECD (2015a), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris.

Urban development frameworks are undergoing change in many countries. Several countries report framework documents or national statements on urban policies under preparation (e.g. Hungary, Israel, Netherlands, New Zealand, Poland and the Slovak Republic). While some of them may have had a spatial planning guidance in their countries for cities, they are moving beyond spatial planning to consider a wider range of urban policy issues. A few countries have recently updated older strategies (e.g. Switzerland) or report increasing the level of activities for urban areas in the context of EU regional policy funds (e.g. Italy, Portugal and Spain). A couple of countries have recently created new ministers for urban issues, such as Australia's new Assistant Minister for Cities and Digital Transformation (created 2016) or Sweden's Minister for Urban Development in the Ministry of the Environment and Energy. In some countries with few cities (e.g. Iceland), one would not necessarily expect a national urban policy framework. There is a pronounced trend of greater attention to cities in country approaches to place-based policies.[4] Some of the increasing attention appears to be associated with environmental sustainability concerns through better spatial planning (i.e. curbing urban sprawl). Urban development is also among the top global issues, and the Habitat III process is raising awareness about the importance of national urban policy frameworks (Box 2.4).

Box 2.4. **Habitat III: Towards a global standard for national urban policy frameworks**

As part of the Habitat III process culminating in the 3rd United Nations Conference on Housing and Sustainable Urban Development, a policy paper on national urban policies proposes ten recommendations regarding the design, implementation, monitoring and evaluation of a national urban policy.

1. **International Agreements:** national urban policy has proved to be valuable for implementing the Habitat Agenda and should be further mainstreamed as a critical instrument to implement the New Urban Agenda. The normative base of a national urban policy should additionally reflect existing international agreements including: i) Universal Declaration of Human Rights; ii) Paris Agreement; iii) Sendai Framework; and iv) Agenda 2030 and the Global Goals.
2. **Institutional Form:** the institutional form of a national urban policy must create channels of participation and take into account the need to affect high-level change, including: legal reform, allocation of fiscal resources, generation of information on the overall urban system (including formal and informal), and integrated long-term urban planning and design that extends beyond the political cycle. Quality of legal frameworks signifies the ability to produce the regulatory reforms required by policy makers. Effective legislation must have a clear purpose, introduce consistent and well-thought-out rules and enforcement mechanisms, and unambiguous rules and obligations. Finally, it must allow for systematic monitoring and evaluation of the results of legislation. Implementing an evidence-based national urban policy process requires investment in civil service, research, university curricula, and educational opportunities.
3. **Leadership:** there needs to be both formal and informal political leadership from within government and/or from other stakeholders to ensure the legitimacy of the national urban policy process and effectiveness of implementation.
4. **Inclusive and equitable:** national urban policies need to be inclusive and enable stakeholders to effectively engage in the process, making sure all voices are heard. The outcomes and impact need to promote equality, reach the most vulnerable, those at risk, and the urban poor.

Box 2.4. **Habitat III: Towards a global standard for national urban policy frameworks** *(cont.)*

5. **Sustainability and resilience:** a national urban policy has to address social, economic and ecological dynamics and the interplay between them in the territorial context.
6. **Priority Issues:** a national urban policy should be people-centred and needs to complement, and not replicate, strong sectorial strategies in areas such as infrastructure, water, energy, health, education, housing or social and economic inclusion policies. Ideally, a national urban policy will address the territorial, fiscal and institutional relationships across sectors. A national urban policy should safeguard the interests and rights of both current and future generations as well as be mindful of the natural ecosystem impacts of policy choices. A national urban policy provides the information platform or process to mediate long-term versus short-term priorities across territorial scales, allowing difficult decisions to be debated and communicated with the public.
7. **Co-ordination:** a national urban policy should emphasise and facilitate institutionalised and informal co-ordination and collaboration among different actors, sectors and functions across all scales and systems of cities. Co-ordination should consider national territorial concerns, including the urban-rural continuum, and metropolitan, regional and supranational urbanisation dynamics and issues.
8. **Capacity:** to be effective, a national urban policy process requires preparation, an institutional host, budget, training and opportunities for in-country and transnational peer-to-peer learning within and across governments and other stakeholders. Effective internal monitoring and evaluation should be built into the process.
9. **Communication:** the national urban policy process should employ a multimedia communications strategy that is comprehensive and transparent, and is targeted to inform all civil servants, residents, media and other stakeholders both within and outside national boundaries. A communication strategy for a national urban policy should also be used to promote broad awareness on the integrated nature of urban development.
10. **Data:** a national urban policy should be grounded in the most current and comprehensive qualitative and quantitative data. The process of developing a national urban policy can be used to improve data collection systems and also develop new and additional data to improve disaggregation (e.g. gender and age), coverage (sector and geography) and the inter-operability of data. Specific attention must be given to enumerating and making visible all aspects of urban informality. Data collected for a national urban policy needs to engage with global and local systems of data and should be open access.

Source: Habitat III Policy Unit 3 (2016), *Policy Paper on National Urban Policy*, *www.habitat3.org/*.

Most countries are reporting a rural-related policy framework. A few almost exclusively focus on agriculture and several others are a mix of agriculture and other rural development themes. For many EU countries in the OECD, this is driven by EU policy on rural development (see previous Box 2.2). In some countries, the regional policy frameworks are essentially about rural development given the highly rural character outside of a few main cities, such as for Iceland and New Zealand.

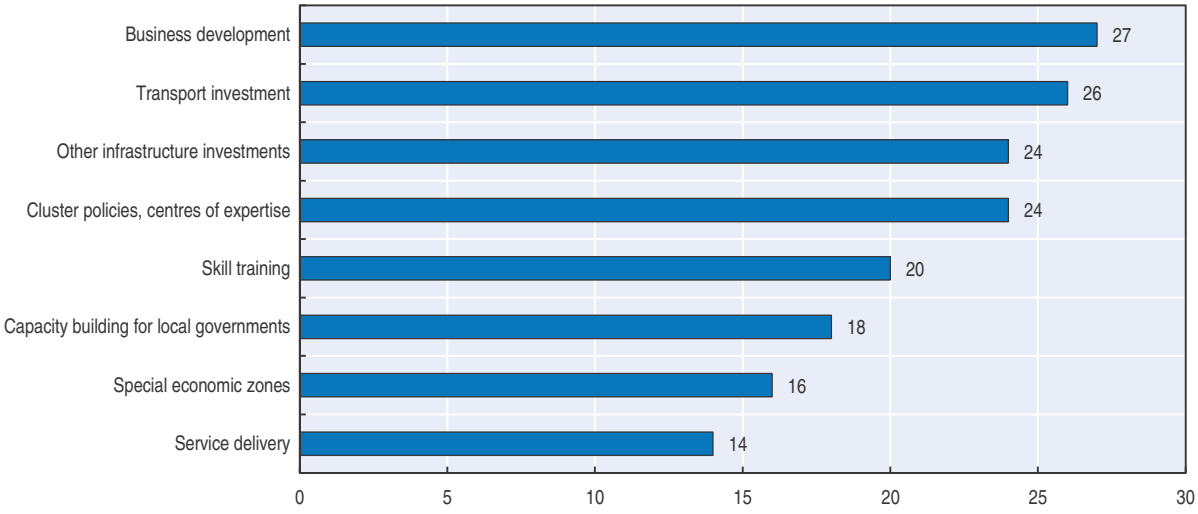
The institutional context and type of national guidance also structure the way that national and regional actors work to fulfil national objectives. There are differences in the type of national guidance, whether it is a more broad "framework approach" or a more pre-defined "planning approach". Framework approaches use strategic guidelines and more tailored contracts as opposed to laws and pre-defined instruments, whereas planning approaches tend to be more associated with binding laws and instruments.

Regional policy tools mainly split between business development and infrastructure

In recent years, there has been a transition to greater use of policy tools that involve investments instead of basic subsidies in the goal of boosting competitiveness (Figure 2.5). Many of the infrastructure investments and business development tools are designed to improve firm productivity. In addition, more than half of the countries report using a common tool box of 5 out of 8 core tools. The use of public service subsidies is less common than other tools, 14 out of 30 responding countries have reported using subsidies for their public service provision, only two more for special economic zones. Subsidies for public services are more widely used in non-EU countries than they are in EU countries. These subsidies are generally associated with remote rural areas, for preservation of locations with a heritage, or particularly disadvantaged regions in terms of economic performance.

Figure 2.5. **Use of policy tools in regional development policy**

Countries reporting use



Note: Figures based on 30 countries responding to the question.
Source: OECD (2015a), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris.

StatLink http://dx.doi.org/10.1787/888933411992

Business development is the most frequently reported policy tool to achieve regional development policy objectives. Virtually all countries report using this tool (27/30). Several countries are reporting a recent shift away from a focus on infrastructure in favour of competitiveness and innovation (e.g. Estonia, Hungary and Spain). Many of the national networks of regional development agencies have a primary purpose of business development, generally focusing on SMEs (see later section). Related to business development are a range of instruments for promoting innovation that are seeking to boost productivity of firms or even improve the productivity of the public sector (Table 2.1). As often science and technology policies are de facto directed towards the leading firms and institutions, often in frontier regions, many of these instruments oriented towards non-leading regions are used by regional development policy as opposed to national innovation policy.

Cluster policies are tools to organise support for groups of firms with a greater focus on spillovers as opposed to an individual firm in isolation. Indeed, 24 out of 30 countries report using cluster policies. Over the last twenty-five years, there has been an evolution of cluster policy approaches, from SMEs to national champions to innovation clusters. Different types of ministries are using these policies: science and technology ministries,

Table 2.1. **Policies to promote innovation outside of leading regions**

Type of policy	Common approaches	Policy design challenges to address
Basic business development and innovation support to firms	• Targeting firms in specific locations • Targeting firms led by particular population groups	• Supply-driven approaches (provider promotes its service, not what firm needs) • Restricting innovation support to S&T only
Clusters and centres of expertise	• Same programme for all regions (so lagging regions included) • 2nd track policy for non-leading regions (possibly from a different policy stream such as regional development) • Firm-focus versus research-driven	• "Wishful thinking" clusters and resources spent to create what doesn't already exist • Lock-in preventing "creative destruction" • Sectoral instead of new cross-sectoral combinations
Capacity building for the public sector	• Regional innovation strategy development support • Networks of professionals across regions	• Copying strategies from one region to next • Developing strategies with insufficient interaction among innovation system actors • Disconnect with industry and skills considerations
Sectoral R&D programmes	• Economic sectors located in lagging regions • Special challenges of targeted places (often rural) • Public facilities or to private firms	• "Excessive" subsidisation • Lock-in
Capacity building for innovation actors	• Focus on public/quasi-public actors • Co-applicants/co-sponsors to include lagging regions	• "Check-the-box" involvement of lagging regions in projects • Insufficient outreach to harder-to-reach actors
Science and industrial parks	• University based • Industrial focus	• Moving from physical infrastructure to innovation systems • Missing entrepreneurs
Venture capital funds	• "Public" funds • Public co-financing with "private" support	• Providing to firms that are not deal ready • Public sector often has unclear exit strategies and low risk tolerance • Neglecting the other elements of the entrepreneurial environment

Note: S&T = Science and Technology.
Source: Maguire, K. and J. Weber (forthcoming), "Should we care about gaps in regional innovation capacities?", *OECD Regional Development Working Papers*, OECD Publishing, Paris.

enterprise and industry ministries, and regional development policy ministries. The different orientations of the policy will determine the types of instruments, from supporting a cluster organisation to R&D subsidies for firms in a designated cluster or sector (OECD, 2007). Clusters (specialisation) are considered one of the opportunities for both regional development as well as innovation diffusion more generally. While there is debate about the policies to "create" or promote clusters and/or cluster initiatives, the role of clusters in the economy is an area many researchers and policy makers are seeking to understand further. Measuring clusters through specialisation indicators is therefore a tool used by several countries to better diagnose regional economies and identify cluster partners (Box 2.5).

Box 2.5. **Cluster mapping portals: New tools to understand regional economies**

Clusters, groups of geographically proximate firms in related industries connected through multiple local linkages and externalities, have long been recognised as an important feature of regional economies (Porter, 1990; OECD, 1999). The initial case-based studies have in recent years given way to cluster mapping, the analysis of comprehensive data sets covering entire regional and national economies, based on a transparent set of benchmark cluster definitions (Porter, 2003; Delgado et al., 2016). Comparable data sets were first created for the United States, followed by the European Union and Canada. They capture economic activity (measured by employment, establishments, and payroll) by cluster category for different levels of geography (e.g. US: county, metropolitan area, economic area, state; EU: NUTS-2 regions and higher; Canada: Census Metropolitan regions, provinces). A range of other countries, including Mexico and Korea, have recently started efforts based on this methodology.

Box 2.5. **Cluster mapping portals: New tools to understand regional economies** *(cont.)*

This new generation of cluster data has been applied to quantitatively examine the role of clusters in regional economies. Clusters of traded industries, defined as those that concentrate in specific locations, competing with rivals based elsewhere, and serving markets outside of their location (e.g. biopharmaceuticals), register significantly higher productivity, innovation, and wage rates than local industries (e.g. retail). Traded industries' share of total employment, currently at 30-40% in many countries, has been falling over time. Strong clusters, i.e. those in which individual regions exhibit a high relative presence of employment, account for about two-thirds of all traded industries employment. The data has been used in a series of papers by researchers connected to the cluster mapping effort to explore the relationship between cluster presence and economic performance. They find cluster strength to be associated with: higher job growth of the related industries that constitute the clusters; higher resilience of employment to economic crisis; higher growth in innovation and entrepreneurship; and with the emergence of new regional industries. They also find regions with a larger share of regional employment/payroll in strong clusters to register higher prosperity levels (Delgado, Porter and Stern, 2010, 2014, 2016; Ketels and Protsiv, 2014).

Governments across the OECD have drawn on this work to launch cluster portals that make this data available for policy and economic development practice. In the United States, the Economic Development Administration (Department of Commerce) has supported the 2014 launch of the US Cluster Portal (*www.clustermapping.us*). The European Commission has hosted the EU Cluster Portal (*http://ec.europa.eu/growth/smes/cluster/index_en.htm*) on its site since 2015; the first version was launched in 2007. The Canadian government has, in its 2016 budget, announced its intent to create a similar portal for Canada. These portals provide comparable"open data" on the cluster composition of regional economies and the geographic footprint of specific cluster categories across regions. Some combine this with cross-cutting data on regional competitiveness and on the presence of cluster organisations, i.e. public-private initiatives to enhance the competitiveness of a specific regional cluster (Solvell, Lindqvist and Ketels, 2003).

Cluster portals enable regions to assess their specific strengths and identify opportunities within existing and related emerging clusters. Organisations like SelectUSA are using the cluster portal to communicate the profile of specific locations to potential investors. The portals aim to help national governments make evidence-based policy choices based on an understanding of the specific needs and opportunities of individual regions, both overall and for cluster-specific efforts. Cluster organisations can use the data to compare themselves with rival locations, and identify collaboration partners elsewhere. The European Commission has recently re-launched the Cluster Collaboration Platform (*www.clustercollaboration.eu*) as a companion site to support the collaboration among cluster organisations.

Source: Porter, M.E. (1990), *Competitive Advantage of Nations*, Free Press, New York; OECD (1999), *Boosting Innovation: The Cluster Approach*, *http://dx.doi.org/10.1787/9789264174399-en*; Porter, M.E. (2003) "The Economic Performance of Regions," *Regional Studies*, Vol. 37, pp. 549-578; Delgado et al. (2016), "Defining clusters of related industries", *Journal of Economic Geography*, No. 16, pp. 1-38; Delgado M., M.E. Porter, and S. Stern (2010), "Clusters and Entrepreneurship," *Journal of Economic Geography*, Vol 10(4), pp. 495-518; Delgado, M., M.E. Porter, and S. Stern (2014), "Clusters, convergence, and economic performance", *Research Policy*, No. 43, pp. 1 785-1 799; Ketels C. and S. Protsiv (2014), "European Cluster Panorama 2014", European Cluster Observatory; Sölvell, Ö., G. Lindqvist and C. Ketels (2003), *The Cluster Initiative Greenbook*, Stockholm.

Infrastructure investments are still a mainstay in regional development policies, mainly for transport, but for other forms of infrastructure as well. Generally these investments are for transport (motorways, for example). Investments in other types of infrastructure are also the third most frequently used instrument. Basic water, sewer and energy investments tend to be reported in OECD counties with below average GDP per capita, but not exclusively (e.g. the United States). Several countries note investments in social infrastructure such as schools, public spaces or other buildings, particularly in sparsely populated areas. Occasionally this infrastructure is more focused on firms (such as incubators) or for tourism. Finally, telecommunications is another field reported, for both broadband connections and mobile telephone networks.

Skills are critical for economic development but are often managed outside of regional development policy. With respect to regional development needs, generally OECD countries report focusing their efforts on low-skilled or otherwise disadvantaged workers (unemployed, migrants, aboriginal groups, etc.). As low skills are a considerable bottleneck to regional growth, this focus is not surprising (OECD, 2012). In more rare cases, the skills focus is more specifically on new technologies and entrepreneurship.

Tools related to service delivery for regional development are often dedicated to rural areas, where the cost of delivering such services is higher. There are several categories of service delivery reported by OECD countries. One category is that of reaching remote areas (e.g. Australia subsidising regular flights to remote areas). Another is to retain public services, including through multi-purpose service centres, and generally for rural areas (one-stop shops) (e.g. Sweden and France). In other cases, there may be service delivery to protect and make use of valuable amenities (e.g. Hungary and Turkey).

Special economic zones (SEZs) are a widespread place-based policy tool used by many countries, within the OECD and worldwide. SEZs focusing on the attraction of foreign direct investment (FDI) are generally established to tackle a range of issues such as to overcome market-failures (in provision of goods and services), generate positive externalities (e.g. knowledge-intensive activities), overcome administrative barriers to reforms, experiment with new policies, or to overcome infrastructure bottlenecks by focusing on a specific location (OECD, 2014a). Such place-based policies are not without their common pitfalls, however. The distortions associated with fiscal incentives should be compensated by other tangible results. Countries often have challenges integrating the foreign firms located in such zones into the wider economy. The tax incentives also may not promote innovation per se, but simply attract or displace firms from outside to inside the designated zone.

For regional development policy, SEZ examples range from firm-focused to those that are supporting individuals (Table 2.2). Some SEZs are targeting people in disadvantaged areas (e.g. Australia and Norway), or to help firms in particularly disadvantaged places (e.g. Mexico and the United States). Others have a more classic FDI focus, sometimes targeting specific sectors, and seeking to promote more economic balance across a country (e.g. Korea and Poland). Others are aiming at maintaining a competitive edge so as to retain frontier firms and sectors (e.g. the United Kingdom). Spatial planning is another consideration for these zones, which offer incentives to encourage firm location taking into account land use concerns (e.g. Turkey and Luxemburg). In some countries, while certain locations may not have the characteristics of an SEZ, those locations may be prioritised for infrastructure investment to support firms (e.g. the Netherlands).

Table 2.2. **Special economic zones: OECD country examples**

Country	Thematic focus	Geographic scope/ target	Comments
Australia	Social inclusion, overcoming remoteness	Specific localities in remote regions	The Zone Tax Offset (ZTO) is a concessional tax offset available to individuals against their tax liability in recognition of the isolation, extreme climate and high cost of living associated with living in particular locations. Eligibility is based on defined geographic zones.
Korea	Business-oriented, to promote balanced development	Economic centres of regions outside Seoul	Korea's 8 Free Economic Zones are a tool used by the Korean government to promote balanced development of the country through zones endowed with advantageous regulatory and tax regimes for firms, as well as sector-oriented infrastructure.
Luxembourg	Business-oriented, industry attraction with diversification goal	Locations with land shortages	Special activity zones are set-up to secure provision of land to businesses and high value-added industry where land availability is uncertain so as to secure Luxemburg's economic diversification and future.
Mexico	Business-oriented, territorial inclusion focus	Locations in lagging regions	A new initiative focused on the southern states of Mexico: Guerrero, Michoacán, Oaxaca and Chiapas, which are the states with the highest level of poverty in Mexico. The zones, 3 designated thus far, will include substantial infrastructure investments, and a business-friendly regulatory framework on labour, taxes and trade.
Norway	Social inclusion, overcoming remoteness	Specific counties and municipalities	In Northern Norway there is the target zone for Northern Troms and Finnmark. In very sparsely populated areas there is a regionally differentiated social security contribution scheme. The regional aid map comprises municipalities in sparsely populated areas eligible for investment aid.
Poland	Business-oriented, growth across country	Locations throughout the country	Polish SEZs are based on a mix of financial support (tax incentives mainly targeted at investment expenditure), non-financial support (the regulatory environment is made business friendly) and investment in public infrastructure which aims at attracting investors and businesses with a focus on specific sectors.
Turkey	Business-oriented, investor-friendly environment and spatial planning	Municipal level	Organized industrial zones (OIZs) – 211 operational and 79 more under construction – are for production of goods and services. They are built according to plans with the required hard and soft-infrastructure for orderly and efficient industrialisation. The main tool is provision of ready-to-use, business-oriented infrastructure. Other benefits include exemption from VAT on land acquisition, as well as other tax breaks on land use, and subsidies for energy, telecommunication and water prices.
United Kingdom	Business-oriented, attracting and retaining top value-added sectors	Within Local Enterprise Partnerships or outside of them	Enterprise zones (24 thus far) are proposing simplified planning to grant automatic planning permission for certain developments (such as new industrial buildings). Local authorities, with help from the central state if necessary, commit to the provision of ICT infrastructure. There is also tax relief for investments and on business rates in general.
United States	Social inclusion, underperforming communities	Neighbourhood, city, community level, including rural and tribal communities	Promise Zones are designated in a competitive national process (13 thus far). Benefits include tax incentives, as well as federal support for firms to locate in disadvantaged neighbourhoods, and support to communities and their leaders.

Source: OECD (2015a), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris.

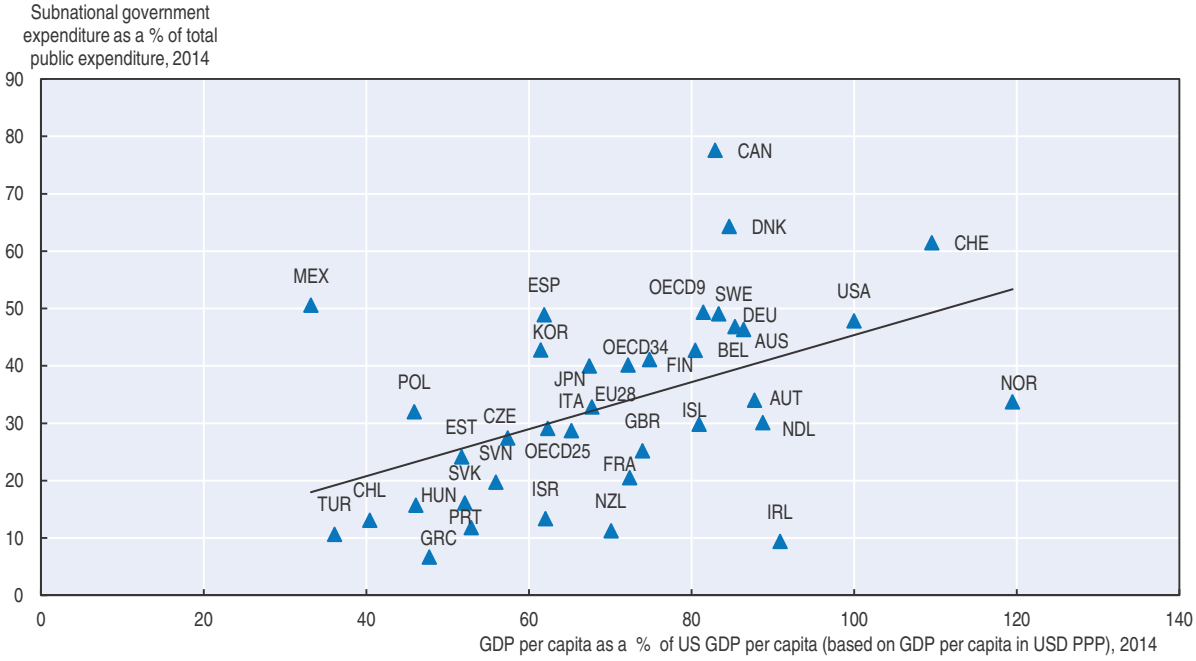
Governance strategies to promote catching-up dynamics and inclusion

For policy in general, and place-based policies even more so, the "how" is as important as the "what". The governance of regional development policy at the national level, and the interaction between national and regional/local policies are both considerations for promoting policy effectiveness. Some key issues concern the national level organisation of the regional, urban and rural development policy portfolio and the manner in which it is monitored and evaluated. The way national governments organise their interventions in different parts of a country can involve different strategies, one being that of regional development agencies. There are many strategies for interacting with regions and localities. Some countries have been promoting reforms to the regional level as part of their efforts to decentralise. As countries develop economically they tend to rely more on subnational governments (Figure 2.6). Building subnational capacity (technical and financial) is therefore an important element in regional development efforts.

Most of the recent changes in regional policy reported by countries are related to the governance elements of their implementation, not in the actual policy tools. For example, two countries created agencies to help administer regional development policy (e.g. Italy and Portugal for European funds). Some countries are changing the level at which certain regional development policy funds are being used: Austria is managing the next round of

European programmes at the national, not regional level, while Greece transitioned management from the national to the regional level. Some countries are seeking to build subnational capacity or prepare for decentralisation (e.g. Chile and the Czech Republic). Some are implementing new types of contacts between the national and regional level, such as Finland's Growth Agreements with major cities, or in the Netherlands the national-provincial agreements, in addition to countries already using this process (e.g. France and the United Kingdom). Cross-sectoral policy co-ordination at national level is a new goal for Hungary, and has been a goal at the United States federal level. A few countries have had ministerial changes at national level for regional development.

Figure 2.6. **Higher income countries tend to rely more on subnational governments for spending**



Source: Calculations based on OECD (2016a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

StatLink http://dx.doi.org/10.1787/888933412006

The entity responsible for regional, urban and rural development portfolios frames policy approach

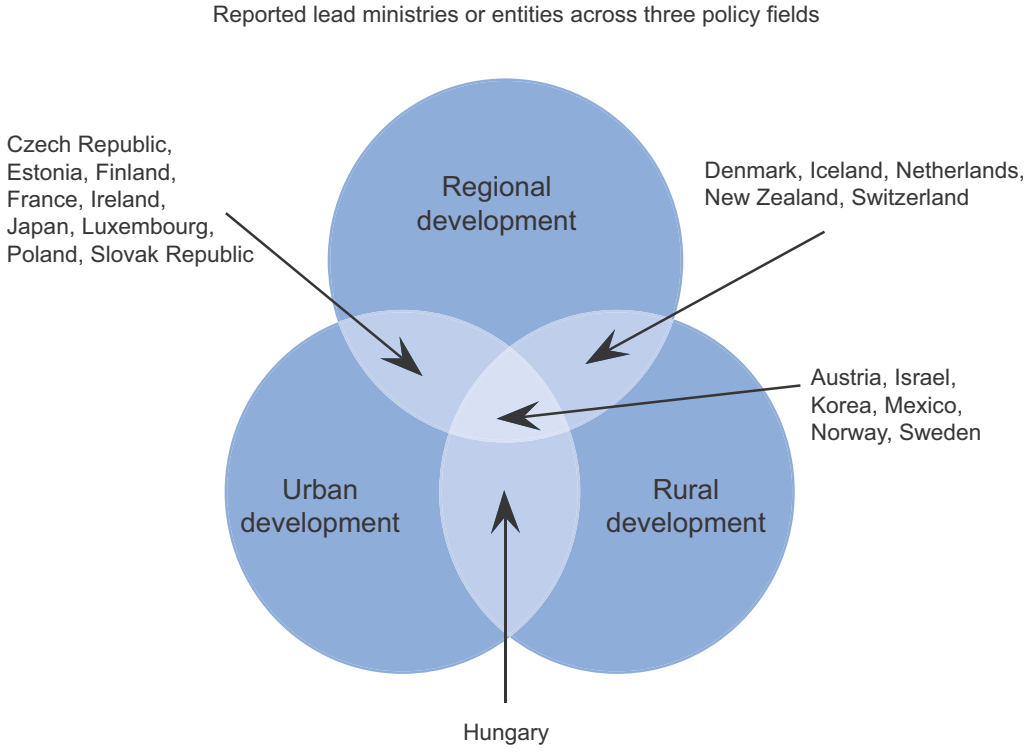
The most common type of ministry for regional development is one that focuses on economic affairs. Almost half of OECD countries (16/34) reported this ministry as the lead on the regional development policy portfolio. Some countries house this portfolio in ministries with a strong infrastructure orientation such as Japan and Australia (6/34 countries). Other ministries that may lead the regional development portfolio are ministries of interior or local government (3/34 countries). In a few countries, this portfolio is either managed by a Centre of Government (Austria), an Interministerial Committee (France) or in the case of Belgium, almost entirely in the hands of regions.

The lead ministry for urban development tends to be more oriented towards infrastructure and spatial planning. Indeed, 15 countries indicated an infrastructure or spatial planning ministry. Two countries reported an interministerial committee as being their lead actor in urban policies. Other countries report ministries of interior (5/30) or economy (5/30). Urban ministry portfolios appear to change more often than that of regional and rural policy, with a few countries changing their lead ministry recently.

Responsibilities and leadership for rural policies remain predominantly in agricultural ministries, and generally rural development is less dispersed across different ministries than regional and urban policy. The majority (20 countries) report agriculture ministries as the lead.[5] However, 29 countries report such ministries are involved, even if not the lead ministry, indicating the prevalence of agriculture in framing rural development policies. Other types of ministries and entities charged with a rural development portfolio are economy and development ministries (5) or central government agencies (4) and infrastructure ministries (3). Very few countries reported either an interior or local government ministry or a regional development ministry as its lead actor for rural development. In several countries, regional and rural development may be synonymous when most of the country has a rural character.

Some countries have integrated responsibilities through different combinations among regional, rural and urban policy. In a few countries, the same ministry or other body is the lead on regional, rural and urban policy, and several others have the same lead for at least two of these three policy areas (Figure 2.7). The way these responsibilities are split across ministries influences the degree to which some policies may be integrated, or not, as well as the need for co-ordination structures to work across ministries. The most common integration is between regional and urban policy portfolios. Responsibilities split across three ministries (one for each field) is reported in 13 countries.[6]

Figure 2.7. **Regional, rural and urban development ministries/entities at national level**



Source: Based on self-reported responses by countries to OECD (2015a), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris.

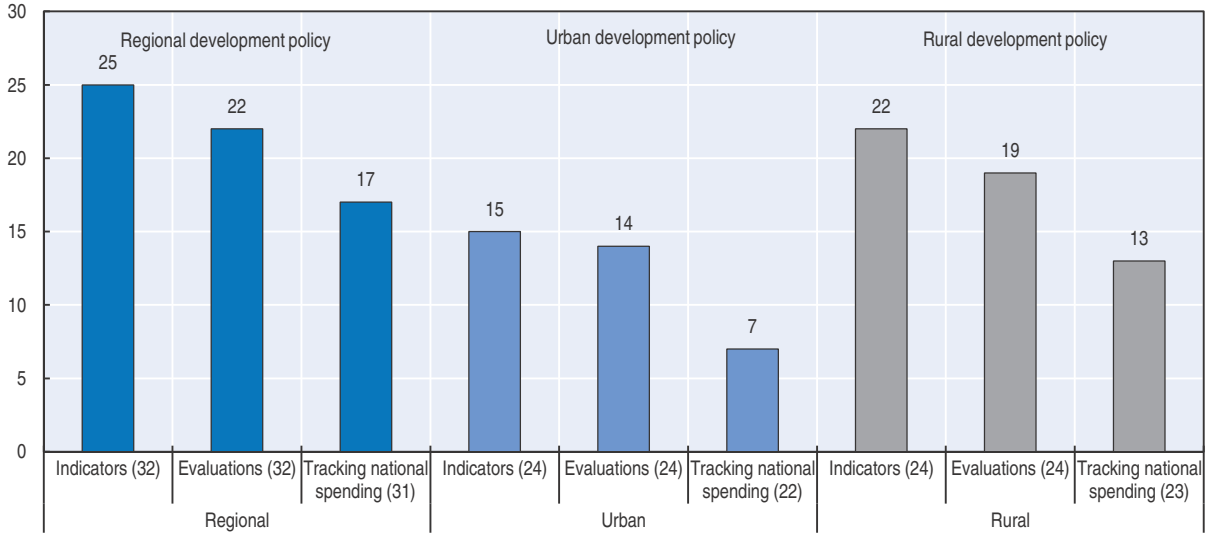
Interministerial committees are one governance arrangement that address the policy co-ordination challenges associated with multiple ministries. In France for example, an interministerial committee is the lead body for regional development at the national level. Overall, such bodies exist in 24/34 countries. Interministerial committees are also used for urban policy (20) and rural policy (21). A previous study found that countries were on average involving six ministries with an explicit role for urban policies, the most fragmented among the three policy areas (OECD, 2014a).

The effectiveness of such interministerial committees is mixed. The dominant approach to interministerial committees at the national level has been to endow them with a co-ordination function to streamline implementation of regional developments policies. Committees that do not meet regularly or lack a permanent structure tend to have significantly less influence in the definition of policies. Some interministerial committees and bodies have provided a genuine forum to advocate policy reforms at the national level through horizontal co-ordination, such as Australia's COAG (which in addition serves a vertical co-ordination role). The United Kingdom's Cities Policy Unit (created in 2011) is a form of interministerial collaboration and provides a policy forum for a wide range of actors (public, private, national, and subnational). It is involved in the design of the city deals that constitute urban policy.

The shared responsibilities for regional development across ministries complicates efforts to track budgets, as well as monitor and evaluate regional development policies (Figure 2.8). For regional development policy 25/32 countries reported the use of indicators to monitor their policies, 22/32 that they were evaluating them and only 17 that they tracked spending at the national level. The results are not as high for urban policies, likely due both to the greater range of ministries involved in urban policy and the less frequent presence of an overarching urban policy framework. Rural policies are more frequently monitored than urban policies but less so than regional policies. The role of EU policy in promoting monitoring of regional and rural policy is evident in the country responses. Most OECD countries have therefore acknowledged the necessity of monitoring and evaluation

Figure 2.8. **Country practices in monitoring, evaluation and tracking of spending**

Number of countries reporting practice



Note: Numbers in parenthesis indicate the total number of reporting countries.

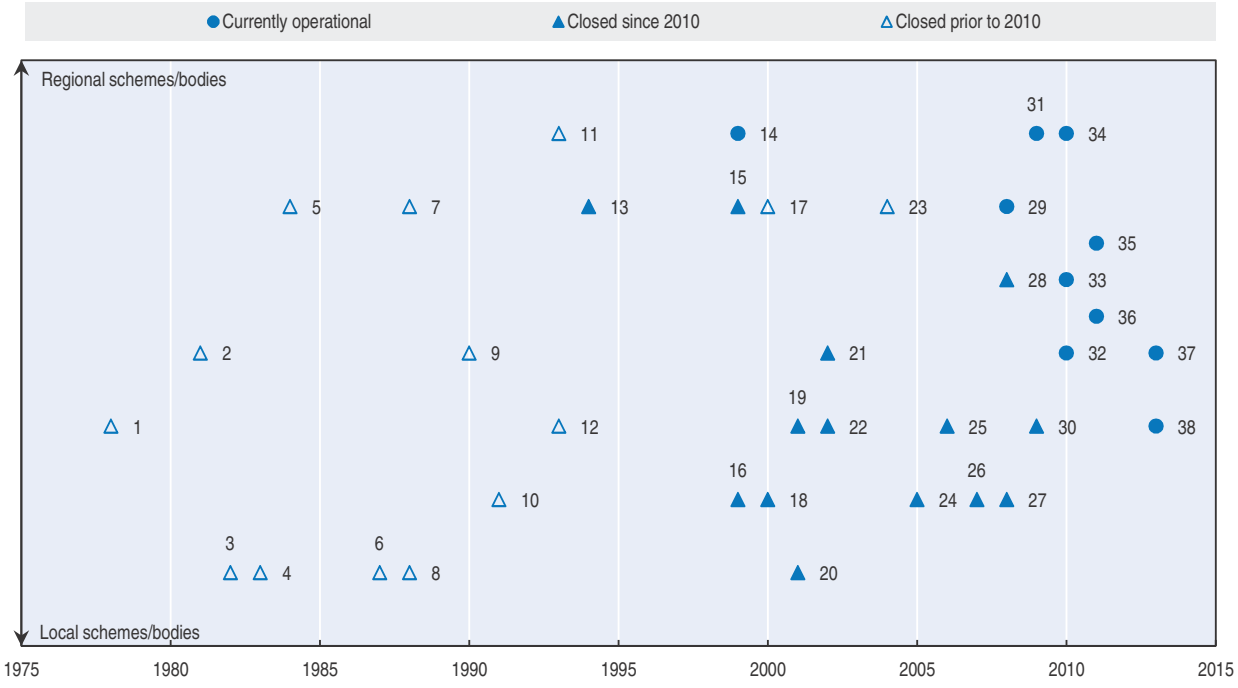
Source: Based on self-reported responses by countries to OECD (2015a), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris.

StatLink http://dx.doi.org/10.1787/888933412010

as complementary tools. Those that track national spending were more often reporting that they also perform both monitoring and evaluation.

Evaluations of place-based policies are fraught with challenges, but necessary to understand what works and what does not. Often these evaluations are conducted on specific programmes, as opposed to overall regional development efforts, given the challenges of attribution. One attempt to look across policies in an evaluation of the actions of English Regional Development Agencies noted that more than half of the benefits were due to less than 20% of the spending (Box 2.8). These results are one of the reasons for the closure of these agencies; albeit they are part of a wider set of place-based policies at regional and local scale that have been launched and in some cases closed in recent decades. Figure 2.9 highlights the challenges of evaluating collective programme impacts given the different scales and timeframes of specific programmes. Among

Figure 2.9. **Place-based initiatives in the United Kingdom over the last 40 years, 1975-2015**



1 Urban Programme (expansion)
2 Urban Development Corporations
3 Urban Development Grant
4 Derelict Land Grant
5 Regional Development Grant (revision)
6 Urban Regeneration Grant
7 Regional Enterprise Grant
8 City Grant
9 Training and Enterprise Councils
10 City Challenge
11 English Partnerships
12 Single Regeneration Budget
13 Government Offices for the Regions
14 National Coalfields Programme
15 Regional Development Agencies
16 New Deal for Communities
17 Enterprise Grant Scheme
18 Urban Regeneration Companies
19 Local Strategic Partnerships
20 Neighbourhood Renewal Fund
21 Housing Market Renewal Pathfinders
22 Local Authority Business Growth incentive
23 Selective Finance for Investment
24 Working Neighbourhoods Fund
25 Local Area Agreements
26 Local Enterprise Growth Initiative
27 City/Economic Development Companies
28 Multi Area Agreements/City Region Pilots
29 Grants for Business Investment
30 Future Jobs Fund
31 Homes and Communities Agency
32 Enterprise Zones (new phase)
33 Local Enterprise Partnerships
34 Regional Growth Fund
35 City Deals
36 Growing Places Fund
37 Tax Increment Finance
38 Business Rates Retention

Note: Programmes may concern England only.
Source: Based on the National Audit Office (2013), *Funding and structures for local economic growth*.

findings to improve the effectiveness of regional development policy efforts is indeed the complementarity of actions in a coherent strategy (Box 2.6). Some of the evaluations on the specifics of individual programmes can also help guide future rounds through a revision of the instrument, such as the type of business support. The time frame for the benefits to materialise above and beyond individual programmes may also be longer than common policy cycles (Box 2.7).

Box 2.6. **Evaluations of place-based policies: Lessons from two studies**

When evaluating different regional development policies it has always been a challenge to document the nature and time frame of impacts. The results of the evaluations below propose potential ways of promoting the catching up of regions.

An evaluation of the EU's Cohesion Policy for 15 regions from 1989 to 2013 conducted by the European Policy Research Centre shows that Cohesion Policy delivered on some of its objectives in the longer run. Taking a panel of 15 regions, mostly lagging or facing specific challenges, the report assesses the ability of Cohesion Policy to fulfil its ex ante objectives. The report shows that Cohesion Policy did deliver since 1989 and increasingly so. The earlier period studied showed that the effect of Cohesion Policy funds was unequal according to programme, region, and period. For 1989-93, only six regions achieved results beyond their initial objectives. In 2000-06, most of the observed regions had met or exceeded their initial objectives (Bachtler et al. 2013). According to the study: "with respect to specific areas of intervention, short-term effectiveness appears to be higher for large-scale physical infrastructure, environmental improvements and local business and innovation infrastructure. Regions had difficulty with areas such as structural adjustment, business support, innovation and community development which required strategies, systems and capacity. A further difficulty reflected in the overall assessment of effectiveness was the co-ordination of measures into a coherent strategy." (Bachtler et al. 2013). The latter point is being addressed by the new programming period requirements of EU Cohesion Policy.

Business support measures are one of the most common tools used in regional development policy. Assessing their differentiated effects on firms of varying sizes, a counterfactual evaluation of the Cohesion Policy and Italy's co-funded business support schemes found that the effect was differentiated by programme and firm size with respect to investments and jobs created (ASVAPP 2012). Going beyond the impact, it also analyses the cost tied to generating impact, showing that the schemes displaying the biggest impact are not necessarily the most cost-effective ones. It also assessed the effectiveness of different instruments in business support. Namely, large non-repayable grants, especially to large firms, are ineffective at stimulating employment and investment. Small grants to small firms are more cost effective. Second, interest rate subsidies and repayable soft loans are an even more effective way to support firms.

Source: Bachtler, J., I. Begg, L. Polverari and D. Charles (2013), "Evaluation of the Main Achievements of Cohesion Policy Programmes and Projects over the Longer Term in 15 Selected Regions (from 1989-93 Programme Period to the Present (2011.CE.16.B.AT.015""*)", Final Report to the European Commission*; Associazione per lo Sviluppo della Valutazione e l'Analisi delle Politiche Pubbliche (2012), "Counterfactual impact evaluation of cohesion policy: Impact and cost-effectiveness of investment subsidies in Italy", *Final Report to DG Regional Policy*, Contract No. 2010.CE.16.B.AT.042.

Box 2.7. **Tennessee Valley Authority: Evaluating the impact of 100 years of place-based policies**

A paper by Kline and Moretti (2013) sought to evaluate the effects of both local and national place-based policies. The research analyses the effects over a period of almost 100 years of one of the most ambitious regional development programmes in the history of the United States, the Tennessee Valley Authority (TVA), spanning multiple states. The goal of the TVA was to modernise the economy of the region rapidly. The counterfactual evaluation run by Kline and Moretti uses control groups to quantify the impact of the

Box 2.7. **Tennessee Valley Authority: Evaluating the impact of 100 years of place-based policies** *(cont.)*

policy, and analyses the impact in the long run, dividing the period in two. The first period spans from inception to 1960 when federal transfers were high and the second period 1960-2000 when federal transfers were cut. The researchers assessed the impact of the sectoral support given to agriculture and manufacturing as well as the effect of the large infrastructure investments that took place in the TVA since its inception in May 1933. The results show that while support for agriculture did not raise employment levels beyond the period of time it was provided, support to manufacturing had a lasting effect that went beyond the initial sums invested in the TVA, resulting in large benefits at the local level from manufacturing growth. The study thus suggests that while manufacturing displays agglomeration economies, this need not be the case for agriculture, in line with previous studies (see Hornbeck and Naidu, 2012).

The effect on the national economy is two-fold, as it has both direct and indirect effects. Direct effects measure the impact of the federal investments on output and the effects of gains in manufacturing on local, sectoral and national output and productivity. These, according to the research, are unambiguously positive, showing that place-based investments outweigh their costs and reap benefits for the local and national economy, because they generate local agglomeration benefits. The majority of the benefits are coming from the substantial federal investments in the region. Indirect effects, which compute the spillover effects of agglomeration economies, were limited, suggesting that local gains did not spillover to other regions. This suggests that the "big push" is limited (see Rosenstein-Rodan, 1943; Murphy, Shleifer, and Vishny, 1989).

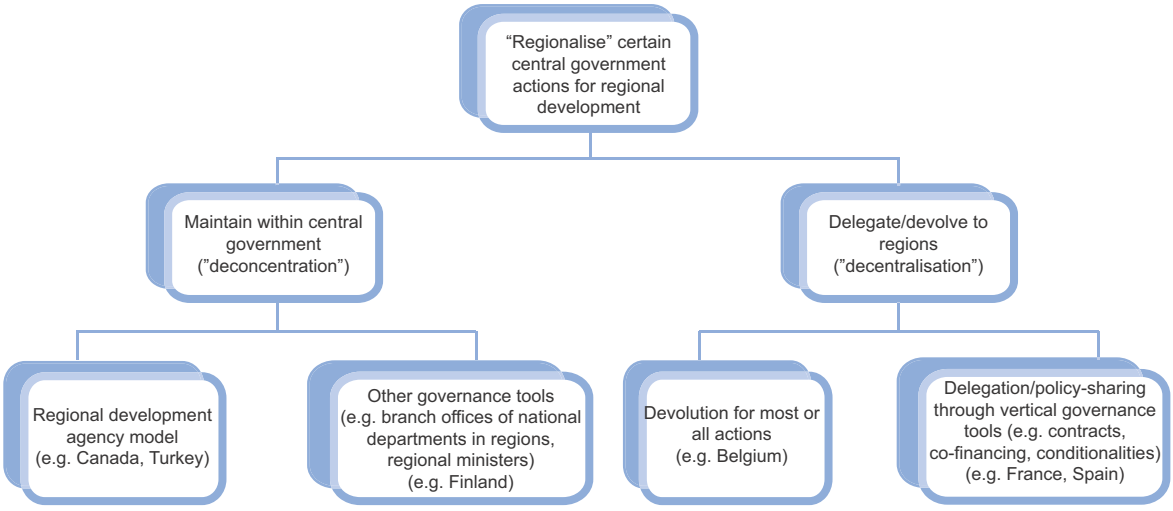
Source: Kline P. and E. Moretti (2013), "Local economic development, agglomeration economies and the big push, 100 years of evidence from the Tennessee Valley Authority" , *The Quarterly Journal of Economics*, Vol. 129(1), pp. 275-331; Hornbeck R. and S. Naidu (2012), "When the Levee Breaks: Labor Mobility and Economic Development in the American South," *NBER Working Paper,* No. 18296; Murphy K. M., A. Shleifer and R. Vishny (1989) "Industrialization and the Big Push," *Journal of Political Economy*, Vol. 97(5) pp. 1 003-1 026; Rosenstein-Rodan P. (1943) "Problems of Industrialization of Eastern and South- Eastern Europe", *Economic Journal*, Vol. 53, No. 210/211, pp. 202-211.

National networks of regional development agencies: One governance tool

Regional development agencies (RDAs) are one governance tool countries have used to organise the delivery of policies targeting specific regions. RDAs of different forms are common in OECD countries. Theoretically, an agency model implies "separateness" and generally a higher set of expectations for performance accountability. The "principal" to which the agency is accountable may be a central or regional government (and sometimes a public-private board), and these models have distinct differences. Most OECD countries have regionally-managed RDAs, with a trend towards increasing specialisation in a particular sector, notably business development and/or innovation. Even when RDAs are accountable directly to a region, they are still part of a complex governance landscape involving multiple levels of government. A survey in Europe noted that 40% of surveyed RDAs[7] had funding sponsorship from other levels of government beyond the region (Halkier, 2011). A few countries have nationally-initiated RDA networks to support regional development. The choice for central government action is nested in a set of alternatives to address governance challenges, many of which may be used simultaneously (Figure 2.10).

In most OECD countries with a national RDA network, the impetus for creation was to build capacity at the regional level in a centralised country context. The institution of RDAs or structures of a similar purpose has been driven in many OECD countries by the EU accession process, notably for countries in Eastern Europe, such as Hungary. The creation of these national networks of regional agencies is designed to map to statistical areas that would receive EU regional policy funds. EU engagement with Turkey was one of the drivers, among others, behind the development of its national model. The Inter-American

Figure 2.10. **Choices for central government action: Regional development agencies and alternatives**

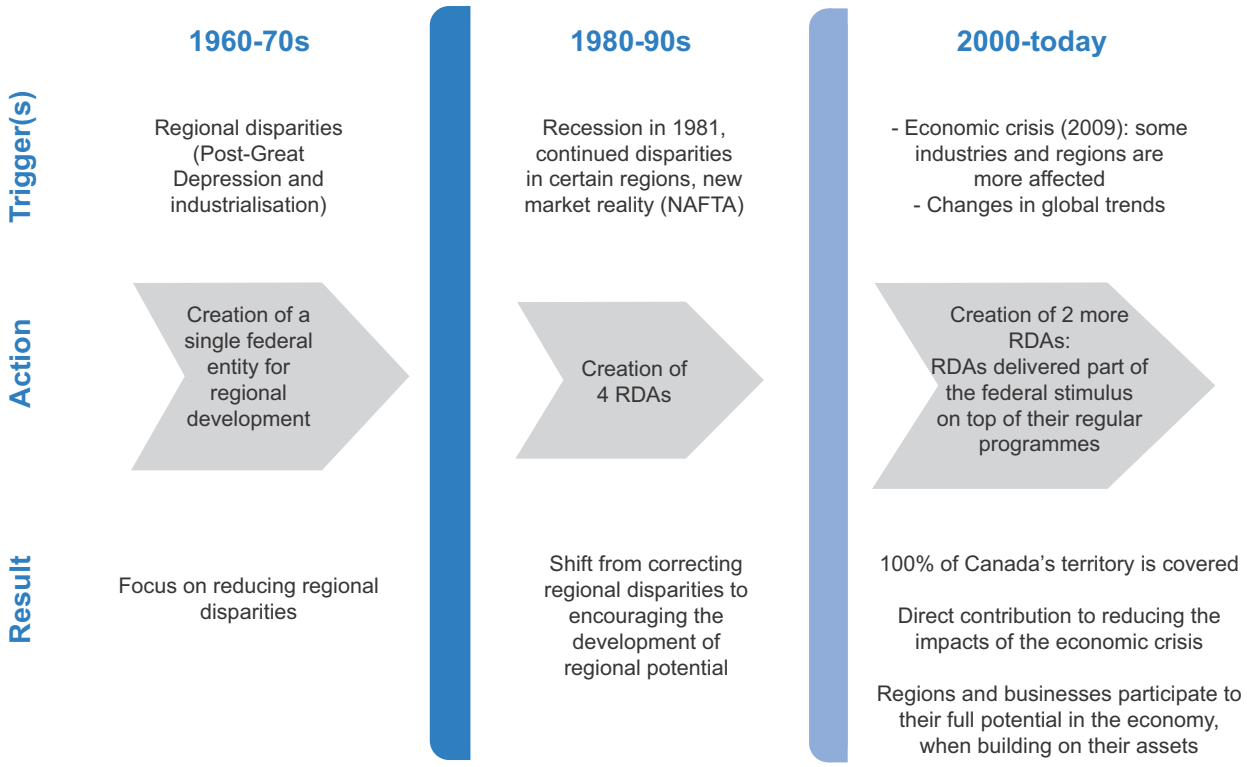


Development Bank co-financed the development of Chile's national network of 15 RDAs. In several of these examples, the central government has worked to embed these agencies in the regions over time for a greater sense of regional "ownership", albeit Hungary has chosen to re-centralise its network.

A little less common is the development of national RDAs to help organise national interventions for regional development in an already decentralised country. The case of Canada is such an exception. It is the most decentralised country in the OECD with respect to public expenditure, investment and debt. Furthermore, individual provinces and municipalities have their own regional/local development agencies that co-exist with the national network. However, it has used RDAs as a way to transition federal action towards a more regionalised approach (Figure 2.11). The United States' Economic Development Administration's regional offices cover areas of a scale similar to those in Canada, with six offices covering the country, but these are not agencies per se, rather regional offices of a national department (ministry). The United States also has selected areas for national place-based support that function like an agency, such as the Appalachia Regional Commission, generally covering parts or all of multiple US states.[8]

One of the goals for an RDA may be to benefit from the complementarity of actions across national policy sectors in a given region. The previous English RDA model had multi-ministry financing (six ministries contributed to a single pot) in support of a Regional Economic Strategy. Portugal's Commissions for Regional Co-ordination and Development are charged with delivering regional development policy, and are significantly influenced by EU regional policy. As there are no regional governments at this scale, these Commissions administer a range of programmes in their coverage area. Although Finland's 15 ELY Centres (Centres for Economic Development, Transport and the Environment) are not RDAs per se, they are a form of cross-sectoral decentralised national action to support regional competitiveness, well-being and sustainable development in each region. They therefore cover a wide range of issues from business and industry support (including labour force and skills), transport and infrastructure and the environment/natural resources.[9]

Figure 2.11. **Canada's federal approach to regional economic development: From centralised to decentralised with RDAs**



Source: Presentation made at the OECD Regional Development Policy Committee, 29 April 2016.

More common among national RDA networks is a targeted approach focusing on business development. The models in Chile, the Czech Republic, Iceland, New Zealand, and Turkey, for example, address one or more of the following: business support, cluster development, innovation programmes and investment attraction. They therefore don't actually address this goal of complementarity, but are rather more focused on action as a one-stop shop for firms to get information on programmes delivered by the agency itself or other sources.

The RDA tool may be used to deliver policy at a more adapted spatial scale when there is no regional tier or it is too small a scale. The Turkey model corresponds to larger statistical regions that do not match the smaller scale regional governments. In other country examples, the national RDAs are assigned to cover an administrative region. An alternative to a national RDA policy is a set of incentives for interregional collaboration when the regions are not of sufficient size. For example, Switzerland's cantons are in several cases at a scale that is perhaps too small for certain aspects of regional development. To address this challenge, the federal government's New Regional Policy offers incentives for cantons to collaborate to access funding and achieve actions at a more relevant scale than would have been achieved otherwise (Box 2.3). The Canadian RDAs are not designed to correspond to a functional region. Rather they have a coverage area that is typically significantly larger than a potential functional region as the six agencies offer nation-wide coverage.

Box 2.8. **From regional to local: England, United Kingdom**

The network of regional development agencies (RDAs) in England was created between 1998 and 2000 as part of the United Kingdom's efforts towards devolution. RDAs were in use in England for a period between 1998 and 2011. The devolved administrations of Scotland, Northern Ireland and Wales have a different status: therefore any agencies they create are accountable directly to their respective authorities. In 2003, the Modern Regional Policy was developed with a position that economic disparities across regions may be the result of particular failures (market/government-based). Furthermore, an initiative to devolve some parliamentary power to directly elected regional assemblies in Northern England was tested. Central government's orientation grew to increasingly focus on productivity drivers. RDAs were also deemed important measures for the Regional Economic Performance Public Service Agreement established in 2004. Another milestone in 2007 was the "Review of Sub-National Economic Development and Regeneration" that continued to emphasise productivity drivers. The subsequent 2008 consultation document "Prosperous Places: Taking Forward the Review of Sub-National Economic Development and Regeneration" raised issues of how to deliver on these goals. An evaluation of RDAs noted that more than half of the benefits were attributed to less than 20% of the spending. The highest value for money was achieved by competitiveness measures. The cumulative value for money was computed as the ratio between cost and gross value-added gains accumulated over the years. It included also potential gross value-added gains from the lasting impact of RDAs spending. Each pound invested in competitiveness of businesses by RDAs could reap as much as GBP 11.6 over the years, outperforming physical infrastructure (GBP 8.0). On average each pound spent by RDAs generated a potential of GBP 6 in gross value added over the years.

With the change in Government in 2010, a decision was made to eliminate the RDAs in favour of more bottom-up defined actions at a smaller scale than the regions. As a result, RDAs in the English regions terminated their activities and closed, as did the Government Offices. Furthermore, regional ministers were not appointed by the new Government. Alternatively, municipalities were provided an opportunity to group themselves into Local Enterprise Partnerships (LEP) between local authorities and firms to help prioritise choices for physical infrastructure investments and apply to different national funds, participate in city deals or request the designation of a business economic zone (and the corresponding funding and regulatory easing).

Source: Elaboration based on PricewaterhouseCooper LLP, (2009), *Department for Business, Enterprise & Regulatory Reform. Impact of RDA Spending*, National Report, Volume 1, Main Report and presentation made at the OECD Regional Development Policy Committee, 29 April 2016.

Reforming regional governance to boost capacity and deliver on regional development objectives

Most OECD countries have a regional level of elected government (28 out of 34).[10] Strong regionalisation processes took place in the OECD in the 1980s and 1990s, resulting in the creation (or strengthening) of the regional level. This is the case, for example, in France, Italy, Spain,and certain regions in the United Kingdom. This was also true in several Central and Eastern European countries, such as the Czech Republic, Poland and the Slovak Republic, and driven in part by EU regional policy. More recently, regional reforms in unitary countries have focused on delegating more powers or strengthening institutional capacity (Table 2.3).

Table 2.3. **Examples of OECD country regional reforms**

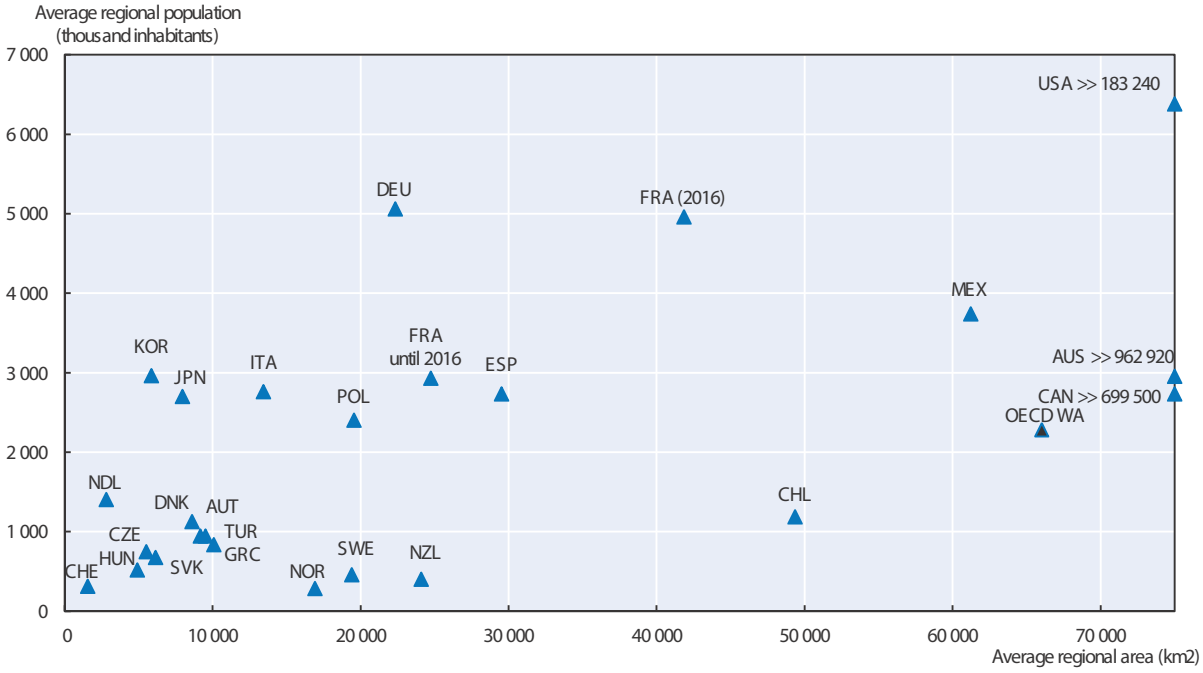
	Intermediary and regional levels	Year created	Fiscal power	Notes
Federal countries				
Belgium	Intermediary: 10 provinces	1830	Yes, decreasing	Provinces' role being transformed by their respective region.
	Regional: 3 regions and 3 language communities	1970	Yes, increasing	6 State Reforms from 1970 to 2011 (6th State Reform) transforming Belgium into a federal county.
Germany	Intermediary: 402 districts (295 rural districts and 107 district-free cities).	Since the 16th century	Limited, except for district-free cities	
	Regional: 16 länder	1949 and 1990 (reunification)	Yes	2006 and 2009 Federal Reforms.
Spain	Intermediary: 50 provinces	1833	Yes	Since 2013, transfer of some responsibilities of municipalities under 20 000 inhabitants to the provincial level.
	Regional: 17 autonomous communities	1978	Yes, recently increased	Each region has its own autonomous status. Specific "foral" status for Basque Country and Navarra. 2000-02: strengthening of regional competences (transfer of education and health care) and since 2006, reforms of autonomous communities status case by case.
Unitary countries				
Chile	15 regions	2009	No	Regional councils elected by universal suffrage since November 2013; regional executives (intendants) to be elected directly in 2017 (draft bill under discussion).
Denmark	5 regions	2007	No	2007 regional reform merged 13 counties to form 5 regions without taxing powers.
Finland	1 autonomous region (island region of Åland)			There are currently 18 other regional entities which are statutory joint municipal boards. A reform is under way with the goal of transforming them into self-governing regions.
France	Intermediary: 101 *départements*	1791	Yes	After intense debates on the future of the departments in 2014-15, discussions postponed until 2020.
	Regional: 18 regions	1982	Yes, decreased with 2010 reform	Starting 1 January 2016, there are 13 regions instead of 22 in mainland France following the 2015 regional reform (and 5 overseas). They also received additional competences.
Greece	13 regions	2011	Weak	Created by the Kallikratis reform as self-governing regions from the previous 54 prefectures.
Hungary	19 counties	Restored in 1990	Weak	Counties lost several major competences since the 2012 Constitutional reform and 2011 Cardinal Law on Local Governments.
Italy	Intermediary: 107 provinces and metropolitan cities	1802-61 2014 (metropolitan cities)	Yes (to be reconfirmed with the current reform)	Since the 2014 Act, the provinces are being transformed into inter-municipal bodies and metropolitan cities have been created. Constitutional reform is underway to abolish the provinces as subnational governments.
	Regional: 20 regions (5 with special status, 15 with ordinary status)	1948 (special status) and 1970 (ordinary)	Yes	Constitutional reform is underway modifying the distribution of responsibilities between the regions and the central government.
Japan	47 prefectures	1871	Yes	The regional level comprises one metropolitan district (Tokyo), two urban prefectures (Kyoto and Osaka), one "district" or "circuit" (Hokkaidō), and rural prefectures. Regional reform discussed for many years (mergers – doshusei).
Netherlands	12 provinces	Before 1848	Yes, limited	Regional reform envisaged for many years (mergers). Last attempt in 2014 failed in the parliament.
Norway	18 counties	1660s, directly elected since 1975	Yes, limited	A regional reform is underway (mergers).
Poland	Intermediary: 380 counties	Re-instated in 1999	Yes, limited	Counties include 314 counties and 66 cities having the status of county.
	Regional: 16 regions	1999		A law passed in 2009 reinforced regional competences.
Sweden	21 county councils	1634	Yes	Experimental regionalisation: among the 21 county councils, 14 have additional responsibilities such as regional development. In the rest of the country, responsibility for regional development falls on either County Administrative Boards or on indirectly elected Regional Development Councils. Possibilities for regional mergers are now investigated.

Source: Chatry I. and C. Hulbert (forthcoming), *Multi-level governance reforms: Overview of OECD country experiences*, OECD Publishing, Paris.

Many OECD countries have engaged in reforms of the intermediate and regional levels in the context of multi-level governance reforms more generally. Indeed, many regional boundaries were established in some cases decades or even centuries ago in a world with a different reality than that of today (OECD, 2014a).[11] Sometimes the reforms address both competencies and the actual borders of regions, in other cases, these two issues are treated separately over time. A changing regional governance landscape may also be due to a need for decentralisation, the re-emergence of historic regions, or changes in competencies at other levels. Another rationale for reforming regional borders is reducing the sheer number of regions to facilitate intergovernmental relations, or public administration cost savings (Chatry and Hulbert, forthcoming).

One of the commonly cited rationales to increase the size of regions is to address the cost of the public sector or improve financial and skill capacity. There is no particular norm or optimal geographic/population size (Figure 2.12). Regional budgets for OECD countries with data range from 1% of GDP in Poland to 19.4% in Canada (Figure 2.13). This value of course is determined by the nature of the functions performed by regions. From a credit rating perspective, larger regions can have improved negotiating power with suppliers and with accessing financing through banks and other debt markets. These same principles apply to local levels of government as well.

Figure 2.12. **Population and surface area of regions in the OECD, 2014**

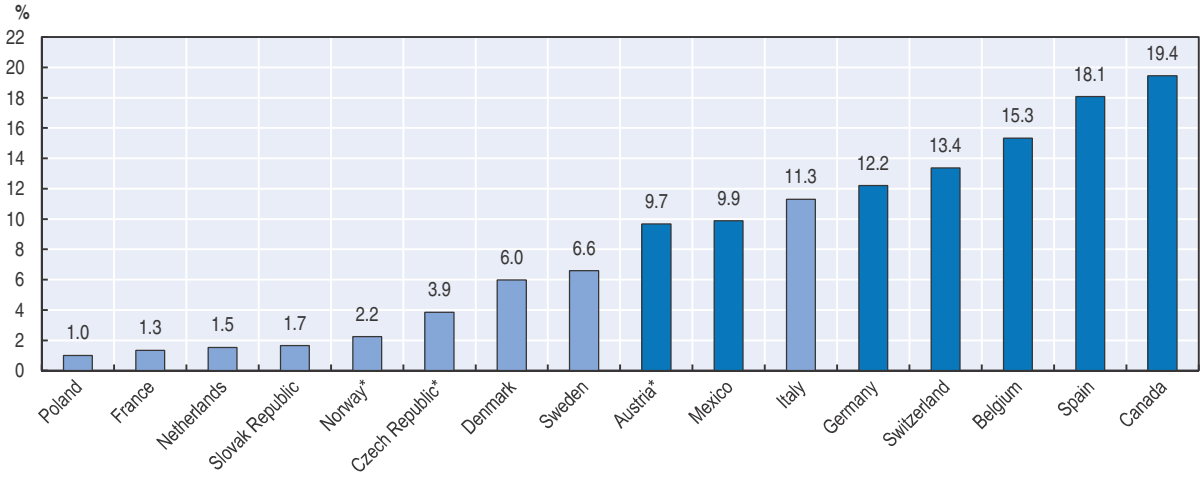


Note: France (without the 5 overseas regions). Belgium and the United Kingdom are not represented on the graph. The OECD average is weighted by both population and surface area.

Source: Calculations from OECD (2016b), *Subnational Governments in OECD Countries: Key Data 2016*, OECD, Paris, *www.oecd.org/regional/regional-policy/Subnational-governments-in-OECD-Countries-Key-Data-2016.pdf*; OECD (2016c), "Subnational government structure and finance", *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/05fb4b56-en* (accessed on 30 June 2016).

StatLink http://dx.doi.org/10.1787/888933412036

Figure 2.13. **Regional government budget expenditure as a percentage of GDP, 2012**



Note: Dark blue: federal and quasi-federal countries. Light blue: unitary countries. Figures for: Austria excluding Vienna; Norway excluding Oslo; Czech Republic estimated 2011 figures.
Source: Elaboration based on national data sources.

StatLink http://dx.doi.org/10.1787/888933412044

Regional development concerns such as interregional inequalities and global competitiveness are behind many of the regional reforms. This is the case for health and social service delivery in Finland, where the new 18 regions would take responsibilities from the municipalities. In Denmark, the prior merger from 13 counties to 5 regions was also driven by health service delivery considerations, as well as regional economic development. Competitiveness and visibility of regions within Europe and beyond was one of the stated motivations for reforms in the Netherlands (proposed) or France (implemented) (Chatry and Hulbert, forthcoming). Above and beyond sheer size, larger regions can help promote greater capacity for specialised technical skills among regional public sector employees. In Sweden, bottom-up reforms of regions have allowed 14 county councils out of 21 thus far to now have responsibilities for regional development. Of course larger region sizes can result in reductions of inequalities in the data without actually changing the conditions for the people living in different locations.

Another goal in merging or reshaping regions is to better match administrative boundaries to functional areas. In other words, the boundaries correspond to an area relevant for a social, economic or environmental function (such as commuting patterns, water basins, or economic ties). It is also perhaps more relevant in some countries at the intermediate region level given the determination of local labour markets. A prior proposal in the Netherlands sought to merge certain provinces to correspond with functional areas (OECD, 2014a). New Zealand's reform to replace 200 local authorities with 12 regional councils and 75 city and district councils (now 11 regions and 67 city and district councils) was largely established by following the boundaries of drainage basins (Chatry and Hulbert, forthcoming). An entire reshaping of boundaries, as opposed to merely mergers, has proven a particularly difficult type of reform process.

The changing multi-level governance environment for the intermediate level regions has raised concerns about the voice of rural areas within subnational governance. Different evolutions in merging or municipal recomposition (up-scaling), inter-municipal co-operation (trans-scaling) and metropolisation have called into question

the role of these intermediate-level regions (Chatry and Hulbert, forthcoming).[12] Several governments are discussing or have recently removed this level of government such as in Italy, France, Belgium and Poland (Council of Europe, 2013). Abolition of counties or city-county mergers has also taken place in some US states. In Turkey, some of the city-county mergers involve rural areas within the province. One of the concerns with the removal of these intermediate layers is the power dynamics within the remaining higher level regional layer. Rural communities that previously had greater political clout at the smaller intermediate level now find themselves having to raise their needs alongside the more populous urban locations at this larger scale of elected government.

Conclusion

For several decades, OECD countries transitioned their regional policy approaches to focus on productivity. There is a trend to focus such policies on boosting national growth as well as the performance of all regions, albeit with an eye to some form of balanced growth that helps reduce interregional disparities. The instruments to achieve these goals in many countries have also been shifting away from basic infrastructure or subsidised services towards those that will support firm productivity. EU policy has spurred this transition in many EU countries. However, current global productivity trends are calling into question whether these efforts are sufficient for helping ensure that the productivity growth in those top firms is indeed benefiting the rest of the economy, across all regions. More research is needed to understand the mechanisms to increase innovation diffusion and the policy tools most effective at promoting catching up among regions.

Governance of regional development policies has also been an area of change since "how" policies are conceived and implemented is critical for place-based approaches. National governments have been using different strategies to better organise and evaluate their efforts. One tool used in several countries is a national network of regional development agencies. While they are often seeking to boost subnational capacity in the context of decentralisation in OECD countries and beyond, they are also a choice in some federal countries to co-ordinate support in a particular location. Models are increasingly focused on business development as opposed to a wider range of policies. Countries have also been reforming the regional level, with the goals of increasing subnational capacity, improving the quality of services and augmenting economic development prospects to make regions more "competitive".

Urban and rural places have particular challenges above and beyond those often covered directly by regional policies. Urban policies tend to have a more transport and spatial planning orientation as well as social inclusion focus, with economic development efforts more focused on social goals than productivity per se. Urban policy is also the most actively changing policy field (relative to regional and rural) with many countries now in the process of creating national urban policy frameworks. Rural policies are still framed in most countries around agriculture – in terms of lead ministry and the content of many policy instruments. However, the opportunities in rural areas go far beyond agriculture, which also implies the need for greater attention to rural-urban linkages. Part II of this Outlook therefore explores the special concerns regarding productivity and inclusion for rural regions, and the need for a Rural Policy 3.0 to address these goals.

Notes

1. Discussions of the new paradigm in regional development policy have taken place since late 1999, with these concepts discussed at the High-level Meeting of the Territorial Development Policy Committee in Martigny, Switzerland June 2003. See also, for example, OECD, 2005 and OECD, 2009.
2. Data for 2014. Public investment is defined as the sum of capital transfers and investment. Gross fixed capital formation is the main component of investment (see Annex B of OECD, 2016d for a more detailed definition).
3. For further information on metropolitan and municipal reforms, see OECD (2014a) and OECD (2015b).
4. The above figures are based on country self-reported responses to the OECD Regional Outlook Survey. A desk review in mid-2013 showed 16 countries with a national urban strategy (OECD, 2014a). While the exact figures may not be entirely comparable, there appears to be an increasing awareness at national level of the need to address urban areas in a more systematic way.
5. Belgium's rural policies are defined at the regional level, and both Flanders and Wallonia reported an agriculture-related type of ministry as the lead on rural development.
6. In Belgian regions, ministries are similar in regional and urban policies for Wallonia, while in Flanders there is a different lead ministry for each policy field.
7. Out of 178 RDA responses from a 2007 RDA Survey database.
8. In addition to the Appalachian Regional Commission (ARC) are the more recently created Denali Commission, the Delta Regional Authority (DRA), the Northern Great Plains Regional Authority, the Southeast Crescent Regional Commission, the Southwest Border Regional Commission, and the Northern Border Regional Commission.
9. While the ELY Centres are overseen by the Ministry of Employment and the Economy, they also deliver policy coming from several other ministries, including of: Environment, Transport and Communications, Agriculture and Forestry, Education and Culture, and the Interior.
10. Those without an elected regional level are generally countries that are not large in surface area (Estonia, Iceland, Ireland, Israel, Luxembourg and Slovenia). For the number of different levels of subnational government, see OECD, 2016b.
11. This is the case, for example, of the *départements* in France, provinces in the Netherlands, Belgium, Italy and Spain, prefectures in Japan, counties in Sweden and Norway and the cantons in Switzerland.
12. The terms up-scaling and trans-scaling are used by LocRef Network, 2013.

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ANNEX 2.A1

Table 2.A1.1. **Regional development strategies and recent changes: OECD country overview**

Country	Main strategy or framework at the national level	Strategic orientation to economic development	Recent changes
Australia	• No over-arching framework at the federal level, aspects of regional policy are directed by the White Paper on Developing Northern Australia (2015) and the Agricultural Competitiveness White Paper (2015); as well as state, regional and local strategies	On the federal level, strong emphasis on infrastructure provision; strategies to develop at the regional level include, for example, a network of Regional Development Australia committees that builds local partnerships to develop Regional Plans	• Implementation of two funding schemes dedicated to financing infrastructure investments (the National Stronger Regions Fund and the Stronger Communities Programme)
Austria	• ÖREK 2011 • STRAT.AT 2020 (Partnership Agreement)	Spatial planning guidelines (for competitiveness, social diversity and solidarity, climate change, adaptation and resource efficiency, and co-operative and efficient governance)	• For the new period, ERDF are to be operationally managed at the national level, instead of at the regional level
Belgium	• No overarching framework at the federal level but regions have their own regional policies: – Brussels-Capital Regional Development Plan – Flanders: Flanders in Action 2.0; Pact 2020 – Wallonia: Wallonia's Marshall Plan 4.0	Regional policies are mainly the responsibility of regions • Brussels-Capital Region: harnessing socio-demographic trends (dualisation of Brussels, internationalisation, poverty and population growth); sustainable development • Flanders: sustainable (social, environmental and economic) development through spatial planning guidelines • Wallonia: industrial and innovation policies, strong focus on energy efficiency	• Brussels-Capital Region: last revision of the Brussels-Capital Regional Development Plan in 2009, implementing a sustainability (social, economic, environmental) objective • Flanders will update its spatial strategy in 2016 (Beleidsplan Ruimte Vlaanderen) • Wallonia adopted in 2015 the Marshall Plan 4.0 and its distinct digital agenda to support economic development and innovation
Canada	• Each of 6 federal Regional Development Agencies (RDA) has its own mandate (albeit similar)	RDAs help address key regional economic challenges by providing regionally-tailored programmes, services, knowledge and expertise that build on regional and local economic assets and strengths. They support business growth, productivity and innovation; help SMEs compete in the global marketplace; provide adjustment assistance in response to economic downturns; enhance business management skills; and support local communities and aboriginal populations	• No recent changes reported in policy approaches
Chile	• No overarching framework, however elements can be found in: – Decree N° 18.359. (1985) – National Urban Development Policy (2013) – National Rural Development Policy (2014)	Strong focus on intraregional disparities and access to peripheral areas through targeted infrastructure investment programmes	• Third urban strategy in 2013 • New framework for rural development soon-to-be launched • Preparations for forthcoming decentralisation
Czech Republic	• National Development Priorities (2014-20) • Regional Development Strategy (2014-20) • Act #248/2000 Regional Development Support (2000)	Business and innovation support schemes are at the core of current regional policies	• Improving capacity building for subnational governments, advancing monitoring and evaluation through digital tools • Shifting focus towards functional areas

Table 2.A1.1. **Regional development strategies and recent changes: OECD country overview** *(cont.)*

Country	Main strategy or framework at the national level	Strategic orientation to economic development	Recent changes
Denmark	• Business Development Act (2005, renewed in 2014)	Business development and innovation support schemes as well as training programmes	• Implementing "Proactive Regional and Rural District Policy" with new strategies for development outside of the largest towns and cities to make areas attractive • Plans to move certain national government jobs outside of the capital • Easing planning restrictions is on the agenda
Estonia	• National Regional Development Strategy (RDS) 2014-20	Focus on regional economic drivers, rural-urban linkages through infrastructure – transport and public services, as well as region-specific clusters and improving development capacity at local level	• This RDS shifts the focus away from infrastructure of public services to regional entrepreneurship and employment; increases emphases on region-specific growth sectors; emphasizes improvement of developmental capacity at local level and cross-sectoral coordination; reform of state and subnational administration being conducted • Spatial Plan Estonia 2030+ (2012) aims at improving the environment in cities and sparsely populated areas, promoting multimodal transportation; mix of energy-savings and renewable energy • Increased accent on polycentric development, the role of regional centres, and travel to work areas[1]
Finland	• Act on Regional Development 2014 • Government decision on national regional development priorities 2016-19 (2016) • Regional Strategy 2020 (2010) • Structural Funds Programme in Finland: Sustainable Growth and Employment 2014-20	Focus on increasing resilience to industrial shocks and improving economic drivers through business and innovation support	• "Proactive structural change"; new tool to help regions anticipate and address rapid structural changes or firm closures • Growth Agreements between the national government and major cities implemented • Long-term planning of the transportation system has been introduced • A reform on regional administration and competencies is to be designed in 2016
France	• State-Region Planning Contracts 2014-20 (7-year cycles since 1984)	Infrastructure investments and clusters are the main tools of regional policies	• Latest generation of regional contracts recently signed; review clause for 2017 given regional reforms (new regional boundaries and leadership) • Territorial reforms of regions (several mergers) and metropolitan reforms in progress (largest cities) • Subnational finance reforms are to be implemented (mainly reforms, and reductions, of the transfers to subnational governments)
Germany	• No overarching framework • Joint Task for the Improvement of Regional Economic Structure (GRW) is the basis of Germany's regional policies	GRW funds mainly used for direct aid to firms followed by business infrastructure. Federal mandate to curb regional disparities	• New EU funding period will focus on new challenges, such as demographic changes, shortage of highly-skilled workers and the energy transition • Specific support mechanisms for East Germany will be phased out in 2019
Greece	• Partnership Agreement (PA) with EU, 2014-20. • Law 4314 (2014)	Addressing structural weaknesses of the country through a mixture of infrastructure investments (transportation and energy), business and innovation support as well as environmental protection	• Management of regional operational programmes is now the responsibility of regional management authorities • Part of National Rural Development programme's resources are now channelled through the regions

Table 2.A1.1. **Regional development strategies and recent changes: OECD country overview** *(cont.)*

Country	Main strategy or framework at the national level	Strategic orientation to economic development	Recent changes
Hungary	• Act on Territorial Development and Spatial Planning (XXI/1996, amended in 2016) • National Development 2030 – National Development and Territorial Development Concept (2014)	Focus on spatial planning, reducing disparities, competitiveness, balanced growth, accessibility and sustainability	• 2013 national guidance for planning and regional development (NDTC) for EU programming and county development plans • 2014 implementing new EU programming period (greater role of counties for regional development) • 2014 emphasises competitiveness and employment creation[1] • Anticipated changes include improvement of cross-sectoral policy co-ordination, and better public investment co-ordination
Iceland	• Parliamentary Resolution on a Strategic Regional Plan for the years 2014-17	Focus on infrastructure and building capacity of subnational governments to achieve balanced growth; address demographic challenges and unemployment; promote economic diversification and innovation	• Iceland 2020: macro-policy statement, includes developing regional action plans for all regions; improve the power of Iceland's local governments over non-earmarked funds • Restructuring of governance along principles of vertical and horizontal co-operation and participation of the population, the so-called the "hourglass strategy"
Ireland	• National Spatial Strategy (2002-20), to be replaced by a new National Planning Framework • Action Plan for Jobs 2014 includes elements of regional policy	Commitment to support competitive regionsthrough business support schemes and competitive funding for regions[1]	• 2014: Some regional authorities were dissolved in Ireland and were incorporated into 3 regional assembly structures • Action Plan for Jobs revised in 2014[1] • National planning framework under development
Israel	• Planning and Building Law of 1965 and the 101 amendment – the reform – 2014) • NMP 35 – Integrated National Master Plan for construction, development and preservation. • District Master Plans • The Preferred Housing/Residential Areas Act (2014)	Housing and infrastructure focus	• Housing policy-issues related to planning/ construction of residential units as well as incentives for accession to property through housing price subsidies provided in certain cases/circumstances • The aim of the recent "101 amendment" to the Planning and Building Law is mainly rebalancing and decentralisation of planning authority from the district level to the local level
Italy	• Italian Partnership Agreement with EU (2014-20)	Reducing regional disparities, especially between the north and the south through infrastructure investments; focus on institutional capacities and access to public services	• 2013: establishment of the Agency for Territorial Cohesion to monitor ESIF funds; strengthened role of central government in steering, monitoring and co-ordinating • Implementation of provincial reforms and establishment of metropolitan cities • 2014: Inner Areas Strategy to cope with service delivery challenges and development issues
Japan	• Grand Design of National Spatial Development towards 2050 (2014) • National Spatial Strategy based on the National Spatial Planning Act (2015)	Regionalising the economy and addressing demographic challenges, adapting infrastructure to new needs and new users, compact and networked cities disaster risk reduction, special economic zones	• FY 2014 budget focuses on earthquake recovery, disaster prevention/mitigation, regional revitalisation (competitiveness, private investment, ageing and energy issues) • The "Grand Design for National Spatial Policy Towards 2050" published in 2014 • Renewal of the National Spatial Strategy in 2015
Korea	• Comprehensive National Territorial Plan 2000-20	Regionalisation and industrial specialisation, balancing growth across the country as the top objective	• Enforcement of "Balanced Regional Development and Fosterage of Local Small and Medium Enterprises Act" in 2015
Luxembourg	• Master Program for Territorial Planning (PDAT) (2003) • Integrated Transport and Spatial Planning Concept (IVL) (2004)	Sustainable development, infrastructure provision outside of transportation and polycentric development	• Third Natural Park • Focus on cross-border urban agglomerations • New convention of territorial co-operation signed between government and municipalities in the southern region, replaces prior planning system

Table 2.A1.1. **Regional development strategies and recent changes: OECD country overview** *(cont.)*

Country	Main strategy or framework at the national level	Strategic orientation to economic development	Recent changes
Mexico	• National Development Plan 2013-18	i) sustainable and smart urban development; ii) reduce the housing deficit; iii) inter-institutional co-ordination among the three levels for government for regional and urban development	• 2013, creation of Ministry of Agrarian, Territorial and Urban Development (SEDATU) combining responsibilities in those areas • Functional territorial analysis used as a new approach in regional policy to look beyond administrative bodies at different flows: people, goods, traffic, etc. • Definition of Rural-Urban Systems which are hubs where economic, social and cultural activities are concentrated; units of analysis for the design, implementation and monitoring of public policies and guidance for private investment
Netherlands	• No explicit framework but implicit in economic policy[1], elements can be found in: • National Policy Strategy for Infrastructure and Spatial Planning (2012)	Focus on entrepreneurship in the top sectors of the economy and innovation policy through various support initiatives such as fiscal incentives, infrastructure provision with priority to certain designated zones and strategic role of city networks[1]	• National-provincial agreement in 2014 to stimulate innovation in SMEs, and connecting regional economies to the Top Sector policy
New Zealand	• Business Growth Agenda (BGA 2015) • Regional Growth Programme (2014)	Focus on innovation as well as competitiveness of all and lagging regions; business support and innovation support are mainstream tools, sometimes focusing on aboriginal economies	• New Regional Growth Programme; several policies to address economic development and build business/innovation capacity outside of the capital • New governance at national level for Regional Growth programmes; taking into account immigration and the specific challenges of the Maori
Norway	• White Paper "On Rural and Regional Policy" (2013-15)	Focus on sustainability and both hard and soft infrastructure, reviving distressed areas, cluster policies and training	• New white paper expected in 2017. Objectives: addressing the need for economic restructuring, the territorial impact of migration and the overall demographic distribution as well as fighting climate change and promoting sustainability
Poland	• National Strategy for Regional Development 2010-20	Focus on competitiveness, territorial cohesion and capacity building; special economic zones are an important instrument as well as infrastructure investments tied to innovation	• Departments related to transport separated from Ministry of Infrastructure and Ministry of Transport was created in 2013 • Departments related to EU Funds & Cohesion Policy were merged with the Ministry of Economy, and created together the Ministry of Development (2015) • Launch of the mid-term evaluation of the National Regional Development Strategy 2010-20
Portugal	• Partnership Agreement with EU (2014-20)	Curbing inter- and intraregional disparities, enhancing competitiveness of all regions and providing access to public services through clusters, fiscal incentives for businesses to innovate and targeted workforce training programmes	• Agency for Development and Cohesion created in 2013 to manage EU structural funds, reports to Minister for Regional Development • New programme (Aproximar) for one-stop shops for services in local areas, and emphasis on capacity building for strategic planning created in 2014
Slovak Republic	• Regional Development Support Act (2008) • National Strategy for Regional Development (updated in 2014)	Strong focus on integrated strategies; sustainability and balanced development, higher living standards, environmental quality[1]	• 2012 Efficient, Reliable, and Open Reform Programme • Incorporation of Investment Principles in updated National Strategy for Regional Development • NUTS 3 regions in charge of integrated territorial investment strategies

Table 2.A1.1. **Regional development strategies and recent changes: OECD country overview** *(cont.)*

Country	Main strategy or framework at the national level	Strategic orientation to economic development	Recent changes
Slovenia	• Law on the promotion of Balanced Regional Development (issued in 2011 amended 2012)	Focus on curbing interregional disparities, reviving areas distressed by industrial shocks, achieving balanced growth and implementing a new industrial policy building on innovation and clusters (smart specialisation)	• Regional development programmes accepted in all 12 development regions • Programmes for improving competitiveness in regions hit by unemployment were accepted • Two Development Councils of Cohesion were formed in 2014 (cohesion region Zahodna Slovenija and cohesion region Vzhodna Slovenija) • Amendment on regulation of the regional development index
Spain	• Partnership Agreement with EU (2014)	Focus on infrastructure and local policy-making, as well as sustainability and special economic zones for ultra-periphery regions	• Gradual change in investment priorities from infrastructure to climate change and innovation
Sweden	• National Strategy for Sustainable Regional Growth and Attractiveness 2015-20	Focus on enhancing innovation, promoting attractive living environments, improving labour market (supply side and matching), strengthening public services delivery, provision of skills, development of transportation systems and ICT	• Swedish Agency for Growth Policy Analysis and the Swedish Agency for Economic and Regional Growth created in 2009 • Ministry of Agriculture was transformed into the Ministry for Rural Affairs in 2011 and then merged into the new Ministry of Enterprise and Innovation in 2015 • Revised National Strategy for Sustainable Regional Growth and Attractiveness 2015-20 was launched in June 2015 • Parliament reallocated the responsibility for regional development to county councils in 6 counties in 2015 and 4 counties in 2017
Switzerland	• Multi-annual programme of the New Regional Policy (NRP) (2016-23)	Strong focus on better export capacities of firms, infrastructure targeted at sustaining value-chains, and innovation support through a mixture of skills training and networks of actors	• Promoting innovation for SMEs • Promotion of regional innovation systems • Federal regional policy 2016-23: focus for rural areas is tourism
Turkey	• Tenth National Development Plan (2014-18)	Focus on competitiveness, through infrastructure (basic, transportation and research-oriented) and coherence between spatial and socio-economic policies	• National Strategy for Regional Development approved in 2014, generated a framework for lower levels' regional plans • Regional Planning carried out in NUTS2 regions in 2014 for the period 2014-23 • Supreme Regional Development Council created in 2011 to steer, co-ordinate, approve and evaluate regional development policy
United Kingdom	• No overarching framework, however, elements can be found in: • Local Growth White Paper: Realising Every Place's Potential (2010)	Strategic goal is to unlock potential by giving local actors more room to manoeuvre and steer policies through partnerships with local governments that are place specific	• New powers are to be devolved to Scotland as part of the Scotland Devolution Bill 2015
United States	• No overarching framework	Mandate of the Economic Development Administration is to focus on infrastructure in distressed areas; region-specific federal commissions	• Shifted approach from subsidies to investments and from interventions to partnerships • Enhanced focus on the place-based approach at federal level • Introduction of multi-department programmes to better integrate place-based policies, such as Promise Zones

Note:
1. Additional information added based on reports from European Policy Research Centre (2014) "Policy Reform under Challenging Conditions: Annual Review of Regional Policy in Europe", EoRPA Paper, 14/1, EPRC, Glasgow.

Source: OECD (2015a), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris.

Table 2.A1.2. **Urban development strategies and recent changes: OECD country overview**

Country	Main strategy or framework at the national level	Strategic orientation	Recent changes
Australia	• Smart Cities Plan (2016), implementation subject to the outcome of the 2016 federal election	Currently, the Smart Cities Plan sets out the Australian Government's vision for cities and provides a foundation for ongoing reform and co-operative action to facilitate long-term investment and co-ordinated planning	• No further changes reported
Austria	• ÖREK 2011	ÖREK proposes planning guidelines for the Länder and subnational governments that are responsible for urban development	• No recent changes reported
Belgium	• Big City Policy (1999/2000) Regions have elements of urban policy: – Flanders: Ruimtelijk Structuurplan Vlaanderen, to be replaced by Beleidsplan Ruimte Vlaanderen – Wallonia: Déclaration de politique régionale 2014-19 "Oser, Innover, Rassembler"	• Federal State has a focus on social cohesion, sustainability and housing policies • Brussels-Capital: Sustainability with a focus on inclusion and demographic change, including citizen participation • Flanders: Sustainable cities and innovation support fuelled by research and strategic investments • Wallonia: Urban renewal and city development strategies in distressed neighbourhoods	• Brussels-Capital: no recent changes reported • Flanders: Will update its spatial strategy, increasing its place-based approach • Wallonia expanded role of Ministry for Cities, in line with transfer of Big City Policy competencies from national level; focus on integration of existing tools and programmes in a single strategy for cities, targeting capacity building for local governments for planning, promoting mixed-use spaces, using public-private partnerships for leverage, and reviving distressed areas in the major cities
Canada	• No overarching federal framework	Urban policy is a responsibility of the provinces, however the federal government is contributing to urban policy via some of its programmes, such as Infrastructure Canada	• No recent changes reported
Chile	• National Urban Development Policy (2013)	Strategy is focused on social integration through access to services, economic development with a focus on inclusiveness, environmental balance through planning guidelines and green subsidies, cultural heritage and governance	• Pending bill on impact fees for projects generating urban growth (Bulletin N° 8493-14) • Land market transparency on the agenda • Social Integration decree which promotes and incentivises social and affordable housing • Emphasis on risk planning and its instruments • Bill passed to increase the regionalisation of Chile (Bulletin N° 7963-09) • Various changes in the regulation of building permits, urban mobility and accessibility, participatory processes and urban planning
Czech Republic	• Principles of Urban Policy (2010)	Economic development with a focus on sustainability and on direct support to SMEs, as well as infrastructure and systems of cities though transportation	• The Principles of Urban Policy are expected to be updated with the new Urban Agenda • Integrated territorial investments (ITI) and integrated plans for territorial development (IPTD) are to be implemented to concentrate ESIF funds in specific areas with challenges or opportunities
Denmark	• Danish Act on Urban Renewal and Urban Development (2015) • The Danish Planning Act (2015)	National level guidelines on planning and housing policies are relevant for urban areas	• Aims at enhancing the integration of urban policy and spatial planning under the Ministry of Business and Growth
Estonia	• National Regional Development Strategy 2014-20	Emphasis on sustainable urban mobility (i.e. links between centres and the hinterland), improving urban public space and child-care facilities; emphasis on investing in insufficiently developed urban environments and promoting sustainability	• New Regional Development Strategy; there is a greater emphasis on co-operation and connections as well as joint planning, aiming to make county centres engines for wider hinterlands
Finland	Not a dedicated urban policy, elements may be found in: • Strategic Programme of the Government (2015) • Growth agreements with city regions (2015)	Competitiveness through innovation policies, resilience, land use and planning (housing and infrastructure); secondary focus on social sustainability	• Continuation of Growth Agreements with Cities, with a focus on competitiveness and resilience • Innovative Cities programme (INKA) to be phased out by 2017, ongoing investments in related themes
France	• Programming Law for Cities and Urban Cohesion (2014)	Main focus on disadvantaged neighbourhoods with cross-sectoral policies (on social cohesion, health, business support, housing) with stakeholder engagement	• Urban policy to support low-income neighbourhoods now includes neighbourhoods in small and medium-sized cities • Under a separate policy stream, metropolitan reforms were implemented and target the largest metropolitan areas as motors of regional growth

Table 2.A1.2. **Urban development strategies and recent changes: OECD country overview** *(cont.)*

Country	Main strategy or framework at the national level	Strategic orientation	Recent changes
Germany	• Memorandum for Urban Energies (2012)	Main programmes at the federal level are to foster social cohesion and urban investments; most of the competencies are the responsibility of the Länder and the municipalities	• In 2014, responsibility for national urban policy framework was moved to Ministry for Environment, therefore ecological issues in disadvantaged places are now on the agenda • Other issues include the fast rise of land prices and rents in urban areas; accommodation of refugees
Greece	• General Framework for Spatial Planning and Sustainable Development (2008)	Mix of strategic and regulatory planning; economic development with focus on infrastructure, systems of cities and sustainability	• Introduction of ITIs on sustainable urban development through regional operational programmes of EU cohesion policy
Hungary	• National Development 2030 – National Development and Territorial Development Concept (2014)	No single document exists. Urban policy is partly framed by construction regulation. Main focus is on the built environment, with emphasis on infrastructure	• Regulation of integrated settlement development plans (2012) • A national urban policy is being developed
Iceland	• No overarching framework	Population size and settlement pattern does not call for a national urban policy	• No recent changes reported
Ireland	• No overarching framework	Ireland participates in EU programmes of URBACT and EPSON, and uses ERDF funds for sustainable urban development at the 5% threshold	• A series of new urban initiatives are proposed in the Programme for Partnership Government, published May 2016, to build on existing initiatives
Israel	• Spatial planning frameworks include: – NMP 35 – Integrated National Master Plan for construction, development and preservation (updated in 2016). – National Master Plan 38 – for strengthening buildings against earthquakes (updated in 2012) – The Preferred Housing/Residential Areas Act (2014)	Planning and construction regulations (including for the strengthening of existing buildings for earthquake resistance); focus on approval of housing units; promotion of infrastructure; quality of life; and public needs and facilities. Balancing development and preservation (agricultural land and open spaces)	• The 101 reform (2014), gives local authorities more planning authority and promotes the initiation and preparation of Local Comprehensive Plans to address city and citizens' needs and set a strategic vision for the city's development and growth • Declaration and planning of priority Housing Areas for efficient approval of housing units across the country • Promotion of strategies to lower housing prices • Preparation of a Housing Strategic Plan • Updated guide for usage and allocation of public areas (2016) • A bill to be passed to promote urban renewal through an Urban Renewal Authority • The National Urban Board (a co-operation between several ministries, local authorities, civil society and other stakeholders) aims to produce a National Urban Strategy alongside tools to promote it
Italy	• Partnership Agreement 2014-20 with the EU	Overcoming administrative boundaries with a focus on curbing sprawl and congestion, and promoting better infrastructure and housing	• Law on metropolitan cities, provinces, municipal unions and municipal mergers, simplification of the country's administration, both incentives and obligatory clauses • Approval by the EU of the Italian national plan operational programme for Metropolitan cities
Japan	• City Planning Act (1968) • Urban Renaissance Special Measures Law (2014)	Compact cities, environmental sustainability and disaster risk reduction, facing demographic challenges and fostering urban economies through urban networks	• Urban policy focusing on resilience to natural disasters • System of cities approach to fight ageing, depopulation, and sprawl, and therefore planning comprehensive transportation systems and concentration of networks and services • Several changes expected to urban management to enhance the effectiveness in handling urban space, with public and private actors involved, a stakeholder approach and evaluation by residents and businesses alike
Korea	• Urban Vision for 2020 (2008)	Growth with a focus on sustainability and liveability, including housing and land use	• Since 2013, housing and land use high on the agenda
Luxembourg	• No over-arching framework, however elements can be found in the conventions for territorial cooperation between the national government and the municipalities	National policies are implemented through contracts with the municipalities; main objectives are infrastructure and governance changes	• No recent policy changes reported

Table 2.A1.2. **Urban development strategies and recent changes: OECD country overview** *(cont.)*

Country	Main strategy or framework at the national level	Strategic orientation	Recent changes
Mexico	• National Program for Urban Development 2014-18 (2014)	Control of urban sprawl; strengthen holistic urban development; land use management; sustainable mobility; prevent human settlements in risk areas; and strengthen the National Regional Development Policy in accordance with local economic opportunities	• New federal emphasis on urban issues with creation of SEDATU in 2013, addressing land and urban policies • New urban model to promote compact development, productivity, accessibility, mobility, sustainability • Perimeters of Urban Contention: instrument based on geographic information systems designed to prevent urban sprawl; they are also used to define the spatial targets of some federal programmes in relevant fields • Local programmes of Urban Development are being designed
Netherlands	• No overarching framework	National action focuses on infrastructure for transportation and curbing sprawl for sustainability; business and innovation support are also on the agenda	• National Urban Agenda under development
New Zealand	• No overarching framework, however elements can be found in: – The Resource Management Act (1991) defining land use regulation and competencies of local governments	Future policy is likely to focus on development capacity and land provision to firms and for housing	• Likely changes are: new National Policy Statement on Urban Development, to include considerations on land-use planning, and involve national government in the relatively devolved urban policy • Streamlining of planning for important cities to respond to key challenges (e.g. Auckland for growth, Christchurch for earthquakes) • Short-term measures like the Housing Accords and Special Housing Act of 2013 to accelerate housing supply are expiring in 2016
Norway	• No overarching framework	Programmes are aimed at promoting co-operation between cities and their surrounding areas; emphasis on transportation and systems of cities	• No changes at the national level • Government led process to create larger municipalities (ongoing) and white papers are to be presented on these issues in 2016
Poland	• National Spatial Development Concept 2030 (2012)	Infrastructure and housing, with a focus on urban forms, social cohesion and institutional reforms	• Finalising work on a national urban policy, promoting sustainable development for cities and their functional areas with a place-based approach. Policy is to be implemented at national, regional and local level, with dedicated tools and instruments, including ESIF • Act on revitalisation is being passed, after being approved by the Council of Ministers in 2015
Portugal	• EU-Portugal Partnership Agreement (2014)	Sustainability and economic development through the EU framework, first budgeting post is dedicated to systems of cities	• 5% of ERDF is earmarked for cities, and it is doubled by Portugal, so more funds and investments available for cities • Municipal mergers and territorial reforms have reduced fragmentation at the local level
Slovak Republic	• No overarching framework, however elements can be found in: – National Strategy for Regional Development (2010, updated in 2014)	Regional policy: strong focus on integrated strategies; sustainability and balanced development, higher living standards, environmental quality[1]	• Awaiting major changes to spatial planning as new Construction Act is being prepared • National Urban Development Strategy in preparation
Slovenia	• Spatial Development Strategy of Slovenia (SDSS)	Promoting attractive cities through quality management and planning, considering in particular cultural heritage, revitalisation, provision of infrastructure, access to public service and safety; focus on targeted urban investments and urban forms	• Implementing urban sustainability targets for the first time through Integrated Territorial Investments and ERDF • Priority is given to funding projects showcasing an integrated approach in their sustainable urban strategies (SUS), with specific eligibility criteria among which is ranked the capacity to provide and design these integrated policies • SUS give a local agenda with specific challenges related to sustainability as well as targets to meet at the municipal level • Improving of support to local governments in terms of capacity but also in the design of instruments through policy fora

Table 2.A1.2. **Urban development strategies and recent changes: OECD country overview** *(cont.)*

Country	Main strategy or framework at the national level	Strategic orientation	Recent changes
Spain	• Operational Program for Sustainable Growth for the period 2014-20 (2014)	Local urban sustainability focuses on the urban and territorial development dimension through targeted urban investments; accessibility, mobility and transport; urban governance; and social cohesion	• Significant increase in urban activities for the 2014-20 programming period
Sweden	• No overarching framework but elements of policy can be found in: – The National Platform for Sustainable Urban Development (2014)	Ministerial portfolio includes environment, energy, climate change and urban development	• Minister for Urban Development under the Ministry of the Environment and Energy • Urban environment agreements aimed at improving urban transportation investments • New National Platform for Sustainable Urban Development, aims to co-ordinate the stakeholders of sustainable development, including special purpose agencies or ministries • National negotiation on housing and infrastructure to ensure the construction of a high-speed rail between Stockholm, Malmo, Gothenburg
Switzerland	• Federal Agglomeration Policy 2016+ (2001, updated in 2015)	Attractiveness, quality of life, limiting sprawl, infrastructure, institutional co-ordination and reforms	• Tripartite approach including the confederation, cantons, cities and local governments • Funds allocated to cities and local governments for transport infrastructure have been increased and streamlined • New agglomeration policy has "networks of cities" approach • Four objectives have been set as targets for 2030: quality of life (and social cohesion), attractiveness, high living standards, efficiency of collaboration
Turkey	• Urban Development Strategy and Action Plan (2010-23)	Spatial planning, quality of life and economic development through urban positioning and attracting FDI; social development through housing and upgrading of informal housing	• Urban development strategy implemented • Urban quality of life is at the forefront of urban policies • Movement towards urban regeneration, specifically towards sub-standard buildings, risk resilience and disaster mitigation • Reduction in the number of municipalities • New trend to draft national development strategy with a "system of cities" mind set
United Kingdom	• Unlocking Growth in Cities – Policy Document (2011)	Strategy mainly based on the devolution of competencies to the local level through government-city contracts; objectives vary but are mainly focused on tapping into urban potential, as well as redrawing Local Enterprise Partnership boundaries to fit functional areas	• Further round of City and Devolution Deals, with increased competencies and funds devolved to local levels
United States	• No overarching framework	Mandate of the Department for Housing and Urban Development is to create strong, sustainable communities and affordable housing; special economic zones for disadvantaged neighbourhoods are also an instrument, along with capacity building for subnational actors	• Strong Cities, Strong Communities is a multi-stakeholder programme aiming at building up capacity for local governments by allowing direct support by federal agencies, access to some of their resources and proposes competitive grants for quality economic development plans (2011)

Note:
1. Additional information added based on reports from European Policy Research Centre (2014) "Policy Reform under Challenging Conditions: Annual Review of Regional Policy in Europe", *EoRPA Paper*, 14/1, EPRC, Glasgow.

Source: OECD (2015a), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris.

Table 2.A1.3. **Rural development strategies and recent changes: OECD country overview**

Country	Main strategy or framework at the national level	Strategic orientation	Recent changes
Australia	• Agricultural Competitiveness White Paper (2015)	Focus on agricultural strengthening, through infrastructure, innovation, and biosecurity	• Introduction of a tiered definition of rural along remoteness criteria (5 classes) in terms of access to services
Austria	• Austrian Rural Development Programme (2014)	Agricultural development, Second Pillar of CAP, primary sector innovation and productivity; long-standing focus on mountainous areas	• Changes to accommodate EU framework
Belgium	• Rural Development Programmes (Flanders and Wallonia) • Additional elements to be found in: – Flanders: Ruimtelijk Structuurplan Vlaanderen – Wallonia: Decree of 11 April 2014 on rural development	• Flanders: Protection of open space with rural-urban linkages, land use and environmental sustainability • Wallonia: quality of life through service delivery	• No recent changes reported
Canada	• No overarching framework	The Community Futures programme is funded by the federal government, and administered by the RDAs who provide funding to a network of 269 community-based, not-for-profit organizations across Canada that provide support to SMEs and Social Enterprises and undertake appropriate community economic development initiatives	• Rural Secretariat in Department of Agriculture ended 2013, accent now on Community Futures programme
Chile	• National Rural Development Policy (2014)	Social well-being, economic opportunities, culture and identity, and environmental sustainability; programmes also focus on agricultural production and infrastructure project	• Minor adjustments to the recent National Rural Development Policy (2014) expected
Czech Republic	• Regional Development Strategy (2013) • Strategy for Growth (2012)	Agriculture with focus on sustainability and resilience of rural areas	• Greater accent on community-led local development: better assessment of needs and capabilities in rural areas to support existing and new local action groups (LAG)
Denmark	• Partnership agreement with EU (2014)	The government is due to propose a plan for growth in all regions of Denmark. EU framework is the current framework for rural policies	• Pre-2015, strategy for rural areas; new government looking at growth throughout Denmark, including rural areas
Estonia	• Estonian Rural Development Plan (ERDP) for 2014-20	Agriculture and rural economies, strong support for environmental sustainability and direct support to agricultural production	• In the future, seeking to improve access to services (including e-solutions); and jobs (including mobility/teleworking solutions)
Finland	• Rural Policy Programme 2014-20 • Rural Development Programme for Mainland Finland 2014-20	Entrepreneurship, diversification of rural economies, quality of life, infrastructure, accessibility, partnership and democracy issues, ecosystem services, sparsely populated rural areas, community / village based local development, agriculture	• Restructuring of public spending due to long-lasting recession affecting most rural areas • Ministry of Agriculture and Forestry now responsible for this portfolio formerly with the Ministry of Economic Affairs and Employment (vice versa 4 years ago)
France	• Law on the development of rural territories (2005)	Public service delivery (notably for healthcare), accessibility, mobility, digital technologies, economic diversification and innovation	• Three inter-ministerial meetings on rurality in 2015-16 to address access to public services, mobility, business support, teleworking and revitalisation of small towns
Germany	• National Framework (2014-20)	Rural development is a competency of the Länder, 13 regional programmes with common elements outlined in the National Framework and a National Rural Network	• New rural development strategies in the Länder • Ministry of Food and Agriculture launched the Federal Rural Development Scheme (BULE) in 2014 to support innovative approaches to rural development
Greece	• Rural Development Program (RDP) (2014-15)	Direct support to agriculture, environmental sustainability, and quality of life (LEADER)	• Better coherence in funding and implementation of Greek RDP • Targeting sectors that have added value for the national economy to increase quality of products and enhance environmental sustainability • Promotion of bottom-up approach for CLLD/ Leader. Additional focus put on innovation support, knowledge transfers, and integration of value-chains • Management changes: reduction of administrative burdens, improving monitoring and evaluation planned. Parts of the funds and programmes allocated to regions

Table 2.A1.3. **Rural development strategies and recent changes: OECD country overview** *(cont.)*

Country	Main strategy or framework at the national level	Strategic orientation	Recent changes
Hungary	• National Development 2030 – National Development and Territorial Development Concept (2014) • National Rural Development Strategy (2012) • Rural Development Programme (2015)	Maintaining rural population, diversifying rural economies, quality of life and employment	• In 2014, tasks for rural development placed in Prime Minister's office (State Secretary for Rural Development) • Ministry of Agriculture helps accredit and supervise implementation of rural policy while the paying agency is the Agricultural and Rural Development Agency
Iceland	• Parliamentary Resolution on a Strategic Regional Plan 2014-17	Rural policy of Iceland is contained in its regional policy given the country's largely rural character	• Introduction of Iceland 2020, a macro-policy statement, developed through consultation of Icelanders (8 regional action plans for Iceland) • Prioritisation of objectives to be coherent with Iceland 2020 framework; objective over the first 5 years is to boost economic and innovation development • Restructuring of governance along principles of vertical and horizontal co-operation and citizen participation (nicknamed the "hourglass strategy")
Ireland	• White Paper on Rural Development (1999)	Economic development supported by service and infrastructure provision, while protecting the environment and social policy to address disadvantage and social inclusion needs in a sustained manner	• Rural charter for Ireland launched 28 January. 10 commitments for sustainable rural development. Consultation process will start in April 2016. Creation of a central policy forum for rural policies • A new rural policy framework expected in 2016
Israel	• No overarching framework, but some elements found in: • Planning and Building Law, National Master Plan 35 and also in the District Master Plans	Land use planning and guidelines emphasising the preservation of agricultural land and open spaces	• No recent changes reported
Italy	• Partnership Agreement with EU (2014-20)	Knowledge transfer and innovation in rural areas, organisation of the agricultural sector through direct support, social inclusion and sustainability	• National Strategy for Inner Areas to foster participation and an integrated approach to improve access to basic services (local development interventions), step-by- step transparent process with contractualisation, multi-fund financing, and indicators/evaluation
Japan	• The Basic Law on Food, Agriculture and Rural Areas (Act No.106, 1999, revised every 5 years, current version 2015-20)	Agriculture through direct support, sustainability, overcoming demographic challenges and maintaining rural populations	• Focus for the opening period on agriculture for preserving rural functions and attractiveness of rural areas, particularly hilly and mountainous areas
Korea	• Development Plan for Agriculture, Rural Areas and Food Industries (2013)	Competitiveness, income and welfare/quality of life	• No recent changes reported
Luxembourg	• No overarching framework, but some elements found in: – Law of 10 of August 1993 on natural parks – Rural Development (approach LEADER)	Landscape preservation	• Third natural park created in 2013
Mexico	• Law on Sustainable Rural Development (2001)	Agriculture, including through direct support; sustainability, land tenure and legal certainty	• No recent changes reported
Netherlands	• Third Rural Development Program (2014-20)	Innovation and sustainability, reducing the trade-off between productive agriculture and environmentally sustainable development	• Rural development programme links to EU CAP, the latest programme has a focus on innovation and sustainability
New Zealand	• Business Growth Agenda (BGA 2015) • Regional Growth Programme (2014)	Regional policy: focus on innovation as well as competitiveness of all and lagging regions; business support and innovation support are mainstream tools, sometimes focusing on aboriginal economies	• New Regional Growth Programme; several policies to address economic development and build business/innovation capacity outside of the capital • New governance at national level for Regional Growth programmes; taking into account immigration and the specific challenges of the Maori
Norway	• White paper "On Rural and Regional policy" (2013)	Growth and sustainability, hard and soft infrastructure	• No recent changes reported • New white paper expected in 2017

Table 2.A1.3. **Rural development strategies and recent changes: OECD country overview** *(cont.)*

Country	Main strategy or framework at the national level	Strategic orientation	Recent changes
Poland	• National Strategy of Regional Development 2010-20	Building upon the economic complementarity with the urban, sustainability of agricultural production, heritage (cultural amenity preservation)	• Integrated approach for ESIF, programming based on strategic assumptions: enhancing human capital, transfer of knowledge and intersectoral mobility, focusing intervention under RDP on active, middle-sized and pro-development farms
Portugal	• EU Partnership Agreement for the use of EU Structural and Investment Funds (2014)	Growth of the agroforestry sector, efficient management of resources. Creation of conditions for the economic and social enhancement of the countryside	• New programme (Aproximar) for one-stop shops for services in local areas; inclusion of rural development policy in national development strategy; greater emphasis on agriculture in LEADER
Slovak Republic	• Slovak Rural Development Programme (2014)	Quality of life and agricultural production	• No recent changes reported
Slovenia	• Slovenian National Strategy Plan for Rural Development (2014)	There is no explicit national strategy. However, EU programmes cover rural areas	• Evaluation of various programmes, could lead to changes
Spain	• National Framework on Rural Development (2014)	Rural competencies are devolved to the regions. Each region has its own rural development plan; national programmes invest in agricultural production and environmental sustainability	• New round of Rural Development Plans along with EU cycle, new Management Authorities co-ordination body created
Sweden	• Rural Development Programme for Sweden 2014-20	Innovation in rural development and sustainability, strong focus on service delivery and accessibility of rural areas	• Parliamentarian committee studying a new rural policy (interim report March 2016, final Jan 2017) • Ministry of Rural Affairs (formerly Agriculture) merged into new Ministry of Enterprise and Innovation in 2015
Switzerland	• Policy of the Confederation on Rural Spaces and Mountainous Regions (2015)	Rural-Urban linkages and innovation. Specific challenges of mountainous areas are taken in account	• Feb 2015, new rural and mountain areas strategy, promoting greater cross-sectoral co-ordination, multi-level governance co-ordination, accent also on innovation
Turkey	• National Rural Development Strategy (2014)	Diversification of rural economies, social services, infrastructure (ICT), statistics	• Rural Development Committee established in 2012. National Rural Development (2014-20) Strategy approved, rural development action plan to be adopted in 2015
United Kingdom	• Four Rural Development Programmes (England, Scotland, Northern Ireland, and Wales), 2014	Infrastructure (hard and soft), human capital, innovation, quality of life, devolution of powers	• Commission for Rural Development ended in 2013 • Department of the Environment, Food and Rural Affairs (Defra) and Ministers have full responsibility for rural development policy and ensuring policy development takes account of rural impacts in a fair and equitable way
United States	• No overarching framework	Agriculture, infrastructure (basic and advanced), stakeholder approach.	• Agricultural Act of 2014, sec. 6025 addresses particular strategic economic and community development

Source: OECD (2015a), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris.

PART II

Special focus: Rural areas – Places of opportunity

PART II

Chapter 3

Understanding rural economies

This chapter first considers the definition of "rural", with a discussion of the characteristics of low-density economies and methods to capture some of those characteristics in the definition of rural regions. The second part of the chapter analyses key trends in rural regions, including trends in productivity, gross domestic product, employment, and demographic change, using the OECD extended typology that allows for the classification of rural regions according to their proximity to cities. There is a focus on the role of the tradable sector for productivity performance and the resilience of rural regions to the effects of the recent crisis.

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.

Key messages

- Rural regions are diverse and highly influenced by their specific natural environments. Their development path is substantially different from the standard urban model. Certain rural regions in OECD countries have been highly successful in terms of economic performance and quality of life. Other rural regions have been less successful. The success or weakness of rural regions is considerably more affected by changes in economic conditions than in urban areas.
- Rural regions employ different development models adapted to reflect specific features of having a low density of population and economic activity. This variability calls for a typology of different definitions of rural, such as: *i)* rural areas inside functional urban areas; *ii)* rural areas adjacent to functional urban areas; and *iii)* rural areas that are far from functional urban areas, i.e. "remote".
- There are different development patterns observed depending on the type of rural region. Rural regions close to cities are more dynamic than rural remote regions and also more resilient, displaying an economic performance similar to urban regions. Rural regions close to cities registered an average annual productivity growth of 2.15% in the period 2000-07 – higher than any other type of region.
- Productivity growth in rural regions in the pre-crisis period was mostly accompanied by employment growth. Among those rural regions that experienced positive productivity growth in the period 2000-07, two-thirds also recorded positive employment growth. Since the crisis this pattern has been difficult to maintain.
- Remote rural regions are particularly vulnerable to global shocks. Following the financial crisis, their average productivity declined by 0.61% per annum over the period 2008-12. This average hides the fact that some remote rural regions continued to perform well during and after the financial crisis.

Introduction

Rural regions are home to more than one-quarter of the OECD population and they contain the vast majority of the land, water and other natural resources in OECD countries. In a green growth context, they will be critical for developing a new type of economy. While rural regions have a reputation for being laggards in the growth process, as was shown in Chapter 1, this is not the case. In fact, Figure 1.8 shows that a considerable share of the 50 regions with the highest productivity growth in the OECD are mostly rural, which means that their high rate of growth took place in the absence of a large metropolitan centre. Moreover, while rural regions are individually small in terms of their level of regional gross domestic product (GDP), they collectively make a significant contribution to national GDP.

Improving our understanding of how rural regions contribute to national economies is the main goal of this chapter. The two main questions raised in Chapter 1 about falling rates of productivity and unequal regional growth have a clear rural dimension. While rural regions are increasingly, and more broadly, linked to urban regions – through markets, the movement of people, multi-level governance, the flow of environmental services and a variety of other ways – they have a distinct growth dynamic that is different from the urban model of growth. While rural regions rely on urban regions as the source of many of the goods and services they consume and as markets for much of what they produce, their economies reflect the special features of what can be called a "low-density economy".

Low-density economies are typically characterised by several features. They include: a small local workforce that both limits the number and size of firms that can efficiently operate; a high reliance on the extraction and first stage processing of local natural resources that are then exported far beyond the region; sensitivity to transport costs; the possibility of strong competition with regions with similar economic structures; a reliance on innovations developed elsewhere as well as local innovator/entrepreneurs; and a local economy that is highly sensitive to regional, national and global business cycles (see also Chapter 1). Under favourable circumstances these economies can: demonstrate high levels of worker productivity; benefit from large inflows of capital that lead to increases in employment and productivity; and provide high wages and employment opportunities that contribute to a good quality of life for local households. Under unfavourable circumstances, such as low commodity prices, the rise of strong competitors, or resource depletion, rural regions can experience high rates of unemployment, population outflows and a deteriorating quality of life, both in terms of income and access to services.

The diverse situation of rural regions in the OECD is examined using data at a lower level of aggregation than was generally used in the first two chapters. The large regions (TL2) correspond to the highest subnational unit of governance – such as a state in the United States or a *Land* in Germany. These units typically contain multiple cities of varying sizes and a wide spectrum of different types of rural areas. In contrast, small regions (TL3) are a lower level of aggregation, such as a province in Belgium, an aggregation of counties into economic areas in the United States or regions in Finland (see the Reader's Guide). While they still contain urban and rural territory, TL3 regions tend to be more homogeneous than TL2 regions. This allows for a more precise picture of the types of rural regions across a country and provides a basis for a better understanding of how differences in rural economic development have occurred in recent times within, and across, OECD countries.

Rural areas as places of opportunity

Rural areas provide traditional resources but they are increasingly providing vital new functions that use their resource base in novel ways. The role of rural regions as producers is well understood. Forestry, mining, oil, gas, electricity production, fishing and agriculture are almost exclusively rural industries. Much manufacturing also takes place in rural areas, in particular the first stage processing of natural resources. However, rural areas are more than just producers. They are more than "hewers of wood and drawers of water". In recent decades, rural areas have experienced a fundamental transformation from places concerned with only resource extraction for export to places that are also concerned with local or direct use of resources, albeit without their direct consumption.

These expanding rural activities include: various types of rural tourism, the preservation of wildlife and cultural heritage sites, the production of renewable energy, and the recognition of the key role that the rural environment plays in eco-system services, such as carbon capture or filtering contaminants from air and water.

These functions offer a new economic base for a rural region that can provide sources of income and employment beyond traditional activities. In many cases these functions are found in rural regions that are in close proximity to a large metropolitan centre. Proximity allows urban residents easy access to the rural region and the possibility of frequent trips within a year. In other cases, a unique high value resource may be found in a remote rural region that can only be reached with a large outlay on travel, making a visit an expensive proposition. Such activities might include: skiing in the Patagonia region of Chile; snorkelling in the Great Barrier Reef in Australia; observing the Saami people and their reindeer in Lapland in Finland; or producing solar power in desert areas of Arizona (United States).

Proximity to an urban region is an important predictor of rural growth. Rural growth does not only occur in rural regions that are close to cities, but proximity allows stronger linkages between urban and rural places that are increasingly important factors in understanding differences in rural growth. Two-way flows of many kinds are easier when urban and rural are adjacent (OECD, 2013). Urban residents have easier access to the green space of the countryside, while rural residents have easier access to advanced public and private services that are only found in cities. Indeed, the vast majority of rural residents and rural economic activity are found in close proximity to (functional) urban areas. While these urban and rural places are connected and interdependent, they remain distinct entities in terms of their economic functions, settlement patterns and ways of life. By contrast, in remote rural places there are fewer direct connections with cities and local residents and firms must rely almost exclusively on local providers of goods and services.

Restoring productivity growth is important in all regions, but especially in rural regions. Falling rates of productivity growth and concentration of growth in a few regions is a central problem for OECD countries in general, but often it is a crucial issue for their rural regions. Across the OECD, in almost all rural regions, the workforce is getting older and smaller. Youth outmigration is typically at a high level, and the average level of formal education and worker skills is lower than is the case in urban areas. These workforce issues have important implications for rural economic development. In a future with fewer workers economic growth must come from higher productivity. Without a strong workforce the presence of a strong natural resource base will not be enough to ensure economic prosperity. Moreover, it is generally recognised that infrastructure investments are required in rural regions to improve connectivity to urban markets. However, investments that will improve human capital are perhaps more important, because without a workforce with adequate skills, firms in rural regions may be unable to maintain production as local workers age and retire.

The 2007-08 crisis provides an example of how rural regions are impacted by external shocks. That crisis presented a major challenge to OECD economies, including their rural areas. Although many rural areas suffered less in terms of direct job loss than urban regions, due to the nature of their economies, the crisis put major pressure on public

spending in virtually all rural regions. The budget constraints of national and regional governments led to reduced subsidies for rural regions that could not be offset with local revenue. The result was reduced access to public services and pressure to find new ways to deliver services in rural areas. Even after a partial recovery, these budget pressures continue and are exacerbated by higher demands in rural regions as local populations age, and economies that were once strong are impacted by recent declines in global commodity prices.

Support from national governments is important for the small and specialised economies found in rural regions. OECD member governments have had a longstanding commitment to supporting their rural residents. Traditionally this support focused on agriculture and a few other resource industries, as these provided the majority of rural income and employment. Now, as rural economies diversify and rural economic development follows multiple paths, a more nuanced form of support is needed. The OECD New Rural Paradigm (OECD, 2006) was a first step in offering a framework for a broader perspective on how countries could better support rural residents in their development efforts. Since its publication, conditions in rural areas have evolved due to the ageing of rural populations, changing demands for natural resources, an increased concern with climate change and greater fiscal limitations in government budgets.

An updated rural policy framework should reflect both new conditions for rural regions and a more advanced understanding of rural economies. Chapter 4 provides a discussion of how OECD member countries have designed and implemented useful rural policies and of a new framework for integrating these policies into a general delivery mechanism. This new framework – Rural Policy 3.0 – reflects the evolution of rural economies since 2006 and the continuous efforts to better understand how national governments can best support them in their efforts to develop.

Defining rural regions

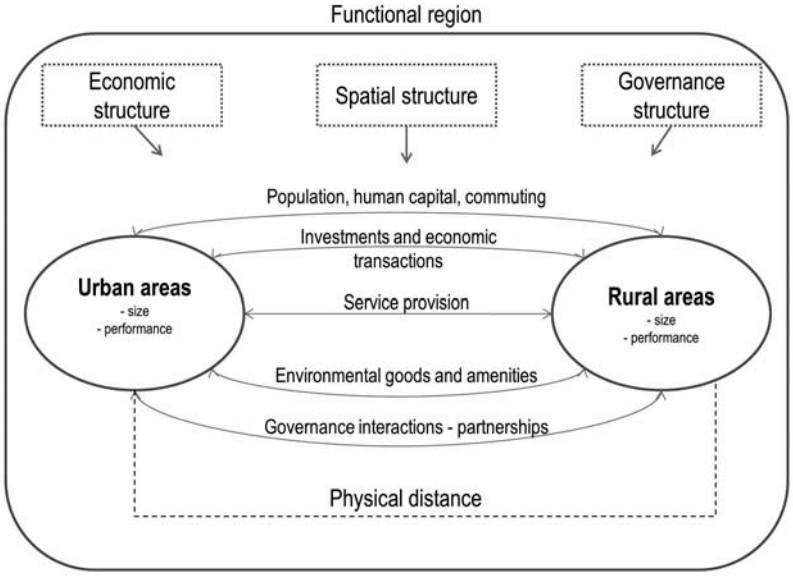
Recent definitions of rural regions recognise that there are many kinds of rural areas. While the OECD has developed a specific definition with a focus on international comparability, individual countries continue to explore alternative definitions that can better suit their particular needs. Importantly, the OECD definition informs the OECD Regional Database (OECD, 2015a) which is used to analyse the performance of the different types of rural region below.

New approaches to understanding how rural spatial dynamics underpin the OECD rural definitions

There is no internationally recognised definition of a "rural area" and there are ongoing debates about how best to define the concept. While a low population density is a common starting point, it is generally recognised that "rurality" is a multi-dimensional concept, which can embody different meanings for different purposes. For example, as a geographical or spatial concept, a socio-economic or socio-cultural descriptor, a functional concept related to, for instance, labour market flows, or simply as "not urban". One way to understand rural is through identifying differences in rural and urban linkages as a function of the distance of a rural place from an urban agglomeration.

Urban and rural areas are interconnected through different types of linkages that often cross traditional administrative boundaries. These interactions can involve: demographic, labour market, public service and environmental considerations. They are not limited to city-centred local labour market flows and include bi-directional relationships with rural-urban functional linkages (Figure 3.1). Each type of interaction encompasses a different geography forming a "functional region".

Figure 3.1. **Rural-urban functional linkages involve many types of interconnections**

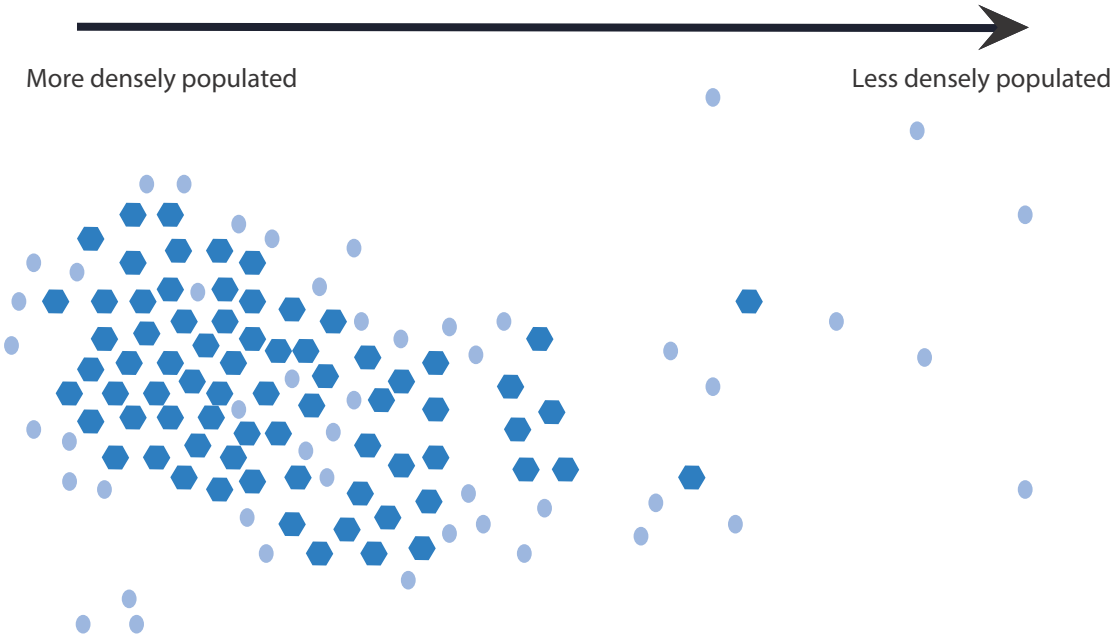


Source: OECD (2013), *Rural-Urban Partnerships: An Integrated Approach to Economic Development*, *http://dx.doi.org/10.1787/9789264204812-en*.

The complexity of the relationships can be represented along an urban to rural continuum from more to less densely populated areas and gradations in between. While there are no sudden breaks in these spatial relationships, there is great diversity in the size and types of interconnections. Figure 3.2 further illustrates the concept. It depicts a distribution of urban (large dots) and rural (small dots) areas scattered through space showing a continuum of settlement patterns based on location, proximity and density characteristics. Such spatial distinctions can yield important insights for public policy, because the range of opportunities and constraints facing any particular place vary with its location, and this has implications for jobs, services and infrastructure development, among other considerations.

In developing definitions of "rural", the unit of analysis plays an important role. There is a choice between a functional unit, based on observed behaviour, and an administrative unit, based on political boundaries. Functional definitions better capture complex economic flows and interactions between highly linked urban and rural places. Conversely, administrative units are better suited for the design and delivery of public services and managing public administration.

Figure 3.2. **A continuum from more to less densely populated areas**



Note: The size of dots indicates relative population size. Large blue dots represent urban settlements and small light blue dots rural settlements.

The three types of rural regions in the OECD approach have different degrees of linkage with metropolitan areas

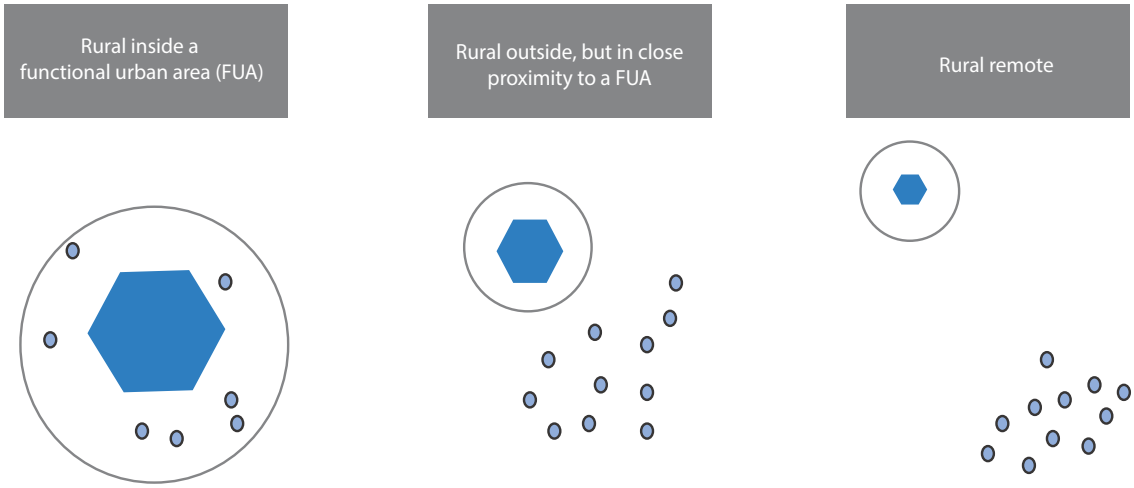
Building on the potential degree of interaction between rural and urban areas to classify rural regions, a three-category typology has been developed. There are: i) rural areas within a functional urban area (FUA); ii) rural regions close to a FUA; and, iii) remote rural regions (Figure 3.3). Each type has distinct characteristics, challenges and policy needs:

i) *Rural areas within a FUA* – these types of rural areas are an integral part of the commuting zone of the urban centre and their development is fully integrated within a FUA.

ii) *Rural regions close to a FUA* – these regions have strong linkages to a nearby FUA, but are not part of its labour market. There are flows of goods, environmental services and other economic transactions between them. While the urban and regional economies are not integrated, much of the growth in the rural region is connected to the growth of the FUA. The majority of the rural population in OECD countries lives in this type of rural region.

iii) *Remote rural regions* – these regions are distant from a FUA. Connections to FUAs largely come through market exchange of goods and services, and there are only limited and infrequent personal interactions outside the rural region, but there are good connections within the region. The local economy depends to a great extent on exporting the output of the primary activities of the area (see the discussion on "low-density economies" below). Growth comes from building upon areas of absolute and comparative advantage, improving connectivity to export markets, matching skills to areas of comparative advantage and improving the provision of essential services (e.g. tourism).

Figure 3.3. **Different types of rural**



Note: The circle delimits a FUA; the blue hexagon represents the most urbanised part of the FUA, while the small light blue dots represent rural communities

Because they are structurally different, the three types of rural region face different development challenges

Understanding the common challenges and opportunities within each of the three categories leads to the possibility for shared action and more effectively targeted policy responses. Table 3.1 summarises these challenges and opportunities.

i) For rural areas within the commuting zone of a FUA, development is intimately linked to that of the core city. The main challenges facing this type of rural region are: service delivery, as services concentrate in the core area; the matching of skills to the requirements of the labour market; and managing land-use policy brought on by increasing pressures of the urban core.

ii) Rural areas that are close to FUAs often enjoy a good industrial mix, which makes their local economies more resilient. They are also frequently able to attract new residents. The economic and social diversity of rural areas that are close to a FUA can pose challenges such as competition for land and landscape in the case of economic activities, and different needs and visions between old and new residents. Conflicts over development patterns can occur between these regions and the nearby FUA.

Table 3.1. **Challenges by type of rural region**

Type	Challenges	Opportunities
Rural inside a functional urban area (FUA)	• loss of control over the future • activities concentrate in the urban core • loss of rural identity	• more stable future • potential to capture benefits of urban areas while avoiding the negatives
Rural outside, but in close proximity to a FUA	• conflicts between new residents and locals • may be too far away for some firms, but too close for others	• potential to attract high-income households seeking a high quality of life • relatively easy access to advanced services and urban culture • good access to transport
Rural remote	• highly specialised economies subject to booms and busts • limited connectivity and large distances between settlements • high per capita costs of services	• absolute advantage in production of natural resource-based outputs • attractive for firms that need access to an urban area, but not on a daily basis • can offer unique environments that can be attractive to firms and individuals

iii) For remote rural regions with a relatively dense settlement pattern primary activities play a relevant role in the regional economy. Growth comes from building upon areas of absolute and comparative advantage, improving connectivity to export markets, matching skills to areas of comparative advantage and improving the provision of essential services. A strong resource base can result in high levels of income and productivity, but it can also result in cyclical (boom-bust) economies. These regions can face challenges in retaining and attracting workers and tend to have weak service delivery mechanisms.

OECD countries have adopted rural definitions that reflect their specific needs and have evolved over time

Since context and geography matter, it is no surprise that OECD member countries have adopted a wide range of definitions delimiting urban and rural borders. Indeed there is no such thing as an optimal or universally agreed upon rural definition for implementing policy. The wide diversity of rural definitions (Table 3.A3.1 in the Annex) also reflects different criteria that exist to elaborate definitions including density, economic activity, size or distance to services, among others.

Countries are trying to move away from traditional definitions of rural areas as simply the remaining "left over" space that is not urban. Traditional definitions do not differentiate among different types of rural areas or do not recognise areas of strong urban and rural interactions. With the advancement of Geographic Information System (GIS) tools and better availability of data, many OECD countries have revised and advanced their definitions to incorporate new criteria such as distance and accessibility to services, and are now recognising areas with strong urban and rural interactions. The shared goal in these efforts is to have a tool that can more accurately delimit rural areas and identify common challenges and opportunities to design better policy responses.

A number of countries are adopting new definitions and making use of a wider range of data sources including commuting, labour market or transportation network data. For example, Austria and Spain mainly use the urban-rural typology of the European Union (EU)[1], New Zealand has adopted a definition that distinguishes between rural areas with high, moderate or low urban influence and those deemed rural-remote by drawing on both population density, place of employment and commuting data (Statistics New Zealand, 2016).

Italy has developed a definition based on service accessibility and policy objectives. Rural areas in Italy are distinguished from urban poles and split into three categories: intensively cultivated and plain areas, intermediate rural areas and finally, areas with lagging development. This classification is based on population density indicators and share of agricultural land.[2] Italy has also adopted a classification of rural areas based on policy objectives. In Italy, "Inner Areas" are groups of municipalities characterised by "inadequate access to essential services." This classification is driven by policy purposes: by measuring access to health care, education, and transportation, policies can be specifically designed to meet local needs. Inner Areas are those further than 75 minutes driving time away from "Service Centres", which are municipalities that have an exhaustive range of secondary schools, at least one highly specialised hospital, and a railway station. All Italian municipalities have been classified according to the distance (travel time) from these Service Centres.

France is also advancing on a definition considering accessibility, but with a different methodology. In France, the National Institute of Statistics and Economic Studies has developed an indicator that examines the accessibility of services and amenities that are important to daily life for communities of varying population densities (INSEE, 2016). The indicator distinguishes between densely populated towns, intermediately populated towns, sparsely populated municipalities and very sparsely populated municipalities. It further considers access to: health, education and social services; sport, leisure, tourism and cultural amenities; and shops for food, goods and services. Taken together, the indicator helps policy makers better understand and act on regional differences in service accessibility.

In some countries, revised rural definitions have been spurred on by the reform of local governments. Finland is a case in point. The country first introduced a rural typology in 1993 based on municipal boundaries. It identified three rural types: i) rural areas close to urban areas; ii) rural heartland areas; and iii) sparsely populated rural areas. Started in 2005, a restructuring of municipalities resulted in fewer and larger municipalities and an increasing degree of rurality within municipalities. Consequently a new rural typology was needed in order to better capture these dynamics. Statistics based on administrative boundaries were found to be unsuitable for spatial analysis because they could not adequately represent regional differences. To this end, Finland has adopted a classification based on spatial data sets and on seven regional types: inner urban area, outer urban area, peri-urban area, local centres in rural areas, rural areas close to urban areas, rural heartland areas and sparsely populated rural areas. The framework employs a wide range of variables to capture the diversity of rural places including: population, employment, commuting patterns, construction rates, transport access and land use data. Collectively these variables are used to construct indicators of economic activity, demographic change, accessibility, intensity of land use and other attributes for each region.

Rural definitions are important and can have political, economic and social consequences

In summary, there is no single and best way to define rural regions across OECD countries. There are, however, emerging best practices that should be taken into account:

- *A single category of "rural" misses the diverse rural realities*. Definitions that only consider the characteristics of urban areas and, by default, define the remaining territory as rural areas are ill-equipped to capture the realities of modern rural economies that are often based on strong interrelations with urban areas, changing commuting patterns and accessibility to external markets.
- *Definitions should capture rural-urban linkages*. The recognition of mixed spaces is important. Definitions recognising areas with strong urban and rural interactions have the potential to better build on synergies and complementarities between urban and rural areas.
- *Administrative definitions that impose large minimum populations may lead to undesirable outcomes*. Efforts to create a rural region that has a big enough population to meet minimum scale requirements for public service delivery can be counterproductive. In rural areas with low population density, large schools may seem to offer more classroom options, but impose high transport costs. Similarly, consolidating rural local governments

to reduce administrative costs may lead to residents losing any connection to their representative and facing high costs in accessing public services. Considerations of distance and accessibility are very important for low-density areas. In adopting rural definitions, governments need to consider the implications for social cohesion within a space or geography (e.g. the desire for people to be connected to one another and have shared community visions) along with the delivery of services. The two may be inversely related – larger service-delivery regions may be desirable for the sake of cost effectiveness, but could negatively affect social cohesion by binding together communities that in fact have little in common.

Definitions of rural areas have important implications for the delivery of services and allocation of public resources. Chile is an illustrative case in this regard. The OECD Rural Policy Review of Chile (OECD, 2014a) found that the country was using a rural definition that classified even the smallest settlements into the "urban" category. As a result, only 12% of Chile's territory was identified as rural, with the remaining 88% classed as urban. These results were inconsistent with the observed distribution of the population and with the vast contribution of rural industries such as mining, agriculture and forestry to GDP and exports (OECD, 2014a). The definition also created the impression that rural development was only a minor issue and had implications only for the delivery of services and support to rural areas. As a result of this analysis, Chile is presently reviewing its rural definition to better capture these dynamics.

A new narrative is needed to clarify that rural regions make important contributions to national objectives, including economic development and prosperity. As seen in the case of Chile, the use of definitions is critical in contributing to this new narrative. By using outdated definitions, rural Chile is depicted as lagging, poor and remote. With a revised definition, a different picture emerges: rural areas are dynamic and poverty is mainly associated with mixed peri-urban areas.

The OECD regional typology

Country definitions are adapted to their specific needs and are mainly used for policy implementation, while the OECD has developed a definition to allow for international comparisons. The OECD first developed in 1991 a regional typology using a simple and commonly accepted criterion rule to define rural regions. This definition has been widely used to compare trends and patterns among OECD member countries, and will be used for the analysis of this chapter. The OECD regional typology incorporates some of the criteria used by individual OECD countries to define regions (e.g. mixed, different types of rural regions, cohesion), but it aims to develop a comparable definition for the purpose of analysis and therefore applies the same criteria across all OECD countries. International comparability requires some concessions compared to the typology outlined above. The typology is used to classify OECD TL3 regions, distinguishing predominantly urban (PU) regions from intermediate (IN) and predominantly rural (PR) regions (Box 3.1). An extended typology further classifies predominantly rural regions into regions that are "predominantly rural close to cities" and those that are "predominantly rural remote". This captures two of the types of rural areas outlined above (Table 3.1). Ideally the typology would also be able to identify rural areas inside functional urban areas, but this is not feasible at the TL3 level and would require data at smaller regional scales.

Box 3.1. **The OECD regional typology and its extension**

The OECD regional typology is part of a territorial scheme for collecting internationally comparable "rural" data. The OECD typology classifies TL3 regions as predominantly urban, predominantly rural and intermediate. This typology, based on the percentage of regional population living in rural or urban communities, allows for meaningful comparisons among regions of the same type and level. However, there is a trade-off: along with the benefits of international comparability, this framework necessarily has the drawback of not being as precise as the more refined definitions that are used to deliver policies in some countries.

The OECD regional typology

The OECD regional typology is based on three steps. The first identifies rural communities according to population density. A community is defined as rural if its population density is below 150 inhabitants per km² (500 inhabitants for Japan to account for the fact that its national population exceeds 300 inhabitants per km²). The second step classifies regions according to the percentage of the population living in rural communities. Thus, a TL3 region is classified as: predominantly rural, if more than 50% of its population lives in rural communities; predominantly urban, if less than 15% of the population lives in rural communities; and intermediate for values in between.

The third step is based on the size of the urban centres. Accordingly, a region that would be classified as "predominantly rural" in the second step is classified as "intermediate" if it has an urban centre of more than 200 000 inhabitants (500 000 for Japan) representing no less than 25% of the regional population. Similarly, a region that would be classified as "intermediate" in the second step is classified as "predominantly urban" if it has an urban centre of more than 500 000 inhabitants (1 million for Japan) representing no less than 25% of the regional population.

This typology proved to be a meaningful approach to explaining regional differences in economic and labour market performance. A drawback for international comparison is that it is based on population density in communities that have administrative boundaries, which can vary significantly between (and sometimes even within) countries. To improve comparability the typology is being updated to start with population density in 1km² grid cells as building blocks. In 2014 the European Union implemented this typology for the 2010 nomenclature of the European NUTS3 regions (see Eurostat, n.d. for details). For these countries the urban population are all inhabitants that live in 1km² cells with at least 300 inhabitants that form a contiguous cluster with at least 5 000 inhabitants. The thresholds for predominantly urban is taken as 20% or less rural residents, intermediate is 20-50% and predominantly rural are regions with 50% or more residents outside of urban clusters. For European OECD countries the new typology is used in this publication. Neither typology fully accounts for the presence of "agglomeration forces" or additional impacts of neighbouring regions. In addition, remote rural regions typically face a different set of challenges and opportunities than rural regions close to a city, where a wider range of services and opportunities are commonly available.

The extended OECD regional typology

The extended regional typology tries to discriminate between these forces and is based on a methodology proposed by the Directorate-General for Regional and Urban Policy of the European Commission which refines the current typology by including a criterion on the accessibility to urban centres. This allows for distinction between remote rural regions and rural regions close to a city. It facilitates analysis of their different characteristics, such as declining and ageing populations, levels of productivity and unemployment rates; and similarly it also distinguishes between intermediate regions close to cities and remote intermediate regions.

This extension to the regional typology draws on the concept of low-density economies to consider location, proximity and density in a more nuanced way, while maintaining the element of comparability which is important for the OECD's work. In practice, this adds a fourth step to the above OECD regional typology. This step considers the driving time of at least 50% of the regional population to the closest

Box 3.1. **The OECD regional typology and its extension** *(cont.)*

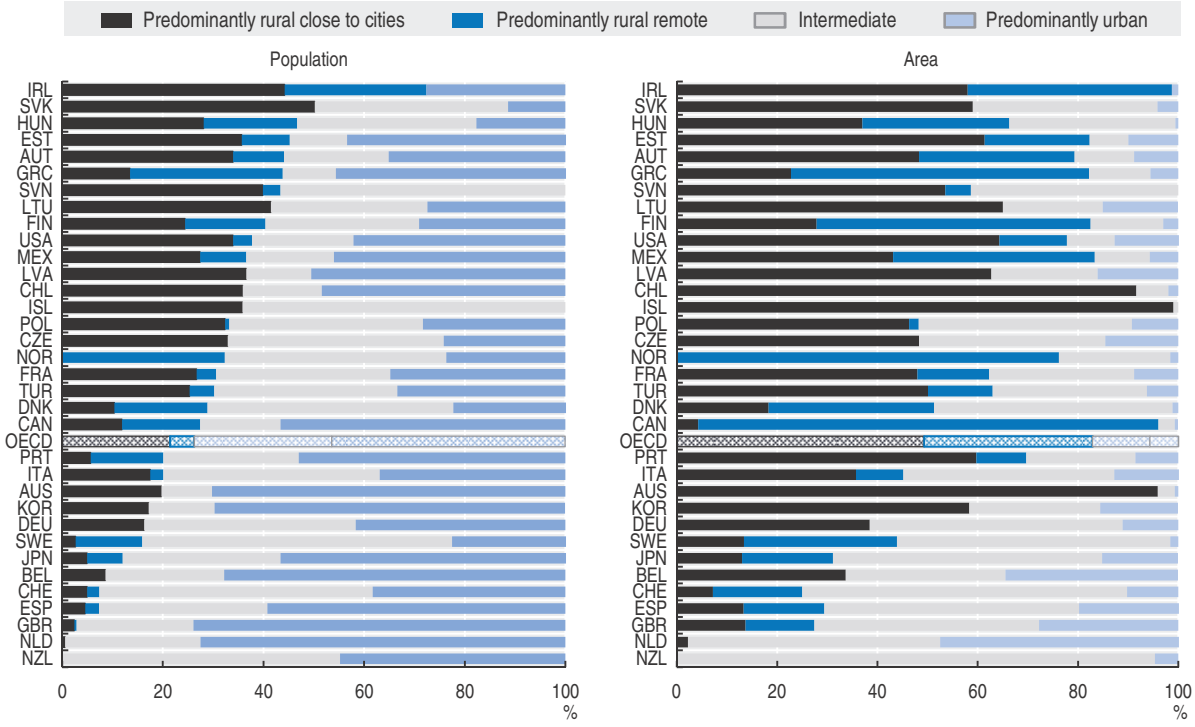
locality of more than 50 000 inhabitants. This only applies to the intermediate and predominantly rural regions, since predominantly urban regions include urban centres, by definition. The result is a typology containing five categories: predominantly urban (PU), intermediate close to a city (INC), intermediate remote (INR), predominantly rural close to a city (PRC) and predominantly rural remote (PRR).

Source: Brezzi, M., L. Dijkstra and V. Ruiz (2011), "OECD Extended Regional Typology: The Economic Performance of Remote Rural Regions", *OECD Regional Development Working Papers*, No. 2011/06, *http://dx.doi.org/10.1787/5kg6z83tw7f4-en*; OECD (2011a), *OECD Regional typology*, *https://www.oecd.org/gov/regional-policy/OECD_regional_typology_Nov2012.pdf*. Eurostat (n.d.), Urban Rural Typology, http://ec.europa.eu/eurostat/statistics-explained/index.php/Urban-rural_typology (accessed 20 June, 2016).

Predominantly rural regions account for one-quarter of the population (26.2%) and more than 80% of the land area across OECD countries (Figure 3.4). In Austria, Estonia, Greece, Hungary, Ireland, the Slovak Republic and Slovenia the share of the national population in rural regions is more than twice the OECD average. By comparison, in 2007, almost 74% of the OECD population lived in predominantly urban or intermediate regions, while the rural population represented 26.3% of the total. This suggests that the distribution has been relatively stable over time.

Figure 3.4. **One in 4 residents in the OECD lives in a predominantly rural region; only 1 in 20 lives in a rural remote region**

Population and area by type of regions, 2014



Note: The distinction between regions that are predominantly rural close to cities and those that are predominantly rural remote is not available for Australia, Chile, Korea, Latvia and Lithuania. For these countries "predominantly rural close to cities" refers to all predominantly rural areas.

Source: OECD (2016), *Regions at a Glance 2016*, *http://dx.doi.org/10.1787/reg_glance-2016-en*.

StatLink http://dx.doi.org/10.1787/888933412052

Among the OECD residents living in predominantly rural regions, more than 80% live in rural regions close to cities representing one-fifth of the OECD population (21.4%). The remaining rural population living in remote rural regions amounts to 4.8% of the total share. However, the average hides significant differences across countries. In three countries (Slovak Republic, Ireland and Lithuania) the share of the population living in rural regions close to cities is at least 40% (Figure 3.4). While rural remote regions, despite their low aggregate share, account for more than one-quarter of the total population in three countries (Norway 32%, Greece 30% and Ireland 28%).

What are low-density economies?

Improving the categorisations of rural regions is vital for a better understanding of how rural economies perform and thus how to increase their productivity levels. Productivity growth in rural regions of the OECD countries is highly variable. As shown in Chapter 1, some have performed exceedingly well and are among the top 50 OECD regions in term of productivity growth. However, the majority of rural regions are not among the best performing regions in their country, which suggests the need for more analysis to determine what seems to drive productivity in rural economies. Before moving to this step, it is important to better describe how rural economies differ from urban economies. In this, it is useful to explore the idea of the "low-density economy" as a way to better understand what factors are important for economic growth. The low-density economy underpins an alternative model of economic growth that can be used to understand how rural regions can be high performing.

Low-density economies have specific characteristics related to proximity, density and location

Rural regions are fundamentally different than urban regions. Obviously they are smaller, less densely populated places with considerable distances between settlements, and consequently have different dynamics than urban areas. Unlike in cities where the "built environment" shapes most human behaviour, in rural areas it is the natural environment that mainly shapes human activities. While each rural place is unique it is still useful to generalise. For example, rural areas that are close to cities, which is the case for the vast majority in OECD countries, have different characteristics than those that are both rural and remote.

Rural regions that are well connected to cities will be linked to urban markets, whereas for remote rural areas, economic success is tied even more to the tradable sector. The tradable sector of the economy is that which concerns goods and services that are not restricted to local markets. The nature of these *low-density economies,* including their relative proximity to markets, socioeconomic dynamics, sectoral composition and so on, leads to very different types of places. As a result, they require different kinds of support to make the most of their assets and opportunities. These differences become more apparent at a more granular level of analysis (TL3 versus TL2 regions).

It is for these reasons that questions of economic geography loom large in the analysis of economic development in rural places. The geography of a place is effectively defined by a combination of physical ("first-nature") and human ("second-nature") geographies (Ottaviano and Thisse, 2004). The more people inhabit a place, the more its character will be defined by second-nature geography – by human beings and their

activities. Where settlement is sparse, first-nature geography inevitably dominates – less human settlement and activity necessarily implies a larger role for natural factors, such as the climate or landforms, in shaping economic opportunities.

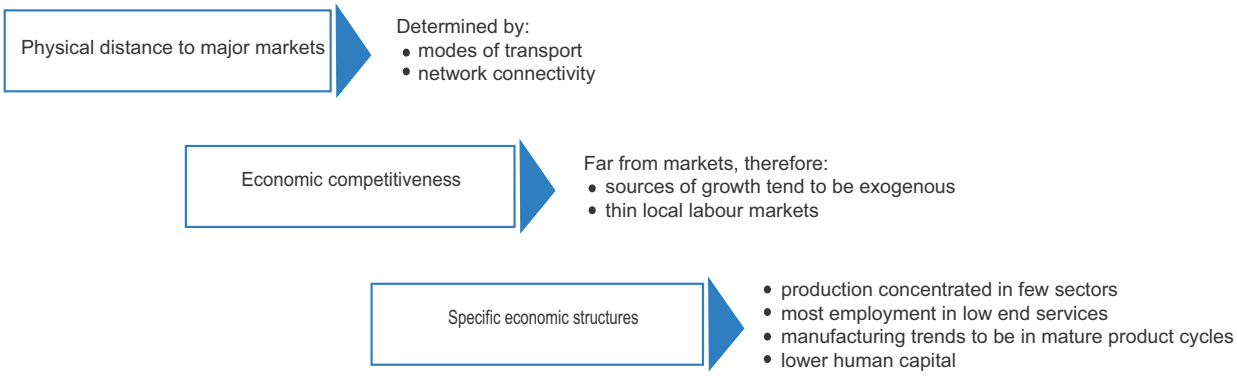
Peripherality in all its connotations can help us understand rural economies

Economic remoteness, or peripherality, which is always a relative term – is about being connected or unconnected to *somewhere*. Peripherality has three distinct dimensions. The first is simple *physical distance to major markets*. This increases travel times and shipping costs, which must be borne by the buyer (in the form of higher prices) or seller (in the form of lower margins). Yet straight-line distance is not all that matters: maritime transport is far cheaper and more flexible than overland transport, and it requires less dedicated infrastructure. Consequently, access to the sea is a crucial variable – southern Chile and coastal People's Republic of China are far less remote from North American and European markets than, for example, Brazil's Amazonian regions or China's interior, respectively, even though these are physically closer to the main markets. Where overland distances are concerned, the quality and layout of infrastructure is clearly critical.

The second dimension of peripherality is the degree of economic connectedness. Lack of economic integration not only reduces current trade opportunities, it reduces the ability of agents in a place to identify new opportunities. Thus, there are costs in both static and dynamic perspectives. For example, Australian wheat farmers, though located in a very remote place, are extremely well connected, because they are deeply integrated into international grain markets and very well informed about changing conditions. By contrast, the residents of many small towns along the US Appalachian Mountains, which are among America's poorest places, are physically very close to some of the world's biggest factories and consumer markets, but they are poorly linked to those markets and thus largely disconnected from activities taking place only a short distance away.

The nature of low-density economies can be summarised in three dimensions (Figure 3.5). The first captures physical distance and the costs it imposes in terms of transport and more general connectivity of people. The second dimension is the importance of competitiveness in regions where the home market is small, the economy is highly specialised in the production of commodities, and all transport costs are absorbed by local firms. The third dimension of the figure captures the importance of "first-nature geography", how the specific natural endowment shapes local economic opportunities.

Figure 3.5. **Features of low-density economies**



Low-density economies located far from major markets tend to face a number of common problems

The principal sources of growth tend to be driven by external demand given the lack of internal markets. Since they can only produce a limited range of the goods and services they need, such regions are, out of necessity, orientated towards exports of one sort or another, unless they benefit from on-going income transfers. Otherwise, they cannot afford to import the goods they need from other places.

Local markets tend to be thin, with weak competition. This feature constitutes both a form of protection from external competitors, as well as a constraint on firm growth. While low-density places often have lower prices for land, prices for other goods and services may be higher than elsewhere, owing to weak competition. This is particularly true for remote regions, where high transport costs and the potential for suppliers to exploit their market power may more than offset the benefit of low land cost and non-tradable prices (i.e. the combination of low density and long distance can be especially expensive). Partly for these reasons, firms in such places tend to be dominated by small and medium-sized enterprises (SMEs), which are often low performing.

The economic structures of such places often have specific features. Production is concentrated in relatively few sectors, since it is impossible to achieve "critical mass" in more than a few activities. Whatever the respective roles of the primary, secondary and tertiary sectors, a narrower economic base implies greater vulnerability to sector-specific shocks, whether positive or negative. In a very large, dense economy, the greater range of activities typically offers a greater degree of resilience.

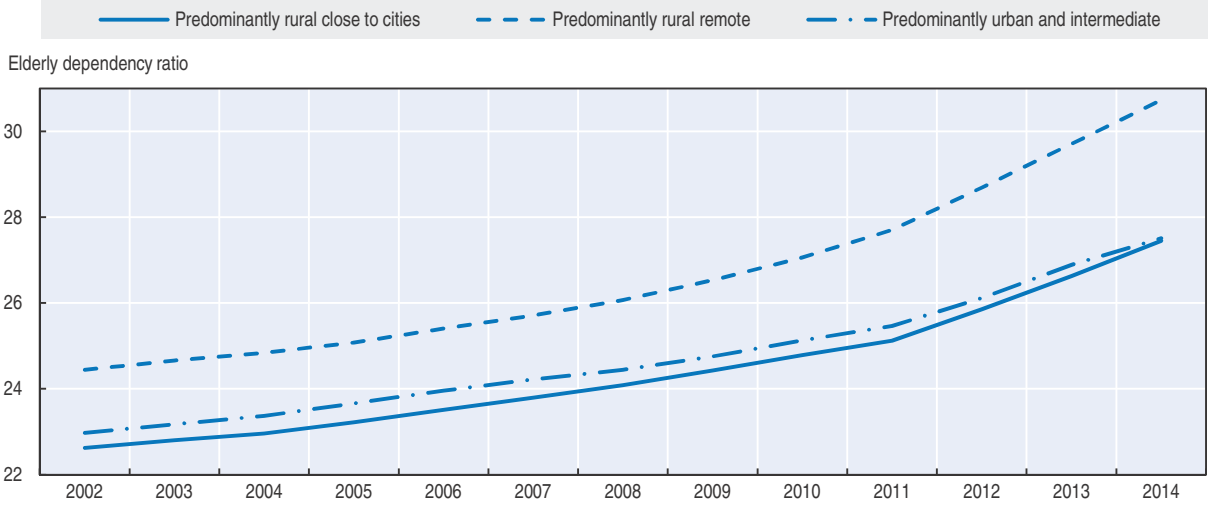
Most manufacturing in low-density economies tends to be "mature" in product-cycle terms. Although cutting-edge manufacturing tends to initially be concentrated in large cities, there are a wide range of examples verifying that they can also occur in rural regions (OECD 2014b). When they initially occur in large cities they can shift to more rural places later in the product cycle when at least one of two conditions holds: i) when proximity to some primary resource is important (e.g. the structure of transport costs is such that it is better to produce close to the resource rather than to the consumer market); and/or ii) where the technology is mature enough that the producers' main concern is cutting production costs. In short, production often shifts to more distant places when the business is no longer rapidly growing. Where the latter motivation prevails, the tendency is to favour rural areas with good connections to major markets but low labour and real estate costs.

In rural settlements, volunteers often provide services that governments or firms provide in cities. The small populations of rural settlements often may make it unprofitable for a typical private firm to provide local services. In many rural places, residents band together to create a social enterprise that takes its place. For example, in England volunteers have kept open the local shop or pub when the previous owner realised profits were too low and chose to exit. Similarly, in North America small communities typically rely on volunteer fire departments because local governments cannot afford to staff a regular fire department. Without a strong group of volunteers, rural places would have much fewer local services and less access to goods, which would make them less desirable places to live (Osbourne, 2013). Moreover, volunteer organisations are also important pillars of social capital and can act as catalysts for economic and social initiatives (Schulz and Baumgartner, 2013).

Demographic change and low levels of educational attainment exert particular pressure on many low-density economies

OECD countries are ageing, and while this demographic pressure affects all regions, it does so more in rural regions and their low-density economies. This is especially challenging if the region is "peripheral", i.e. located far from a city. The elderly dependency ratio, i.e. the ratio between the elderly population and the labour force, has been increasing for all types of regions over the last decade (Figure 3.6). While in most OECD countries, predominantly rural regions have a higher elderly dependency ratio than predominantly urban regions, those that are less peripheral, i.e. close to cities, have an elderly dependency ratio similar to that of urban and intermediate regions taken together.

Figure 3.6. **The elderly dependency ratio is similar in urban and rural regions close to cities, 2002-14**

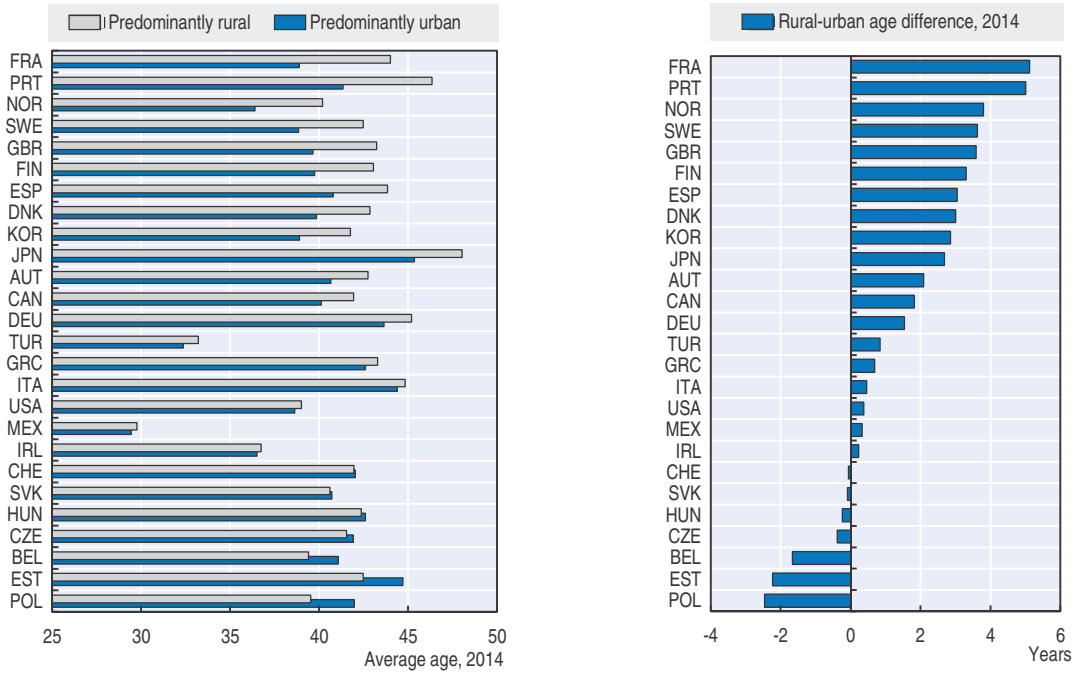


Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).
StatLink http://dx.doi.org/10.1787/888933412063

Rural regions also have an older population base than urban regions in all but seven OECD countries (Figure 3.7). In France and Portugal, the average age difference between the two types of regions is around five years. Conversely, in Poland, Estonia and Belgium, the average age in urban regions is about two years higher than in rural regions. There are also a number of countries for which the difference between the average age of the rural and the urban regions is rather small, such as Ireland, the Slovak Republic and Switzerland.

The low-density economies in remote rural regions face mounting dual demographic pressures. Not only is the elderly dependency ratio higher than in other regions and the gap between rural remote regions and other types of regions has widened over time, but the youth dependency ratio – defined as the share of the population under 15 years, over the working age population – is higher in rural regions compared to urban and intermediate regions. This means that rural regions tend to have a larger share of their population that is not in the labour force, either because they are too young or too old, but who require access to education, health and other public services.[3] These population dynamics can lead to a shrinking local labour market and present a potential fiscal problem for the regions that need to rely more on transfers than local taxes. Moreover, providing services for the elderly and young can place pressure on a small labour force and

Figure 3.7. **Populations in rural regions tend to be older than in urban regions**



Note: Data for Mexico refers to 2010, all other countries data refers to 2014. Excluded OECD countries have missing values in at least one type of region.
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

StatLink http://dx.doi.org/10.1787/888933412076

reduce average productivity because the services provided tend to have a low level of worker productivity, especially where economies of scale cannot be achieved. In rural areas close to cities, policies can try to address these population dynamics by enhancing rural-urban linkages, which facilitate the access to services mainly located in urban areas (such as specialised health care for the elderly and educational opportunities for young people).

Low levels of educational attainment in rural areas limit opportunities for productivity growth in their low-density economies

Human capital and skills are critical drivers of regional growth, and this is particularly challenging for rural regions that may suffer from "brain drain" (OECD, 2012). The labour market for high-skilled workers tends to be global and dominated by cities and large metropolitan areas, given the opportunities and amenities they offer through the presence of economies of agglomeration. In contrast, the market for low and technical skills is much more locally driven. This suggests that the productivity of rural areas depends on the successful upgrading of low-skill workers and an increase of workers with technical skills. Research finds strong benefits of reducing the share of low-skilled workers in the regional labour force supports economic growth (OECD, 2013). This result is particularly relevant for rural regions, where policy should focus on retaining youth in schools, matching the supply of skills to available jobs in the labour market and to prioritise technical skills, rather than scientific skills.[4]

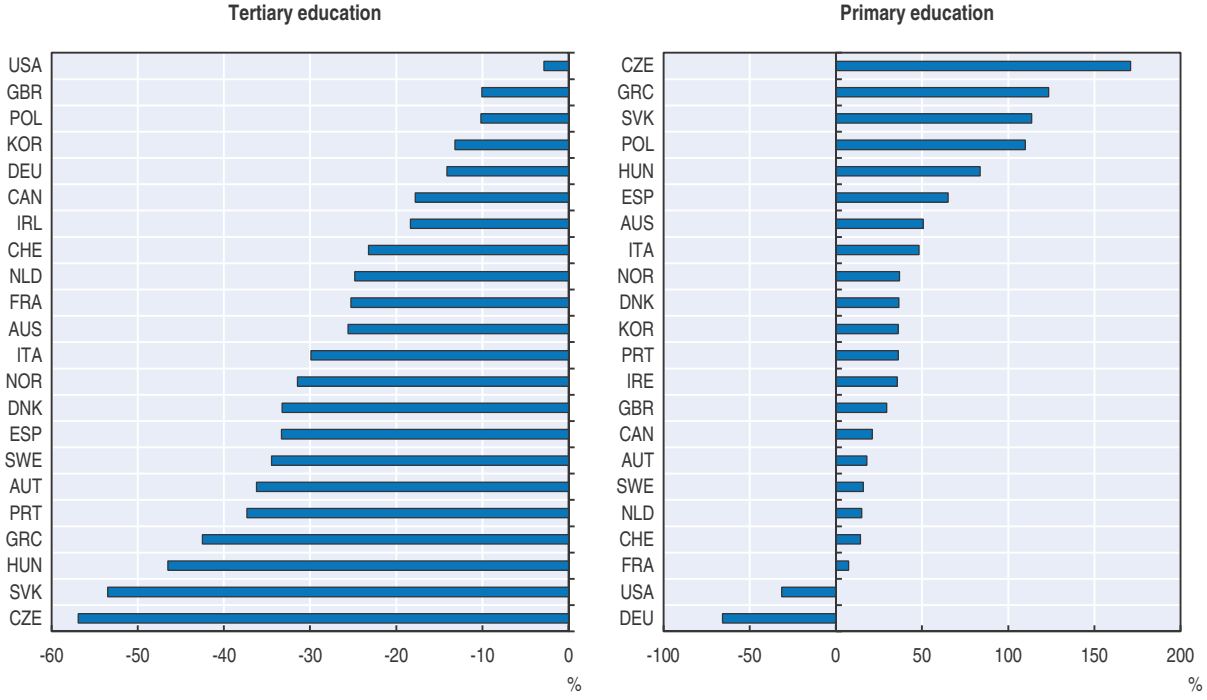
Low levels of high-skilled workers can be a bottleneck for growth in low-density economies. Educational attainment provides an indicator for the average skill level in the labour force. The share of workers with tertiary education, i.e. a university degree, is lower in

regions characterised by low-density economies, while the share of workers that do not have education beyond primary education (a proxy for low-skilled workers) tends to be high in these regions. Put differently, rural regions tend to have a higher share of low-skilled workers.

The skills gaps between urban and rural regions can be substantial. The percentage of university educated workers in the most rural (TL2) regions is lower than in the most urban regions in each OECD country with available data. For example, in Denmark and Sweden the share of workers with tertiary education in the most urbanised regions is 50% higher than in rural regions (Figure 3.8). The difference in terms of the workforce with only primary education is significantly smaller in Sweden (15% higher in rural compared to urban areas) than in Denmark (36%). This is in contrast to Hungary and Greece, where rural economies have both significantly lower shares of workers with tertiary education and significantly higher shares of workers that did not progress beyond primary education. In two countries, Germany and the United States, the share of only primary educated workers is higher in urban regions. In Germany, this partly reflects the historic east-west divide and the significantly lower shares of workers with only primary education in the (less densely populated) east of Germany. It also reflects that there are three *Länder* that are (administrative) cities and that cities often have a workforce with many workers at both ends of the skill spectrum. For the United States the difference is driven by states that are mostly urbanised and have a large percentage of foreign born residents (see Chapter 1 for a discussion of inclusion and migration in cities).

Figure 3.8. **The share of workers with tertiary education is lower in rural regions**

Percentage difference between predominantly rural and predominantly urban regions



Note: Each bar represents the percentage difference between the share of the labour force with tertiary (primary) education in regions in a country that belong to the 25% of OECD TL2 regions with the lowest share of population in low-density economies (the most urban regions) compared to those among the 25% with the highest share of population in low-density economies (i.e. the most rural regions).
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

StatLink http://dx.doi.org/10.1787/888933412082

Productivity and innovation are directly linked to the characteristics of low-density economies

Low-density economies are, almost by nature, characterised by limited diversification of economic activity. Smaller places with small labour forces cannot achieve critical mass nor economies of scale in very many activities. This also means that local producers often face thinner markets for their inputs – a lack of redundancy in markets can mean that weakness in one part of a supply chain harms other firms in the chain. It is not so easy to replace a supplier who fails or is underperforming in terms of quality or price. Low levels of diversification thus imply heightened vulnerability to external shocks, particularly those affecting the "export base" sectors.

As a consequence of many of these factors, such places tend to have lower levels of productivity, except in the primary sector, and limited entrepreneurial activity. Entry rates for new firms are typically lower than in denser places. Other things being equal, cities offer new firms a richer "ecosystem" in which to develop. In addition, the opportunity costs of failure in big, dense economies tend to be lower (resources released in the event of a failure are easier to reallocate to other uses) and, in part for that reason, the cost of capital tends to be lower as well.[5] Survival rates for new firms, though, are often *higher* in less dense economies, because entrants have to be fairly productive in order to overcome the barriers to entry (OECD, 2011b).

In general, levels of patenting and formal research and development also tend to be low, though low-density economies can be surprisingly innovative in ways that traditional innovation indicators do not capture. In more remote rural regions, the incentives to innovate may be high. It can be difficult to purchase an existing solution to a problem for an individual or firm. This reflects the narrow range of existing local suppliers and difficulties in identifying distant potential suppliers. Further, distance creates barriers to competition that can enable entrepreneurs to "capture" or monopolise local markets. However, unless these entrepreneurs are low-cost producers or have unique products, it will be difficult for them to expand beyond the local market.

Place matters because places are different. Territorial policies take this seemingly simple statement as a starting point and use it to construct initiatives and interventions to support the development of cities, regions and communities in an inclusive, robust and sustainable manner. Different places have their own unique assets and attributes and, as a result, it is important to understand different geographies, contexts and institutions, in order to adopt the most effective policies and support local actors. This is particularly important for rural places because of their extremely diverse characteristics and the structure of low-density economies. The next section explores the differential trends in different types of rural areas in more detail.

Trends, opportunities and challenges for rural areas

Rural areas often have substantial growth potential. This has been highlighted in previous empirical work on the determinants of regional growth and is reflected in the results presented in this section. It is important to note that the productivity performance of rural regions has implications for national performance. National levels of productivity are built up from regional levels, which in turn reflect the productivity of individual firms. While the level of economic activity in individual rural regions is small, the aggregate

contribution of rural regions to national growth is significant because there are many of them. Moreover, the viability of firms in rural regions may hinge on them having relatively high productivity, because they must compensate for higher transport costs than urban peers. Consequently rural firms may even make a disproportionate contribution to national productivity that goes beyond their number.

Rural regions have, on average, performed relatively well in terms of productivity growth, but were harmed by the recession. Chapter 1 shows that the gap in productivity growth has been increasing across all OECD regions, but this divide is not between urban and rural regions, but rather between a small number of urban and rural regions and all other regions (rural and urban included). However, on average, rural regions have lower levels of GDP per capita and lower levels of productivity than urban regions, with levels in both measures below the national average in their respective countries. However, the best performing regions in terms of growth are a mix of predominantly urban and predominantly rural regions. This suggests that mechanisms for productivity growth are available to rural regions and not only to those that are urban.

In terms of growth rates over the period 2000-07, rural regions performed very well. They recorded an average annual rate of growth (GDP per capita) of around 2.3%, which is close to the average growth rates of urban regions (2.4%) and above the intermediate regions (2.2%). Yet, while rural regions performed well before the global financial crisis, they were the most vulnerable regions since the onset of the crisis, with an average drop in GDP per capita of -1.11% annually over the period 2008-12. This variability in performance suggests that rural economies face particular challenges inherent in low-density economies (as discussed above). In particular the limited diversification of economic activity, problems with accessibility, lack of critical mass and population ageing, accentuated by the outmigration of young people limit their resilience.

Trends in regional productivity

Rural regions are not synonymous with decline

The widespread perception that "rural" is somehow synonymous with "decline" in OECD countries is simply wrong. In the run-up to the financial and economic crisis (2000-07), all rural regions combined recorded an average annual growth rate of just under 2% in labour productivity (real GDP per worker) and 0.12% since the crisis (2008-12) (Table 3.2). This is higher than the average growth rates of urban and intermediate regions, which, before the crisis, grew at 1.7% and 1.6% respectively. The contraction of productivity growth since the crisis was however larger in rural regions than in the other two categories. This is also reflected in the relative position of regions across OECD countries. Urban and intermediate regions improved their performance compared to the OECD average in GDP per capita from 2000 to 2012, while rural regions fell further behind (Table 3.2, upper panel). However, this does not reflect the reality for the majority of the rural population. Rural regions close to cities narrowed their gap to the OECD average GDP per capita levels by more than urban and intermediate regions pulled away. Remote rural regions account for most of the increased gap among all rural regions.

Rural regions close to cities perform particularly well

The downturn since the crisis has affected remote rural regions much more than rural regions that are close to cities. When rural is divided into two constituent parts, the two types of rural regions perform very differently. The regions that are "predominantly rural close to cities" display higher productivity growth before the crisis and more resilience after the crisis began. The economies of predominantly rural remote regions show a very different pattern. They are the most badly affected by the crisis, with an annual average drop of GDP per capita of -2.5%, more than 2 percentage points worse than rural regions close to cities. Productivity declined as well in the period 2008-12, albeit at a slower pace with an annual average decline of -0.6%. While slower, the decline is still a full percentage point more than in rural regions close to cities. This shows that the weaker performance of rural regions in aggregate mainly reflects rural remote regions, where productivity contracted.

The attractiveness of rural areas that are close to cities is also reflected in population growth figures. Predominantly urban regions and intermediate regions experienced stronger population growth than rural regions combined. But this is driven by remote rural regions declining, on average, between 2000 and 2007 and growing by less than 0.2% per year between 2008 and 2012. The population in rural regions close to cities grew by about 0.6% during those periods. This is a low growth rate, but only slightly lower than the rate in urban regions and higher than for intermediate regions.

Table 3.2. **Trends in GDP, productivity and population**

	GDP per capita, %		Labour productivity, %		Population, %	
	2000	2012	2000	2012	2000	2012
Predominantly urban	120.6	121.1	112.0	111.9	231.5	229.3
Intermediate	98.6	99.7	99.2	99.3	102.6	101.4
Predominantly rural (total)	85.5	83.9	91.6	91.4	50.0	49.9
Predominantly rural close to cities	85.8	86.3	91.3	93.3	72.9	74.3
Predominantly rural remote	84.9	79.9	91.9	88.5	24.0	22.6
All regions	100	100	100	100	100	100
	Annual average GDP per capita growth, %		Annual average labour productivity growth, %		Annual average population growth, %	
	2000-07	2008-12	2000-07	2008-12	2000-07	2008-12
Predominantly urban	2.39	-0.70	1.65	0.24	0.76	0.67
Intermediate	2.20	-0.28	1.57	0.65	0.55	0.45
Predominantly rural (total)	2.29	-1.11	1.97	0.12	0.31	0.38
Predominantly rural close to cities	2.29	-0.28	2.15	0.56	0.61	0.55
Predominantly rural remote	2.30	-2.45	1.69	-0.61	-0.03	0.18
All regions	2.29	-0.70	1.74	0.34	0.47	0.46

Note: Upper panel depicts the category average relative to the OECD average. Labour productivity is defined as real GDP per employee. Data refer to GDP evaluated at PPP constant 2010 USD, using the SNA 2008 classification. GDP data cover 20 countries: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Netherlands, New Zealand, Poland, Portugal, Slovak Republic, Slovenia, Spain, Sweden, the United Kingdom; (Netherlands coverage: 2001-12; Portugal coverage: 2000-11; UK coverage: 2000-10). Data on population cover 34 countries: Austria, Australia, Belgium, Canada, Switzerland, Chile, Czech Republic, Germany, Estonia, Spain, Finland, France, Greece, Hungary, Ireland, Iceland, Italy, Japan, Korea, Lithuania, Luxembourg, Latvia, Mexico, Netherlands, Norway, New Zealand, Poland, Portugal, Sweden, Slovenia, Slovak Republic, Turkey, the United Kingdom, the United States; (Austria coverage: 2001-12; Mexico coverage: 2000-10; Turkey coverage: 2001-12).
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

Performance varies more across rural regions than it does in intermediate and urban regions

The average performance of regions masks a high degree of variability. The standard deviation of labour productivity growth captures the range of growth rates across TL3 regions. It is higher for rural regions than for urban or intermediate regions (Table 3.3). In particular remote rural regions show very high variability, as exhibited by their high coefficient of variation (the ratio of standard deviation and the average growth rate). This variability reflects the fact that rural regions have a tendency to either do well or poorly, i.e. rural performance tends to cluster at the extremes as they exhibit boom and bust economies.

Table 3.3. **Rural remote regions present a higher variation in productivity growth rates than other types of regions**

	Annual average labour productivity growth, %, 2000-12	Standard deviation, %	Coefficient of variation
Predominantly urban	1.01	1.02	1.019
Intermediate	1.07	1.09	1.024
Predominantly rural close to cities	1.36	1.32	0.972
Predominantly rural remote	0.70	1.15	1.641

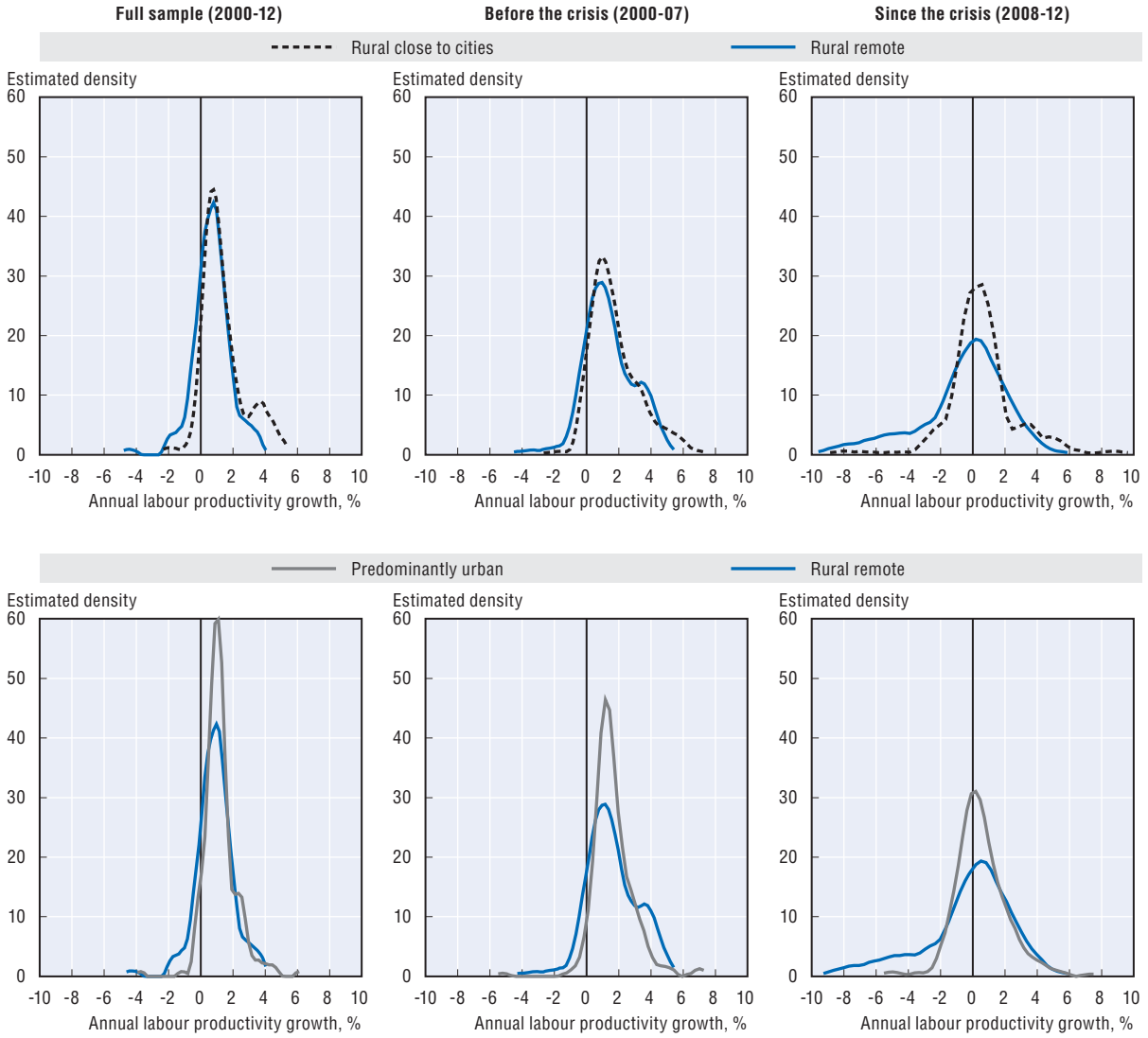
Note: Labour productivity is defined as real GDP per employee. GDP is measured at PPP constant 2010 USD, using SNA 2008 classification; employment is measured at place of work. The coefficient of variation represents the ratio of the standard deviation over the mean.
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

This variation is further accentuated when growth across the whole distribution of urban and rural regions is considered (Figure 3.9). A higher estimated density indicates that a higher share of regions fall around the specified growth rate. Across all types of regions the annual average growth rates are less-widely spread over the whole period analysed (2000-12) than before or since the crisis. In all three periods, rural regions close to cities outperform rural remote regions in all parts of the distribution, which is indicated by the distribution being further to the right (Figure 3.9, upper row). This means that, for example, regions in the bottom 20% of rural regions close to cities grew faster than the bottom 20% of regions that are rural remote. The difference is even more pronounced compared to predominantly urban regions. Urban regions have a higher peak, indicating stronger clustering of regions around average growth rates, than remote rural regions. This is combined with a narrower distribution for urban regions, which means that there are fewer regions with extreme growth events. The left tail, indicating low growth or decline, in particular is much less pronounced in urban regions than in remote rural regions. This pattern is in line with a lack of diversification in remote rural economies.

Linkages between rural and urban areas are key mechanisms for diffusing productivity

Urban regions tend to have higher levels of productivity. Table 3.2 shows that in 2012, average productivity in urban regions measured by GDP per capita was 21% above the OECD average for TL3 regions. Some of the factors driving this higher level of urban productivity may benefit adjacent rural regions as well. For example, agglomeration effects can "spill" across a broader geographical area and reach rural regions, even when the connections between rural and urban regions are not particularly strong. This may be a factor explaining the relatively strong performance of rural regions close to cities. One of the

Figure 3.9. **Growth in labour productivity is less concentrated in rural remote regions**



Note: Labour productivity is defined as GDP per employee. GDP is calculated at PPP constant 2010 USD, regional employment is measured at place of work.

Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

StatLink http://dx.doi.org/10.1787/888933412096

main policy concerns of countries is how to foster productivity by favouring the diffusion of technology from the frontier. Proximity, reinforced by enhanced linkages between rural and urban areas, may well be such a diffusion mechanism.

The strong performance of rural regions close to cities is not solely linked to their proximity to a large metropolitan area. Indeed, the definition of "rural close to cities" refers to any city of more than 50 000 inhabitants. This highlights the role played by small and medium-sized cities for the economic development of rural regions, but benefits cannot be achieved without access. This highlights the importance of transport links for rural areas, especially given a low population density. At least half of a region's population that is "close to a city" can access services provided by the city in less than 60 minutes driving distance, the population of "remote" rural areas needs to drive even further. But in both cases, "borrowing" the agglomeration benefits of large metropolitan areas, i.e. the

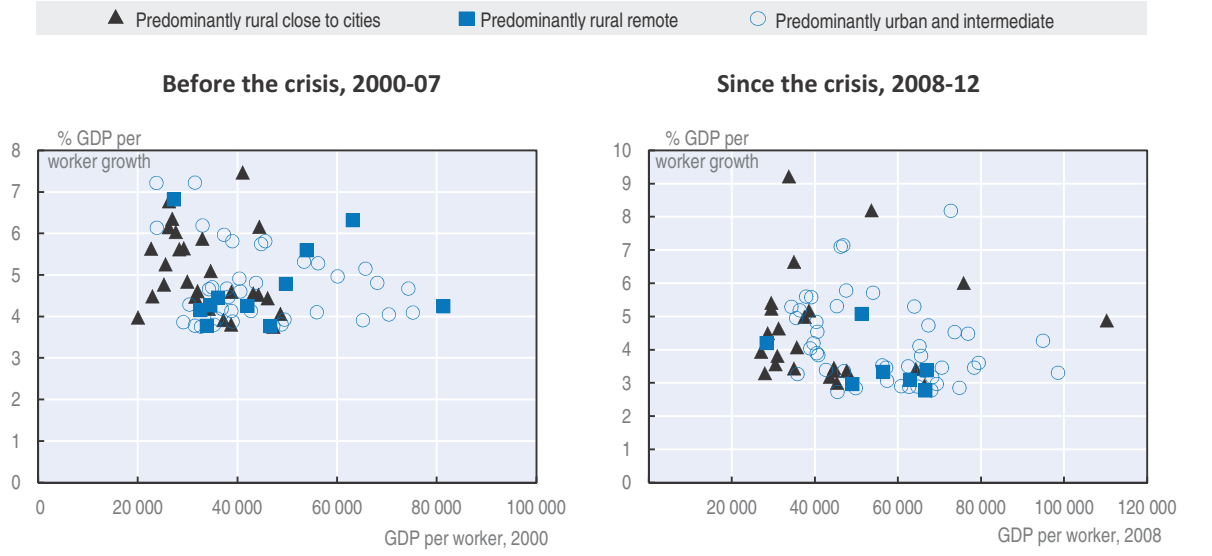
largest cities across the OECD, might require bridging longer distances. Therefore, accessibility is a challenge for all rural areas, but seems to also play a key role in supporting the strong economic performance of rural regions close to cities.

Productivity trends among small (TL3) regions in the OECD

Rural regions are well represented in the top performing regions in terms of productivity growth, particularly rural regions close to cities

Rural regions accounted for half of the top 10% fastest growing OECD regions in terms of labour productivity before the crisis. Even after the onset of the crisis 40% of the fastest growing regions were rural. Before the crisis, rural remote regions and rural regions close to cities were leveraging their "catching up potential". While they initially had relatively low labour productivity levels, they experienced significant productivity growth, in excess of 4% per year, before the crisis (Figure 3.10). Since the crisis, a significant share of rural regions remain among the fastest growing regions, but with a greater shift towards rural regions that are close to cities. Among the 10% fastest growing TL3 regions in the period before the crisis, half are rural regions, overrepresented are rural regions that are close to cities (36%). In the following period, the number of rural regions in the top performing group declined to 41%, with the largest decline occurring amongst rural remote regions, representing only 9% of top-performing regions.

Figure 3.10. **Many rural regions are among the 10% top performing OECD TL3 regions**



Note: TL3 regions are selected according to their labour productivity growth rate before and since the crisis. Labour productivity is defined as real GDP per worker. GDP is calculated at PPP constant 2010 USD, regional employment is measured at place of work.
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).
StatLink http://dx.doi.org/10.1787/888933412100

The resilience of rural regions close to cities may be the result of economies of "proximity". As discussed above, a strong link between urban regions and adjacent rural regions may have been beneficial in times of economic expansion and also in times of decline, given the stronger resilience of urban regions to downturns due to their thicker markets and more diversified economic base. The evidence of the good productivity growth in rural regions close to cities highlights the importance of fostering rural-urban linkages in these regions, especially since the highest levels of labour productivity tend to be in urban

areas. Remote rural regions were fewer than one in ten among the 10% OECD TL3 regions with the highest levels of labour productivity. Since the crisis, no remote rural region belongs to this group of highly productive regions. Conversely, urban regions represent 68% of the most productive regions, underlining the importance of agglomeration benefits.

Increasing productivity is a key strategy for rural regions, but the nature of such increases matters

Increasing productivity, i.e. output per worker, is perhaps the most important way to increase the competitiveness of firms and regions in order to boost worker wages, opportunities and well-being. However, a common mechanism to increase productivity is to substitute capital for labour in the production process. In this case, if output remains constant, there is an obvious need for a reduction in the number of workers, or in the hours worked per worker. Alternatively, a firm that faces declining sales may lay off workers, but this may result in higher output per worker for those who remain, either because employers selectively eliminate the least effective workers or because the fixed stock of firm capital is spread over a smaller employment base, which might result in higher output per worker. Both of these strategies have the obvious benefit of keeping the firm operating, but both lead to negative impacts on the part of the local labour force.

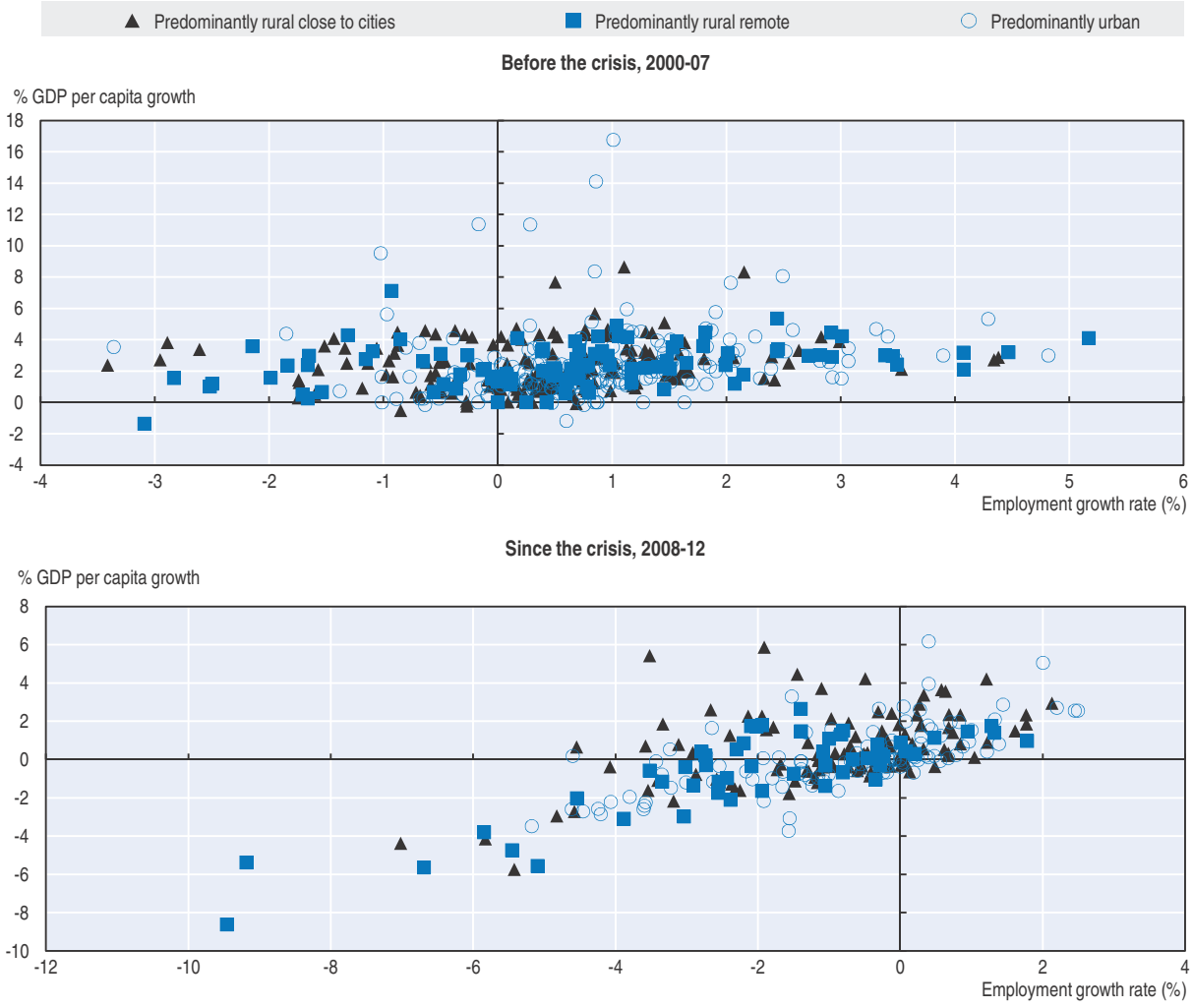
The ongoing modernisation process, whereby labour is substituted for capital, might lead to the so-called "rural paradox" resulting in job losses and regional decline. This refers to the fact that rural regions may boost productivity by "shedding" labour, i.e. by reducing employment. The "paradox", when productivity growth is driven by a reduction of employment, is that productivity growth creates challenges for an inclusive and sustainable path of development, rather than support it. These challenges can be quite important for the mid- and long-term resilience of rural communities. If the laid-off workers leave the region, an already thin labour market is shrinking further, with serious consequences for the development prospects of the region. In this sense, the "rural paradox" could make rural regions become victims of their own success.

In most cases, higher productivity has been associated with increasing employment

The "rural paradox" is however not the rule. Increases in productivity can result in a larger output volume for the improving firm and region, either through increasing market shares, i.e. displacing competing low-productivity, high-cost firms, or from a general increase of industry demand, due to the reduction of prices or increases in the quality of the products. In these cases, higher productivity is associated with an increase in employment.

The analysis over the period 2000-12 reveals no evidence of a general "rural paradox", but since the 2007-08 crisis, rural regions struggle to combine productivity and employment growth. The majority of TL3 regions, including both rural and urban ones, that had positive productivity growth in the pre-crisis period, also display positive growth of both GDP per capita and employment. In particular, 69% of rural regions that are close to cities and 64% of remote rural regions combined productivity and employment growth (Figure 3.11). A positive correlation between GDP per capita growth and employment growth is present both before and since the crisis. The main difference between the two periods is a shift of the whole distribution from a situation of mainly positive growth of GDP per capita and employment to a situation of mainly no growth, exhibited by a clustering of regions around the origin of Figure 3.11 (lower panel). Since the crisis, the number of rural regions experiencing both positive productivity and employment growth dropped to 36, i.e. to only 13% of rural regions, compared to 192 (67%) before the crisis.

Figure 3.11. **For most regions increases in productivity result in greater employment**



Note: Only the sub-sample of OECD TL3 regions with positive labour productivity growth are included in the graphs. GDP is measured at PPP constant 2010 USD, and regional employment is measured at place of work.

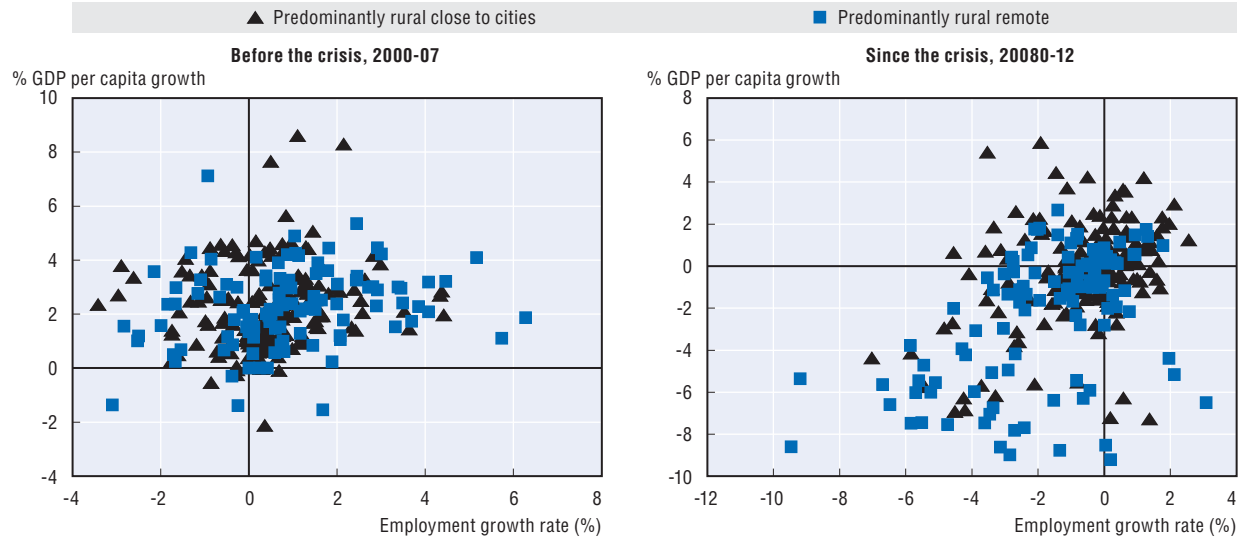
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

StatLink http://dx.doi.org/10.1787/888933412113

Among rural regions, the simultaneous increase of productivity and jobs is more frequent in rural regions close to cities

Among sub-types of rural regions, the majority of dynamic rural regions close to cities are becoming more productive and increasing employment simultaneously. But, the 2007-08 economic and financial crisis led to reductions in GDP and employment. The number of regions with increasing GDP per capita, but decreasing employment is larger than in the period before the crisis (Figure 3.12). Many remote rural regions in particular suffered doubly, both GDP per capita and employment declined following the global shock in 2007-08. Only 6% of rural remote regions displayed both productivity and employment growth since the crisis, compared to 16% of rural regions close to cities. These trends may be consistent with the importance of the tradable sector in rural regions which drove the virtuous cycle of increasing GDP and employment before the crisis and which was badly hit by the collapse of global trade in the years since the 2007-08 shock.

Figure 3.12. **Positive correlation between GDP per capita growth and employment growth in rural regions**



Note: OECD TL3 rural regions. GDP measured at PPP constant 2010 USD.
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).
StatLink *http://dx.doi.org/10.1787/888933412126*

What are the key factors driving these trends?

The accumulation of capital (physical and human) and the pace of innovation are key

In a globalised economy, firms and regions are required to compete internationally, and their competitiveness is strongly linked to productivity. Regional performance is driven by a combination of interconnected factors that include: geography, demography, specialisation, institutions, physical and human capital, and the capacity to innovate (OECD, 2009; see also Chapter 1). Some factors refer to the national regulatory and macroeconomic scenario that may favour the competitiveness of some regions within a country. Others, however, refer to specific regional characteristics. Among them, the most important refer to the accumulation of capital, both physical and human, and the pace of innovation.

The following analysis looks at characteristics that distinguish successful rural regions. Based on available data, it is possible to consider several characteristics of the regional economy, the labour market (employment rate, unemployment rate, and participation rate), demography (population density and elderly dependency ratio), and sectoral specialisation (manufacturing and the tradable sector). In order to include the largest possible number of regions in the analysis, the period before the crisis is limited to the period 2004-07. Both before and since the crisis, successful regions are here defined according to their labour productivity growth rate. The group of successful regions refers to the top 40% of regions in terms of labour productivity growth and the group of unsuccessful regions refers to the bottom 40% of the distribution.

Tradable activities are key drivers for rural productivity growth

What stands out among the characteristics of successful and unsuccessful rural regions is the importance of the tradable sector (Table 3.4 and Figure 3.13). Before the crisis, the contribution to total output produced by the manufacturing sector was 24% in successful rural regions close to cities and 20% in remote rural regions. This is a substantial

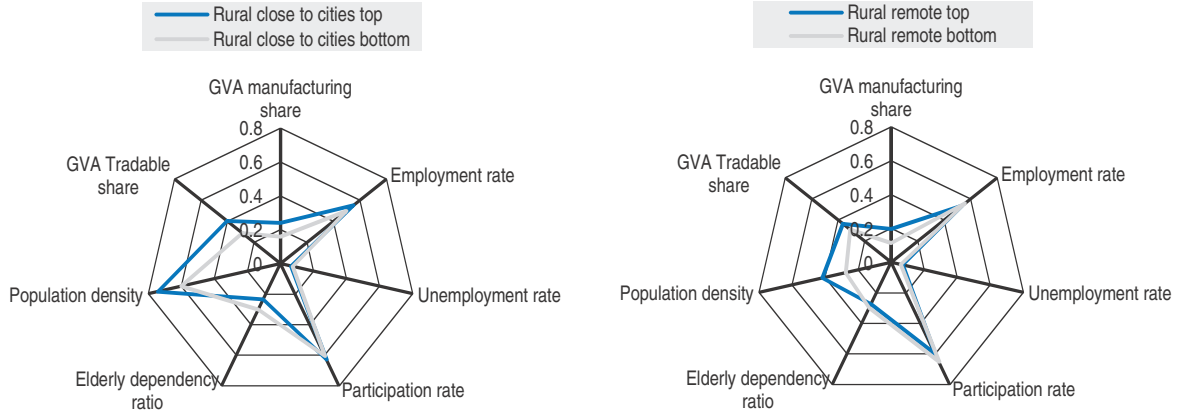
difference to the 16% and 11% contribution of manufacturing in the least successful rural regions. This difference reinforces the results from Chapter 1 that highlight the role of the tradable sector for productivity growth. For rural regions, manufacturing is a major part of this result. But, other tradable sectors also contribute, as is evident in the difference for rural regions close to cities, where 40% of output in successful regions is produced in the tradable sector as opposed to 29% in the least successful regions. This confirms the importance of tradable activities for the overall performance of rural regions, given their

Table 3.4. **Difference in characteristics between fast and slow growing rural regions, 2004-07**

		Predominantly rural close to cities		Predominantly rural remote	
		Top 40%	Bottom 40%	Top 40%	Bottom 40%
Labour market	Employment rate, %	55	50	53	55
	Unemployment rate, %	7	7	7	6
	Participation rate, %	63	60	60	65
GVA share	Manufacturing, %	24	16	20	11
	Tradable sector, %	40	29	36	31
Demography	Population density	74	60	42	27
	Elderly dependency ratio, %	23	30	27	30

Note: The employment rate is the percentage of those employed who are aged 15 and over divided by the working age population (those aged 15-64). The unemployment rate is the percentage unemployed aged 15 and over divided by the labour force (those aged 15 and over). The participation rate is the percentage of the labour force aged 15 and over divided by the population of those aged 15 and over. The gross value added (GVA) share is the measure of goods and services produced in an industry. The tradable sector includes agriculture (A), industry (BCDE), information and communication (J), financial and insurance activities (K), and other services (R to U). Population density is the average number of inhabitants per km^2. The elderly dependency rate is defined as the ratio between the elderly population (aged 65 and over) and the working age population (aged 15-64). The sample includes regions from the following countries: Austria, the Czech Republic, Estonia, Finland, France, Hungary, Ireland, Korea, Sweden, Slovenia, Slovak Republic, and the United Kingdom.
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

Figure 3.13. **The tradable sector drives productivity growth**
Difference in characteristics between top 40% and bottom 40% of rural TL3 regions in terms of labour productivity growth



Note: All indicators represent shares; the scale goes from 0 to 1, except for population density, which is measured as 100 residents per km^2.Top refers to rural regions in the top 40% of growth of GDP per worker in the relevant period. GDP and GVA are measured at PPP constant 2010 USD, SNE2008 classification; employment is measured at place of work. The tradable sectors are: agriculture (A), industry (BCDE), information and communication (J), financial and insurance activities (K), and other services (R to U). The manufacturing sector is a subset of the tradable sector.
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).
StatLink http://dx.doi.org/10.1787/888933412130

lack of a large internal market and lower productivity of the services sector due to lack of agglomeration economies. It suggests that the common emphasis of rural policy on stimulating manufacturing and other tradable sectors has considerable merit.

The large difference in the contribution of tradables is contrasted by small differences in labour market-related characteristics, with some indication of demographic challenges curtailing growth. The difference in employment, unemployment and participation rates between the top 40% and the bottom 40% of regions in both rural regions close to cities and remote rural regions is small, with little discernible pattern (Table 3.4 and Figure 3.13).[6] The elderly dependency ratio, i.e. the total population above the age of 65 compared to the labour force is higher in less successful regions, indicating a potential bottleneck for rural growth. Population density (especially in rural remote regions) is another element of distinction of successful regions. The importance of population density for the economic performance of rural regions suggests that a "minimum" level of density is crucial in order to take advantage of economies of scale and scope for the delivery of goods and services. This is another factor that helps explain why rural regions close to cities tend to outperform rural remote regions. Along with the promotion of the tradable sectors, public policy in rural remote regions should also facilitate connections between isolated communities.

Rural remote regions have suffered more since the financial crisis than rural regions close to cities

The analysis of the period 2008-12 provides some indication of the resilience of rural economies to the global crisis. Sector specialisation seems not to matter for rural regions close to cities. The groups of top and bottom performing regions have both similar shares of gross value added (GVA) in tradable sectors and GVA in manufacturing, 36% and 22%, respectively (Table 3.5 and Figure 3.14). This lack of difference may reflect the drop in international trade and global demand which reduced the importance of the tradable

Table 3.5. **Determinants of productivity growth in rural regions, post-crisis period, 2008-12**

		Predominantly rural close to cities		Predominantly rural remote	
		Top 40%	Bottom 40%	Top 40%	Bottom 40%
Labour market	Employment rate, %	53	52	55	53
	Unemployment rate, %	8	8	8	8
	Participation rate, %	63	61	64	62
GVA share	Manufacturing, %	22	21	13	18
	Tradable sector, %	36	36	29	34
Demography	Population density	69	67	27	36
	Elderly dependency ratio, %	27	28	31	31

Note: The employment rate is the percentage of those employed who are aged 15 and over divided by the working age population (those aged 15-64). The unemployment rate is the percentage unemployed aged 15 and over divided by the labour force (those aged 15 and over). The participation rate is the percentage of the labour force aged 15 and over divided by the population of those aged 15 and over. The gross value added (GVA) share is the measure of goods and services produced in an industry. The tradable sector includes agriculture (A), industry (BCDE), information and communication (J), financial and insurance activities (K), and other services (R to U). Population density is the average number of inhabitants per km^2. The elderly dependency rate is defined as the ratio between the elderly population (aged 65 and over) and the working age population (aged 15-64). The sample includes regions from the following countries: Austria, the Czech Republic, Estonia, Finland, France, Hungary, Ireland, Korea, Sweden, Slovenia, Slovak Republic, and the United Kingdom.
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

Figure 3.14. **The tradable sector has lost importance since the crisis**

Since the crisis, 2008-12

Note: All indicators represent shares; the scale goes from 0 to 1, except for population density, which is measured as 100 residents per km^2. Top refers to rural regions in the top 40% of growth of GDP per worker in the relevant period. GDP and GVA are measured at PPP constant 2010 USD, SNE2008 classification; employment is measured at place of work. The tradable sectors are: agriculture (A), industry (BCDE), information and communication (J), financial and insurance activities (K), and other services (R to U). The manufacturing sector is a subset of the tradable sector.

Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

StatLink http://dx.doi.org/10.1787/888933412147

sectors for growth. This suggests that specialisation in the tradable sectors can boost productivity, but that rural regions remain vulnerable to global crises that affect international trade flows, such as the global shock of 2007-08 and the subsequent period of recession.

Rural remote regions present a different picture, as the most resilient regions are those where the share of GVA from the tradable sector is lower. The results for population density suggest a regional switch in performance, with the most dynamic regions before the crisis losing heavily since the global shock in 2007-08, with the initially poorer performers before the crisis displaying a better resilience since the crisis. Whether this performance is sustainable is another question, as this better performance of the most remote regions, with lower population density, and a lower share of the economy based on tradable sectors, probably reflects a regional economy based on the public sector and financed through transfers from the central government, which are (by nature) less dependent on the business cycle and less responsive to macroeconomic shocks – at least in the short term.

Conclusion

The chapter extends the idea from Chapter 1 that productivity growth can occur in any type of region and focuses on the rural regions of the OECD. To understand rural growth dynamics it is important to first understand how rural regions differ, because differences in conditions affect the potential for growth. To this end, the chapter introduces the idea of a "low-density economy" that highlights the importance small home markets, physical distance and the role of the local environment for rural areas. The OECD is now employing a typology of regions that uses the degree of physical distance from, and the degree of connectivity to, an urban centre as way to categorise three degrees of rurality. Development opportunities and constraints vary considerably among the three categories and these can lead to differences in relative performance.

The empirical evidence highlights the significant growth potential of rural regions, but it also shows that significant differences in performance exist among different types of rural regions. In terms of productivity growth, rural regions close to cities outperformed urban regions, both before and since the crisis. In contrast, the performance of rural remote regions was significantly weaker, underlining the importance of spillover effects between urban regions and adjacent rural regions and the need to better understand rural-urban linkages. This is particularly important when it comes to economic resilience of rural economies, as the main distinguishing feature between successful and unsuccessful rural regions since the 2007-08 crisis seems to be their proximity to urban centres.

Tradable activities appear to be a crucial factor driving the performance of rural regions, as was shown to be the case for all types of regions in Chapter 1. The presence of tradable activities (e.g. agriculture, manufacturing, energy, mining, and financial and business services) represents the main discriminant between the strong and poor performers before the crisis period. For both rural regions that are close to cities and remote rural regions, the strong performers systematically have a higher share of GVA in tradable activities than the underperformers. In addition, amongst remote rural regions, strong performers have higher population density which suggests that reaching a certain degree of density is a critical driver of performance for low-density economies. Boosting productivity in rural regions can also be inclusive and sustainable, as the majority of dynamic rural regions are boosting their productivity while creating jobs.

Rural growth can take place and some rural regions are high performing in terms of productivity growth rates, however, most rural regions do not perform well. In many cases they lack some of the prerequisites for growth outlined above. A role for public policy for rural regions is to help support the establishment of these prerequisites. Chapter 4 takes on the challenge of identifying a rural policy framework – Rural Policy 3.0 – that builds on the ideas of the New Rural Paradigm (OECD, 2006) as a way to increase the economic performance of rural regions so they can make a full contribution to national growth and reduce current levels of spatial inequality.

Notes

1. The EU's urban-rural typology uses a three-step approach to classify the NUTS level 3 regions. Rural areas are defined by: identifying populations in all areas outside urban clusters; classifying NUTS3 regions on the basis of the share of their population in rural areas; and differentiating between predominantly rural and intermediate regions. See: Eurostat (n.d.), *Urban Rural Typology*, *http://ec.europa.eu/eurostat/statistics-explained/index.php/Urban-rural_typology* (accessed 20 June 2016).
2. The method differs from the OECD approach in three key ways: i) it considers not only population density but also the share of agricultural area as a discriminatory variable; ii) the classification is at the administrative unit (municipality or communal level), while the OECD method uses the small region (TL3) level (in this case provinces) with several problems of inner heterogeneity; and iii) the classification is performed within each geographical area (mountain, hill and plain), with the purpose of taking into account different natural and soil endowments.
3. A consequence of this is that estimates of productivity expressed on a per capita basis tend to depict rural regions less favourably than estimates based on a per worker basis.
4. The effects of human capital on productivity can only be assessed for TL2 regions, because of data limitations – indicators of human capital are not available at a lower regional level (e.g. the TL3 level used throughout this chapter). The OECD typology, which classifies regions in predominantly urban, intermediate, and predominantly rural, is not available at the TL2 level. To overcome this

problem and to make inference between educational outcomes and rural characteristics, the present analysis uses an index of rurality which captures the share of regional population living in rural areas. It defines four categories of TL2 regions ranked by regions with the highest share of population living in rural communities to regions with the lowest.

5. Lenders must always consider the potential value of collateral: in a denser economy, it is likely to be higher because deeper markets imply greater opportunities for reallocation of assets. To take a simple example, if a borrower builds a plant in a large city and then goes out of business, the building and grounds are likely to be easier to resell advantageously than if he builds the same plant in a small town, where it may stand empty and derelict for a long period.
6. The descriptive analysis illustrates differences in average characteristics of fast- and slow-growing rural regions that can be indicative of determinants or drivers of labour productivity. Establishing a causal link between the characteristics and growth requires more in-depth analysis.

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ANNEX 3.A1

Test of mean difference

The test of mean difference allows the statistical reliability of the observed differences in the mean values of different types of regions to be established.

Table 3.A1.1. **Test of mean difference**

	GDP per capita			Labour productivity			Population		
	Full	Before	Since	Full	Before	Since	Full	Before	Since
Rural close to cities – rural remote	**0.008*** **	-2.6E-06	**0.022*** **	**0.007*** **	**0.004** **	**0.012*** **	**0.005*** **	**0.006*** **	**0.004*** **
Rural close to cities – urban	0.001	-0.001	**0.004***	**0.004** **	**0.004** **	0.003	**-0.001***	**-0.001***	-0.001
Rural remote – urban	**-0.007*** **	-0.001	**-0.017*** **	**-0.003***	-0.0001	**-0.008*** **	**-0.007*** **	**-0.008*** **	**-0.005*** **

Note: "Full" refers to the whole period of the analysis (2000-12); "before" refers to the period before the crisis (2000-07); "since" refers to the period since the onset of the crisis (2008-12). The word "predominantly" normally precedes all region-type labels.
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), (accessed 18 June 2016).

ANNEX 3.A2

Change in regional statistics

In 2015, the OECD Regional Database was updated according to the 2008 revision of the System of National Accounts (SNA 2008) and, for the real value indicators, a new base year (2010) is considered. Regional indicators are in the process of being updated so that the new series covers a smaller number of OECD countries than the old series. The text uses the new system of accounts (SNA 2008) although it covers a smaller sample of regions, because it provides better international comparison and easier verifiability, as data for the prior revision (SNA 1993) are no longer publicly available.

Nevertheless, in order to lend support and verify the robustness of the results based on the SNA 2008, the same statistics are computed with the 1993 SNA definition, using the larger number of regions available under the previous revision. The main difference between the two series is the absence of regions from Japan, Korea, Italy and Norway in the new series. This is due to a time lag in the updating process and statistics will become available soon. Table 3.A2.1 shows that although the coverage in terms of total number of regions is different (788 compared to 868) the distribution of regions across the regional typologies is quite similar. The comparison also shows that the key results discussed in this chapter are also present in the SNA 1993 data (Table 3.A2.2).

Table 3.A2.1. **Sample size, difference between old and new SNA series**

Region type	SNA 2008				SNA 1993			
	GDP		Population		GDP		Population	
	Number	Share, %	Number	Share, %	Number	Share, %	Number	Share, %
Predominantly urban	223	28	387	22	243	28	352	21
Intermediate	279	35	469	27	318	37	443	26
Predominantly rural (total)	286	36	882	51	307	35	888	53
Predominantly rural close to cities	177	22	466	27	179	21	445	26
Predominantly rural remote	109	14	416	24	123	14	389	23
All regions	788	100	1 738	100	868	100	1 683	100

Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

Table 3.A2.2. **Summary statistics, 1993 SNA series**

	Gross domestic product per capita, %		Gross value added per worker, %		Population, %	
	1995	2011	1995	2011	1995	2011
Predominantly urban	118	121	113	114	223.2	225.3
Intermediate	98	96	99	98	106.4	104.7
Predominantly rural (total)	87	88	90	90	48.0	48.0
Predominantly rural close to cities	84	86	87	89	69.2	71.1
Predominantly rural remote	93	88	96	92	24.4	22.8
All regions	100	100	100	100	100.0	100.0
	Growth in gross domestic product per capita, %		Growth gross value added per worker, %		Population growth, %	
	1995-08	2008-11	1995-08	2008-11	1995-08	2008-11
Predominantly urban	2.40	-0.83	1.73	-0.52	0.72	0.77
Intermediate	2.26	-0.64	1.67	-0.05	0.49	0.55
Predominantly rural (total)	2.44	-0.42	1.76	-0.35	0.32	0.57
Predominantly rural close to cities	2.48	0.26	2.13	-0.28	0.60	0.74
Predominantly rural remote	2.26	-1.58	1.08	-0.66	-0.04	0.35
All regions	2.36	-0.62	1.72	-0.29	0.45	0.61

Note: Data refer to GDP and GVA evaluated at PPP constant 2005 USD, using the SNA 1993 classification. The initial year is 1995 for most countries, when not available the first available year is taken as initial year for the calculation of the growth rate pre-crisis and the average in 1995.
Source: Calculations based on OECD (2015a), *OECD Regional Statistics* (database), *http://dx.doi.org/10.1787/region-data-en* (accessed 18 June 2016).

ANNEX 3.A3

Country Definitions of rural areas

Table 3.A3.1. **Rural definitions in select OECD countries**

Australia	Five "Remoteness classes" defined in the Australian Statistical Geography Standard (ASGS). These remoteness classes reflect differences in access-to-services due to the physical connections between locations. They also provide a summary geographic classification to compare how outcomes vary between large regions that share common characteristics of remoteness.
Austria	Uses the urban-rural typology of the EC-Commission.
Belgium	In Flanders, for spatial development "rural" is defined as a function of existing natural and agricultural structures. In Wallonia, a definition based on EU policy is applied.
Canada	Rural areas include all territory lying outside population centres. Taken together, population centres and rural areas cover all of Canada.
Chile	Chile is in the process of updating its current rural area definition. Presently, rural areas are identified based on three types of municipalities according to population density in census districts.
Czech Republic	Rural areas are presently defined more by sectors. In the EU Rural Development Programme, the rural areas are all areas of the Czech Republic, with the exception of cities, with a population of more than 100 000 inhabitants.
Denmark	A new categorisation of rural areas (municipal level) was made for the EU Rural Development Programme 2014-20. Another definition of peripheral areas (municipal level) was made for the EU Structural Funds 2014-20. In 2013, a new typology of rural and urban areas also distinguishing between areas close to and far away from large urban areas was developed. This typology categorises parishes and was developed for statistical purposes. The indicators used for this categorisation, however, were also the starting point for the above mentioned categorisations relating to EU programmes.
Estonia	No unique official definition for rural areas exists in Estonia. In accordance to the National Regional Development Strategy 2014-20 different types of areas have been distinguished (and to some extent also considered in designing regional development policy incentives), including: centres of labour market areas/daily activity spaces (16); larger urban areas (5 in all out of the 16 centres of LMA-s); hinterlands of the centres of labour market areas (distinguishing closer/peri-urban and remote/weakly interlinked rural hinterlands). Respective spatial distinction is based on LAU2 units (intact municipalities). "Rural" areas are still not defined distinctively in this framework document for the national regional policy. For the EU Rural Development Plan the rural area definition is used, whereby all municipalities and small cities (with inhabitants up to 4 000) are considered as rural. For the 2014-20 programming period there has been some adjustment to the definition, which excludes from the rural area definition the municipalities with an increased number of inhabitants, low unemployment and high average income.
Finland	In 2013, Finland completed a new urban-rural classification, which is based on spatial data sets. See elaboration in the text of this chapter.
France	France uses a wide range of definitions of rural areas depending on the subject/issue.
Greece	Greece uses a number of definitions. It defines rural communities based on population thresholds within administrative boundaries. Distinctions are also made for communities at altitudes higher than 2 000 metres. Greece's regional development policy is based on EU typology and mountainous and disadvantaged areas are defined according to EU Directive 75/268 and its successive Directives.
Hungary	The definition of rural and urban areas is based on the territorial specificities of Hungary. Rural regions are settlements under 10 000 inhabitants. These settlements can be larger in homestead areas. Settlements in the Budapest agglomeration are excluded from this definition. The rural policy and Priority 6 of the EU Rural Development Programme differentiates between developed and underdeveloped rural areas.

Table 3.A3.1. **Rural definitions in select OECD countries** *(cont.)*

Iceland	The characteristics distinguishing regional and rural policies in Iceland are not as clearly identifiable as in other European countries as the districts outside the capital area are densely populated. Urban, regional and rural distinctions are therefore not as clear as in larger countries and merge into one policy area. Regional development and rural development are therefore combined to a great extent and put forward in the Regional Development Policy. The District Master plans provide a further detailed typology of open spaces.
Ireland	In Ireland, rural is defined as all areas outside of the five main cities of Dublin, Cork, Galway, Limerick and Waterford.
Israel	Israel's geography is divided into five texture typologies (or development patterns): urban texture, rural texture, mixed preserved texture, national preserved texture and coastal texture. The typology aims to balance development and preservation (agricultural land and open spaces). Each texture has a series of statutory instructions which regulate the following subjects: maximum size of the locality (with the exception of urban texture), expansion extent of rural localities, average minimum density for residential development, industrial and commercial development and tourism objectives, as well as uses and objectives of inter-urban areas.
Italy	Rural areas are defined and classified according to EU typologies and regional development strategy. Rural areas have been distinguished from urban poles and then have been split into three categories: intensively cultivated and plain areas, intermediate rural areas and, finally, areas with lagging development.
Japan	Rural areas are defined in comparison with urban areas, and sometimes the following classifications are used for policy purposes: i) Densely-inhabited districts (DIDs) and Non-DIDs DIDs are designated in accordance with the prescribed criteria based on statistical data, and defined as areas with a population density of at least 4 000 people per km^2 which are adjacent to each other within a municipality and where the combined population comes to 5 000 people or more. ii) Urban areas and 3 kinds of agricultural areas are classified using a basic classification in order to promote agricultural policies, in the census of agriculture and forestry.
Korea	Defined based on population.
Netherlands	One of the definitions frequently used in the Dutch Policy discourse is a definition of urban city, in five categories ranging from non-urban to very strongly urban. The definition criterion is the address density per km^2, either for postal code areas or at municipal level. Rural areas are then defined as the areas that are non-urban and very little urban, that is areas with fewer than 1 000 addresses per km^2. The classification of surrounding address density based on five categories: • extremely urbanised – 2 500 addresses or more per km^2; • strongly urbanised – 1 500 to 2 500 addresses per km^2; • moderately urbanised – 1 000 to 1 500 addresses per km^2; • hardly urbanised – 500 to 1 000 addresses per km^2; • not urbanised – fewer than 500 addresses per km^2. Urban area: A grid of 500 by 500 metres is considered an urbanised area when the surrounding address density is 1 500 or more per km^2 in the grid. Rural area: Area with a surrounding address density of less than 1 000 per km^2. Other definition: Built area boundary, used for monitoring purposes by the Ministry of Infrastructure and Environment, is a combination of the function of an area and the hardening of the area (pavement, roads, buildings etc.).
Norway	Rural areas (or remote districts) are mostly defined by demography, geography, labour market and standard of living. In terms of demography, emphasis is put on population growth or decline and gender/age composition. In terms of geography, emphasis is put on the degree of centrality (large city versus periphery), population density and accessibility in terms of travel distance to Oslo. In terms of the labour market, emphasis is put on employment growth and work participation rates. Standard of living is measured by income. Rural is also defined in terms of economic zones eligible for either investment aid where population density is a main criterion.
Poland	Rural areas are defined as areas situated beyond the administrative borders of towns, i.e. rural municipalities or rural parts of urban-rural municipalities (*gminas*). For measures under Priority 6 devoted to the development of rural areas (basic services and village renewal) support is limited to rural areas and towns below 5 000 inhabitants and in LEADER towns not exceeding 20 000 inhabitants. Other measures of the Rural Development Programme are not exclusively directed at rural areas. There is no distinction between rural areas close to urban areas and the remote ones in the Rural Development Programme.
Portugal	There are multiple classifications for different purposes – e.g. spatial planning, statistical purposes or rural policies. Rural policies are based on EU typology.
Slovak Republic	There is one official definition of "rural area". There are no distinctions between rural areas close to large urban areas and those that are more remote.
Slovenia	Rural policies are based on EU typology, with some special definitions for certain measures.

Table 3.A3.1. **Rural definitions in select OECD countries** *(cont.)*

Spain	Multiple definitions co-exist. ● National Institute of Statistics – rural: municipalities less than 2 000 inhabitants ● Ministry of Agriculture, Food and Environment – Rural: municipalities less than 100 inhabitants per km^2 and less than 30 000 inhabitants in total. Distinctions are made between rural areas close to urban areas and remote areas, based on commuting criteria. ● According to Regulation (UE) 1305/2013 (Article 50), each managing authority defines the rural area for each RDP.
Sweden	There are multiple definitions of rural areas used in Sweden. In general they differ from definitions made by OECD and EU while Swedish categorisations are made on municipality level or even smaller units. It means that big areas that OECD defines as rural in the Swedish definitions are partly urban and partly rural. It has also been important to develop definitions that make distinctions between rural areas close to urban areas and those that are more remote. This perspective is also important in the current work of the committee on a revised rural policy. Within the National Rural Development Programme for the period 2014-20 a specific definition of rural areas has been developed. This definition sets out the framework for where support from the programme is eligible.
Turkey	There are two official definitions in Turkey for rural areas. Both are used also for territorial statistics by TurkStat. The first is based on a population threshold of 20 000, which establishes that settlements having a population of less than 20 000 are considered as rural areas. The second is based on administrative units which makes a division among urban cities (i.e. province and district centres) and rural (villages) settlements. The former is accepted as the target area for the rural policy implementation. The classification of the rural settlements according to distance is expected to be considered in the production of the new rural definition. The Tenth Development Plan (2014-18) points out that during the design of place-based rural development policy implementation the specific conditions of the close, intermediate and remote rural settlements will also be considered. There is no specific or formal definition for remote rural areas.
United Kingdom	There are three official definitions of what is rural, used for statistical purposes. Broadly speaking, rural areas are defined in: ● England and Wales as settlements with less than 10 000 resident population ● Scotland as settlements with less than 3 000 resident population ● Northern Ireland as settlements with less than 1 500 resident population All of these rural and urban definitions include more detailed classifications that differentiate areas based on how close a rural area is to a larger urban settlement (proximity calculations).
United States	The Agricultural Act of 2014 (Farm Bill) makes areas with a population of up to 35 000, and rural in character, eligible for USDA Rural Housing Programs, with certain provisions.

Source: OECD (2015b), "OECD Regional Outlook Survey", GOV/RDPC(2015)8, OECD, Paris.

PART II

Chapter 4

Rural Policy 3.0

This chapter describes the Rural Policy 3.0. *It argues that a key objective of rural policy should be to increase rural competitiveness and productivity in order to enhance the social, economic and environmental well-being of rural areas. Within this approach, policies should focus on enhancing competitive advantages in rural communities and should draw on integrated investments and the delivery of services that are adapted to the needs of different types of rural areas. The* Rural Policy 3.0 *describes a partnership-driven approach that builds capacity at the local level to encourage participation and bottom-up development. Practices from select OECD countries are drawn on to illustrate this approach.*

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.

Key messages

- A key objective of rural policy should be to increase rural competitiveness and productivity in order to enhance the social, economic and environmental well-being of rural areas. This in turn will increase the contribution of rural regions to national performance.
- Rural communities will not excel in all areas. They should focus on enhancing economic opportunities based on their competitive advantages, given their location, natural endowments, human capital and connectivity to other places.
- Public policies should focus less on providing subsidies, and more on integrated investments and public services that are geared to local needs. Such policies – territorial and sectoral – are most effective where they are co-ordinated and aligned along similar goals and objectives.
- Rural governments and other actors have much to gain from collaboration with one another. From procurement to service delivery and economic development, the pooling of resources and ideas across communities has a much greater impact than stand-alone actions. Such arrangements may take the form of: *i)* rural-rural partnerships; *ii)* rural-urban partnerships; or *iii)* government with non-profit or business partnerships.
- Strong community capacity is needed to understand local dynamics in rural areas and act on them. Implementing public policies that strengthen the capability of community actors is critical to fostering the success and resilience of rural areas.
- Effective rural policy recognises that development opportunities and constraints in rural regions are different than those in urban ones, and can vary across the types of rural regions. Rural policies are thus distinct from, but complementary to, urban development approaches.

Introduction

Most OECD countries recognise that rural policy has moved beyond farming and they now define a broader set of issues and activities as being central to rural development. The 2007-08 global crisis, and the ensuing fiscal crises in many countries, put pressure on national budgets. Public policies are now focussed on cutting expenditure while promoting economic growth (competitiveness), and rural policy is no exception. In addition, several countries have adopted aspects of multi-level governance in their rural policy. All countries see the benefits from better co-ordination of activity by national government departments or ministries, but struggle to find effective ways to achieve this.

Governance systems challenge the implementation of effective rural development policies and also limit the capacity to capitalise on complementarities. While multiple levels of government are involved in rural policy in all OECD countries, it is clear that the idea of a bottom-up approach is not something that comes easily to national governments.

In most OECD economies, national governments continue to play the dominant role in rural development and often define the menu of options available to intermediate and local levels of government. Moreover, funding for local governments from national sources is generally tied to specific purposes, and local governments have only limited abilities to raise additional revenue, especially given the financial crisis. Rural development policy is still relatively marginal in national policy frameworks and it proves difficult to use it to guide and organise policy complementarities. For instance, national health care systems would benefit from receiving guidance from rural development policy. This holds true for other key national policies such as education, innovation, etc.

The OECD has long advocated for a territorial approach to rural development that takes into consideration the competitiveness of rural areas. This chapter focusses on the implementation of this approach through the Rural Policy 3.0, offering potential lessons for countries in adopting or strengthening their approaches to rural development. While this approach bears higher transaction costs due to the large number of stakeholders involved, it also requires more information about available investment opportunities at the subnational level. This has proven potential to foster more resilient rural development that is strongly linked to community strengths and aspirations.

The Rural Policy 3.0

The New Rural Paradigm, endorsed in 2006 by OECD member countries, proposed a conceptual framework that positioned rural policy as an investment strategy to promote competitiveness in rural territories. This approach represented a radical departure from the typical subsidy programmes of the past aimed at specific sectors. The magnitude of this shift was not fully appreciated at the time and is de facto being implemented among member countries in the current context of low growth and limited resources brought about by ongoing processes of fiscal consolidation.

The Rural Policy 3.0 is an extension and a refinement of this paradigm which has been instrumental in starting a process of rethinking rural development practices across OECD countries (see Box 4.1 for further discussion). Where the New Rural Paradigm provided a conceptual framework, the Rural Policy 3.0 focuses on identifying more specific mechanisms for the implementation of effective rural policies and practices.

Box 4.1. **The evolution towards the Rural Policy 3.0**

In 2015, the Rural Policy 3.0 was endorsed by delegates of the 10th OECD Rural Conference, "National Prosperity through Modern Rural Policy", in Memphis, Tennessee (19-21 May 2015)[1]. Almost a decade on from the adoption of the New Rural Paradigm, the time was ripe to revisit the framework.

Its elaboration has been informed in part by the OECD Rural Policy programme and 12 National Rural Policy Reviews, to date, which cover a wide spectrum of national conditions and rural regions. Given that each review was conducted with the New Rural Paradigm as a metric, they contain valuable information on the degree of adoption of this paradigm by member countries.

1. For more information see *https://www.oecd.org/rural/rural-development-conference/*.

Box 4.1. **The evolution towards the Rural Policy 3.0** *(cont.)*

In addition, a number of rural thematic reviews have also provided a fresh perspective on the changing nature of rural economies and the opportunities and constraints facing rural development. Thematic reviews are also tools that can facilitate international policy dialogue and mutual learning. The most recent thematic rural reviews focus on:

- interactions between urban and rural regions (*Rural-Urban Partnerships: An Integrated Approach to Economic Development*, OECD, 2013a)
- identification of key factors and bottlenecks for economic growth (*How Regions Grow*, OECD, 2009; *Promoting Growth in all Regions*, OECD, 2012a)
- delivery of services in rural areas (*Strategies to Improve Rural Service Delivery*, OECD, 2010)
- links between renewable energy deployment and rural development (*Linking Renewable Energy to Rural Development*, OECD, 2012b).

Rural Policy 3.0 is a mechanism to help national governments support rural economic development. It reflects several important changes in rural development. First and foremost is that rural regions have evolved into far more diverse and complex socio-economic systems. Second, in general, all government policies are now less isolated and are held to more rigorous accountability standards. Third, with better data and analysis, it is possible to have a greater understanding of rural regions and move away from the presumption that all rural places are alike. Table 4.1 below summarises this approach.

Objectives for rural policy have become multidimensional and focus on well-being broadly defined. The initial objective for rural policy was to bring the income levels of rural dwellers closer to those of urban ones. Now the objective focuses on delivering well-being to rural dwellers comparable to that which is attainable in urban areas, even though different aspects may be emphasised. In general, quality of life is seen as having: i) economic dimensions, where household income hinges on employment in firms that are productive and competitive; ii) social dimensions where households have access to a broad set of services (that may be delivered in different ways than in urban places) and promoting a local society that is cohesive and supportive; and iii) a local environment that provides a pleasant place to live. The balance among these elements may vary considerably across the spectrum of rural regions.

Table 4.1. **Rural Policy 3.0**

	Old Paradigm	New Rural Paradigm (2006)	Rural Policy 3.0 –Implementing the New Rural Paradigm
Objectives	Equalisation	Competitiveness	Well-being considering multiple dimensions of: i) the economy, ii) society and iii) the environment
Policy focus	Support for a single dominant resource sector	Support for multiple sectors based on their competitiveness	Low-density economies differentiated by type of rural area
Tools	Subsidies for firms	Investments in qualified firms and communities	Integrated rural development approach – spectrum of support to public sector, firms and third sector
Key actors & stakeholders	Farm organisations and national governments	All levels of government and all relevant departments plus local stakeholders	Involvement of: i) public sector – multi-level governance, ii) private sector – for-profit firms and social enterprise, and iii) third sector – non-governmental organisations and civil society
Policy approach	Uniformly applied top down policy	Bottom-up policy, local strategies	Integrated approach with multiple policy domains
Rural definition	Not urban	Rural as a variety of distinct types of place	Three types of rural: i) within a functional urban area, ii) close to a functional urban area, and iii) far from a functional urban area

The policy focus is evolving away from sectoral support towards helping to build conditions favourable for a low-density economy. The initial rural policy approach was to support incomes in a single natural resource sector – mainly farming, or in some regions fishing, forestry or mining. Now rural policy is moving towards operating in the context of a low-density economy, where the fundamental economic structure and its growth opportunities follow a considerably different logic than is the case in urbanised regions. Recognition that the rural economy is fundamentally different leads to the need for a new set of policy prescriptions that reflect differences in opportunities for growth and differences in the factors that constrain growth.

This new way of understanding rural policy demands implementation through an upgraded set of policy tools. Subsidies for farmers and other kinds of firms were the mainstay of rural policy in past years. Now, a more comprehensive approach is being introduced. Investments that offer a positive return to society should be the main instrument for rural development. But, in situations where markets fail, due to incomplete information, insufficient competition or due to the lack of provision of public goods, governments may have to be more directly involved in order to ensure that well-being in rural areas is improved. In particular, support for social enterprise or other aspects of the voluntary sector is increasingly recognised as a useful way to enhance rural communities.

The number and kind of participants involved in the rural policy process have increased over time. The main policy actors of rural policy in the past tended to be national government ministries of agriculture that delivered support to farmers and farm organisations that lobbied government in support of farmers. Now the number and range of participants is much larger. Governments are still involved, but now multiple levels of government play a role as do a broad range of ministries through a multi-level governance structure. Individuals and firms, including farmers, are still engaged but it is now all the people and enterprises in the region who are stakeholders in the development process. Finally, the important role of the voluntary sector is recognised, including large issue-oriented NGOs and local service organisations that provide services where firms and government fail to act.

Policy approaches have broadened from a uniformly applied top-down approach, towards an integrated rural development focus. Initially rural policy was designed and implemented by a national ministry with little input from rural recipients. Policy was also structured to provide essentially the same level and type of support to all recipients. Over time rural policy has evolved to include multiple domains, such as, providing: support for people in the form of better services and skill development; support for local governments through fiscal equalisation and grants for infrastructure; and protection of the environment. The intention is that these various policy thrusts should be co-ordinated and mutually reinforcing, and the mix between them should be rebalanced to meet differing local needs, even though this has proved to be difficult in practice.

The definition of what is a rural area now recognises that proximity to urban areas is a key factor in characterising rural regions. While "rural" was initially conceived as being "not urban" in many OECD countries, there is now broad recognition that rural is a complex phenomenon. A useful way to identify types of rural is to look at the degree of physical distance between rural and urban places and the degree of linkages. Using this approach, the OECD has developed a typology that sorts rural territories into those that are embedded in a functional urban area, those that are outside of a functional urban area but close to one, and those that are remote from a functional urban area (see Chapter 3). This latter category can be further sub-divided into uniformly settled and sparsely settled regions.

Objectives: Increasing well-being in rural areas

Employment in agriculture continues to decline across OECD countries. It is not the main source of rural jobs and incomes anymore (OECD, 2009a: 53). Further, as Chapter 3 discussed, several rural regions are found to perform in line with urban ones in terms of economic growth. These trends have in turn led to changes in the way that governments think about the objectives of rural policy. The shift towards competitiveness reflected a desire to valorise the opportunities that are present in rural areas, including the better use of local assets in non-farm activities (e.g. tourism), valorising tradable activities, promoting rural firms, and implementing comprehensive strategies around natural resource activities.

This broader well-being agenda does not abandon the competitiveness agenda, rather it recognises that competitiveness is a necessary, but not a sufficient, condition for well-being. In the current context of low economic growth and loss of jobs in the aftermath of the global financial crisis, improving the competitiveness of rural firms and creating jobs has come to the forefront of the rural agenda in many countries. Notwithstanding this fact, governments are starting to focus on delivering different dimensions of well-being for rural dwellers including the social and the environmental along with economic opportunities. Measurements of the economic conditions of a society are important, but they do not give a full picture of the living conditions that people experience. For instance, a society's overall wealth may rise, but inequalities can persist, leading to prolonged poverty and deteriorating health outcomes for many (Atkinson, 2000). Further, countries may experience rapid economic growth, but deteriorating environmental quality that negatively affects quality of life, and particularly health.

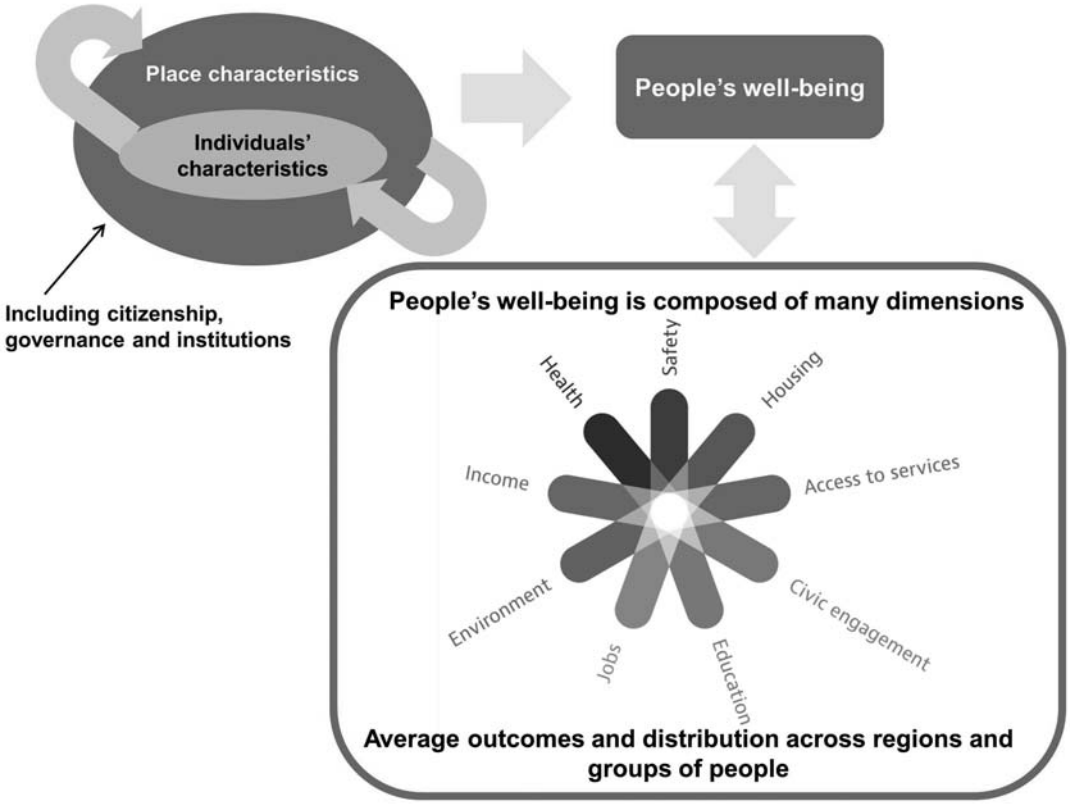
The concept of well-being has arisen as a way to capture these dynamics. It links quality of life and material conditions to the goal of sustainable well-being over time. It is a multidimensional concept that is grounded in an understanding that economic conditions should be viewed as part of broader social and environmental systems and conditions. Although there are many debates on the measurement and operationalising of the concept of well-being (Adler and Seligman, 2016), the OECD has supported this work by developing a *Framework for Measuring Well-Being and Progress* (Figure 4.1). It encourages governments to think of natural, economic, human and social capital as interconnected and as such, supports the idea of policy complementarity.

Rural areas perform well on several dimensions of well-being. The OECD's well-being indicators show that the urban dimension is not necessarily associated with higher levels of well-being. Rural dwellers can count on better environmental conditions and more affordable housing with performance measures such as access to jobs and income in line with those of cities (OECD, 2016a). Two elements of well-being: i) competitiveness and productivity, and ii) the environment, are key priority areas for OECD governments, but they are not without their contradictions.

Competitiveness and productivity

In order for the people in a rural community to remain employed, local firms must be competitive in either local or export markets. That is, they must be able to match the prices and quality of competing firms. Skills and productivity are major sources of strong, inclusive and sustainable growth (OECD 2015a). It is the case that more productive workers tend to earn higher wages than those with lower productivity because they are more valuable to firms in producing more or better output. Workers with higher skills tend to be more productive than are workers with lower skills. This means that there is a strong

Figure 4.1. **OECD framework for well-being**



Source: OECD (2016a), *OECD Regions at a Glance 2016*, *http://dx.doi.org/10.1787/reg_glance-2016-en*.

connection among: the competitiveness of firms, the productivity of workers, incentives to invest in skill development and economic well-being (i.e. income levels). What is not addressed in this relationship are broader measures of quality of life and their implications for workers' wage demands and firms' competitiveness.

Governments should work with rural regions on broad-based strategies to lift productivity

Productivity is particularly crucial for rural regions because they tend to not have a large domestic (home) market, and therefore need to export. For places that do not have an outstanding resource endowment, working to improve productivity is essential. Tradable activities are a major component of economic growth and productivity in rural areas (see Chapter 3). Rural regions also tend to compete in different niche markets than urban regions and given the presence of strong rural-urban linkages these activities are highly complementary.

Increases in productivity tend to be associated with increases in material well-being (see Chapter 1). For example, a recent panel study of subjective and objective well-being in Germany and Britain found that employed persons exhibit the highest levels of well-being according to all measures in both countries (Muffels and Headey, 2013). Thus, enhancing productivity is important in order to support the well-being of rural communities and their resilience over time. A recent forecasting exercise by the Economist Intelligence Unit finds that, by promoting rural development, governments have the potential to unlock significant economic growth and fundamentally change the structure of the economy:

under the right conditions, rural development has the potential to unlock USD 2 trillion of annual rural output across the globe (The Economist, 2015). Such growth has the potential to alleviate poverty and eliminate extreme poverty, increase food security and set communities on the path to sustainable development.

Governments can help increase rural competitiveness and productivity through hard and soft infrastructure investments, well-targeted sectoral policies and effective regulation, among other measures (see Chapters 1 and 2). The United Kingdom's strategy to boost productivity in rural areas is illustrative of such a multi-faceted approach (Box 4.2). Understanding the productivity dynamics of rural firms can help to structure more effective support (Box 4.3 shows an example from the United States).

Box 4.2. **The United Kingdom's strategy to boost rural productivity**

In recent years the UK government has placed a renewed focus on boosting productivity in rural areas. This is driven by a number of trends which point to the potential of strong rural productivity gains. For example, unlike many OECD countries, the UK is experiencing net migration from urban to rural areas.[1] There has been a growth in knowledge intensive businesses and the number of flexible and home-working arrangements has expanded rural employment opportunities (Centre for Rural Economy, 2011; OECD, 2011). Rural areas make a substantial contribution to the UK economy; for example, they currently account for 16% of GVA, 16% of employment and 26% of businesses in England (Government of the United Kingdom, 2016). Moreover, the UK's rural economies are increasingly diversified – in general, their structures look much like that of urban ones.

Despite these positive trends, productivity challenges remain. On an output per worker basis, UK productivity was 20 percentage points below the average for the rest of the G7 in 2014 and on average productivity in rural areas is lower than that of urban ones in the UK.[2] The UK Treasury has identified productivity as the main driver of economic growth at the national and local levels with skills, investment, enterprise and competition as the main drivers of productivity increase (OECD, 2010a: 79-80). To address this priority the UK government has adopted a number of new measures to boost productivity:

- *Ensure that rural areas are fully connected to the wider economy both in terms of ICT and transport connections.* The government has committed to delivering superfast broadband of at least 24Mbps to 95% of UK households and businesses by 2017. It is also working with the communications industry to extend permitted development rights for taller mobile masts in order to improve mobile communications coverage. The strategy further entails a major roads and rail investment programme and support for small airports to connect rural communities.
- *Support a highly skilled rural workforce.* This includes expanded funding for schools, particularly for those that have been identified as underperforming. The government is also increasing apprenticeships in rural areas with a particular focus on such areas as food, farming and tourism.
- *Create strong conditions for rural business growth.* The UK government has created a number of Enterprise Zones which include capital grants and business discount rates (similar policies have been adopted by the devolved administrations of Scotland and Wales) (Ward, 2016). Zone development in smaller towns, districts and rural areas was a stated aim of this strategy. The government is also reviewing the regulatory burden faced by rural businesses and plans to introduce a fast track planning certificate process for developments.

Box 4.2. **The United Kingdom's strategy to boost rural productivity** *(cont.)*

- *Making it easier to live and work in rural areas*. A 2011 OECD rural policy review of England found that there is a longstanding housing shortage in rural England that is exacerbated by housing policy and land use policy (OECD 2011: 208). To support new housing developments, the government will make it easier for villages to establish neighbourhood plans and allocate land for new homes, and support incremental expansion. In order to support families with young children, the government is looking to support the delivery of 30 hours of free childcare to working parents and the introduction of Tax Free Childcare.
- *Greater local control over economic development*. The government is committed to empowering local leaders to drive growth through policies anchored in the specific needs of local areas. This entails the adoption of new devolution agreements, the first of which was signed with Cornwall.

The UK Government productivity plan suggests a multifaceted approach – one that builds on traditional investments in communities such as better transport connections, but links this to much broader strategies that include a focus on skills, the regulatory environment and critically, support for workers through such measures as child care. The strategy also particularly points to the importance of involving communities in economic development and devolving power to them to be meaningful actors in the process.

The UK Government estimates that – were the gap between productivity in rural areas and productivity in urban areas (excluding London) to close over the next ten years – annual productivity growth for rural areas would average around 2.5%.[3] Based on these projections, GVA per worker for rural areas could increase from around GBP 40 234 (2012) to GBP 53 777 in real terms by 2025, leading to increased real earnings in rural areas. Such expanded economic opportunities could also influence rural demographics; current rural population projections suggest a potential increase of 6% between 2015 and 2025 (Government of the United Kingdom, 2015: 9). Therefore, such policies matter not just in economic terms, but also for the sustainability of rural communities.

Notes:

1. In 2011/12 there was net population migration to predominantly rural areas of around 46 000 and net migration to predominantly urban areas of 68 000, with net migration from predominantly urban to predominantly rural areas of 40 000 people. (Statistical Digest of Rural England, 2014. Based on 2001 ONS classification of rural and urban areas).
2. Productivity in rural areas is currently around 83% that of urban areas including London and 94% of urban areas excluding London (Government of the United Kingdom, 2015: 9).
3. This assumes annual average productivity growth of 1.9% for urban areas based on the Office for Budget Responsibility's latest projections for UK productivity growth overall (Government of the United Kingdom, 2015: 9).

Source: Centre for Rural Economy (2011), "Rural Economies: Incubators and Catalysts for Sustainable Growth; Government of the United Kingdom (2015), "Towards a one nation economy: A 10-point plan for boosting productivity in rural areas", *www.gov.uk/government/uploads/system/uploads/attachment_data/file/454866/10-point-plan-rural-productivity-pb14335.pdf* (accessed 20 June, 2016); OECD (2011), *OECD Rural Policy Reviews: England, United Kingdom 2011*, *http://dx.doi.org/10.1787/9789264094444-en*; Government of United Kingdom (2016), *Statistical Digest of Rural England*, *www.gov.uk/government/collections/statistical-digest-of-rural-england* (accessed 20 June, 2016); OECD (2010a), *Strategies to Improve Rural Service Delivery*, *http://dx.doi.org/10.1787/9789264083967-en*; Ward, M. (2016), "Enterprise Zones. UK House of Commons Library", *Briefing Paper*, No. 5942, 12 January 2016, *http://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN05942* (accessed 20 June 2016).

For more information see: Government of the United Kingdom (2015), "Towards a one nation economy: A 10-point plan for boosting productivity in rural areas", *www.gov.uk/government/uploads/system/uploads/attachment_data/file/454866/10-point-plan-rural-productivity-pb14335.pdf* (accessed 20 June 2016).

Box 4.3. **Rural SMEs and innovation in the United States**

As a whole, the rural economy in the United States is more dependent on small and medium-sized enterprises (SMEs) than that of its urban counterparts. This is particularly true with respect to job creation. Worryingly, there is a declining trend in the share of SMEs that are five years or younger as a share of all firms.

In order to keep track of these dynamics and better target support to SMEs, the US Department of Agriculture has created a Rural Establishment Innovation Survey. It is the first nationally representative self-reported innovation survey for Rural America. The survey of 11 000 establishments with 5 or more employees in the tradable sector oversampled rural establishments, but allocated a quarter of the sample to urban establishments for comparison.

It was found that the size distribution is very similar within sectors, but that rural areas are more dependent on SMEs overall. It was further found that long-term job creation is challenged by diminished displacement of main job creating engines. Finally, the urban innovation advantage appears to be compositional – SME substantive innovation rates are similar in innovation intensive industries.

Source: Wojan, T. (2015), "Rural SMEs and Innovation in the United States", Economic research service/USDA, paper presented at the 10th OECD Rural Development Conference.

Growth in rural areas tends to be driven by urban demand for resources and amenities and tends to depend on a flow of new technologies from urban areas. This is in contrast to urban economies that benefit from increasing returns to scale, a diverse home market, dense networks and strong competition effects. Rural firms are more likely to have small-scale innovation driven by firms' needs and local monopoly power – not variety – which allows firms to start up and survive in such environments. For many rural firms, growth is linked to their ability to find export markets, as opposed to home markets. Given these conditions, high productivity is vital for growth because rural exporters have to absorb higher transport costs. Rural firms benefit from some lower costs (e.g. greater availability and lower cost of land), but in other respects, they pay a distance premium. Thus it can be said that in general, it is the attributes of specific firms (management capacity, marketing skills) in combination with the characteristics of the local economy that determine regional growth (see Box 1.1, Chapters 1 and 3).

Given this, public policies have an important role to play in supporting rural firm connectivity – including transport connectivity, the flow of ideas, access to export markets and access to capital. Rural policies have long supported rural development through infrastructure connections (e.g. transport and ICT infrastructure) and while this remains important, other elements of connectivity also deserve attention such as helping firms connect to export markets and capital in order to grow their business. The modern rural economy requires a high level of capital investment; however rural regions often face an absence of equity investors.

Rural firms also tend to struggle to find the right skills for their needs or the right training opportunities to continually upgrade them. As smaller places, rural areas have a smaller labour market and less diversity across the types of skills available. Educational opportunities also tend to be more limited and highly skilled individuals tend to be trained in urban locales or they tend to migrate to them in order to take advantage of a broader range of opportunities and a bigger labour market. Public policy has an important role to

play in working together with employers, employees, jobseekers and training institutions to ensure access to high quality and responsive training and skills upgrading that support lifelong learning. It is critical that employers take an active role in supporting such skills development, rather than passively expecting employees to have the skills they seek. In other words, mobilising skills requires multi-partner, engaged and ongoing efforts to support businesses and workers to be successful. For the rural economy to modernise, there must be a significant increase in the average skill level (Figure 3.8, Chapter 3).

Quality of life is also important in retaining and attracting skilled workers and enhancing competitiveness

In making employment choices, workers look at both wages and the environment in which they will live, among other factors. When some places are more desirable locations than others, it is possible that workers will demand a wage premium to accept a job in the less desirable location, just as they may require a wage premium for a hazardous job. Clearly, the wage demanded by the worker cannot exceed the value of their labour to the employer if they are to be employed. But, from the worker's perspective, there can be a trade-off between compensation levels and the local quality of life. In addition, highly productive workers have more scope in demanding higher wages to accept jobs in undesirable locations because they have a greater range of employment alternatives. Conversely, employers of software engineers in San Francisco, for example, have an easier time attracting talent than do similar employers in Minnesota, because San Francisco is seen as a more desirable location.

Firms in challenging locations typically pay high wages to compensate workers with needed skills for a relatively unattractive environment. For example the large iron ore mine at Kiruna, the northernmost town in Sweden, produces the vast majority of all the iron ore mined in Europe. Without the mine the viability of the town would be in question and it would certainly shrink in size. Kiruma has less than 20 000 residents and is located north of the Arctic Circle with limited connections to other places. In principle, this should be a place that faces challenges in attracting workers, but because the mine is extremely efficient, it can pay high wages and the community has worked hard to improve the local quality of life, making it less difficult to attract workers to the locale.

It is this exceptionally high rate of productivity, combined with a high quality natural resource, which allows firms to afford these wages and remain competitive. This is the case for the aforementioned mine in Kiruna. It explains the otherwise difficult-to-understand observation that in some small remote rural regions there are firms with very high levels of productivity. Typically such firms specialise in the extraction of highly profitable natural resources that can only be produced in similar locations in other countries.

On the other hand, rural places with a high quality of life can compensate for lower wages and attract and retain workers and their families. It is also observed that in many rural areas, wages are relatively low, but outmigration is less than might be expected and in some places there is even in-migration – or "counterurbanisation".[1] One explanation for this might be driven by the fact that rural regions have a lower cost of living and a high number of natural and cultural amenities, suggesting that households chose to accept lower wages and a high quality of life provided by their high amenity environment (Gosnell and Abrams, 2011; Ward and Brown, 2009). Take for example Bend, Oregon. It is a small city in central Oregon that had a population of 52 000 in 2000 but had grown to over 83 000 by 2013, despite a significant decline in the logging industry, which had been the mainstay of the local economy. Logging was replaced by a wide range of outdoor sport activities:

mountain biking, rock climbing, white water rafting, camping and skiing. These activities result in jobs that pay less than work in the traditional logging industry, and yet, the population has grown, not shrunk.

These two extreme cases suggest that, in rural areas where the natural environment is a major factor in quality of life, employment decisions can reflect both wage levels and local amenity benefits. For firms, this trade-off by workers can be either beneficial or problematic. Firms in high amenity areas may survive, even though they are relatively inefficient because they can pay a lower wage. Conversely, firms in undesirable locations have to be highly productive in order to attract and retain workers by paying them high wages. For these latter firms, high levels of productivity are important to offset both distance from markets and high wage bills.

Rural communities cannot do much to change their natural resource endowments but they can work to make better use of them. This involves thinking about how to repurpose natural assets that have lost their original functions and requires vision, investment and a marketing plan. There are numerous examples of places that have successfully done this. Forests that are no longer logged can be turned into mountain bike trails, as was done in Bend and in central Scotland. Commercial fishing harbours can be used for recreational boating and sight-seeing. Small towns near urban areas that have lost their manufacturing base can work to attract retirees to occupy their stock of relatively low cost, high quality housing. In these instances, the average wage may have declined, but the quality of life improvements can compensate for the drop in income.

Rural regions also need to consider how the combination of environmental, social, economic and cultural attributes combine to create a good quality of life and sense of local identity. This is particularly important for retaining and attracting families and young people who can address workforce needs. There are a number of different dimensions to this. The first is continuing to improve the efficiency and quality of basic social infrastructure such as schools, health services, roads and public transport. The second is about considering how local economic development strategies can be adapted to also strengthen local quality life (and vice versa). For example, tourism is a good case in point as arts and culture, local events, festivals, and tourism infrastructure can both improve local quality of life and help attract visitors. The third is involving communities in regional planning and priority setting to ensure that the interests and perspectives of young people, women, the elderly, indigenous communities and other groups are properly considered.

The environment

Rural areas are front-and-centre in the shift to a low carbon economy

Boosting productivity and competitiveness is important for the sustainability of rural areas, however a well-being lens emphasises that not all forms of economic growth are desirable. Industries that damage human health and the environment should be reduced, and eventually, eliminated. Correspondingly, it should be a goal of public policy to reduce support for unsustainable and polluting industries while encouraging development in environmentally sustainable ones. The fossil fuel industry is a case in point. Governments of OECD countries and key emerging economies are spending an estimated USD 160-200 billion annually to support the consumption and production of fossil fuels (OECD, 2012b). In order to align policies for a low carbon economy, such support needs to be removed with investments shifted to renewable energy. As Nordic experiences demonstrate, the bioeconomy has huge potential (Box 4.4).

Box 4.4. **Making the bioeconomy work for rural development: The Nordic experience**

The bioeconomy is an economy that relies on renewable natural resources to produce food, energy, products and services. The bioeconomy will reduce our dependence on fossil natural resources, prevent biodiversity loss and create new economic growth and jobs in line with the principles of sustainable development.

Across the European Union the bioeconomy accounts for approximately 9% of employment. In Nordic countries this figure is higher at approximately 18% for Iceland, 16% for Finland. Norway is an exception, the bioeconomy accounts for 6% of employment. In some rural regions this figure is much higher. For example, in the Örnsköldsvik region of Sweden, the bioeconomy provides an estimated 25% of employment.

Nordic countries see considerable scope for bioeconomy development, but, there are challenges to its development. For instance, there can be competing demands for bioresources and the extraction costs of raw materials can be too high. Further, existing regulations can create impediments to some developments or institutional arrangements may get in the way of the use of raw materials ("waste"). Public policies have been highly instrumental in helping to overcome some of these challenges and support innovation in the sector.

Country	Policy/strategy	Example
Sweden	• National Bioeconomy Strategy • VINNOVA (Public agency for innovation systems) via VINNVAXT programme for regional specialisation	Biofuel Region platform for 4 northern counties. • Local municipal adoption of ethanol buses • Development of local vision and 'brand'. Municipal and National support for the Biorefinery of the Future Cluster, with quadruple helix form • Established Regional Pilot Process plants in Umeo and Örnskoldsvik
Finland	• National Bioeconomy Strategy 2014 • Key national funding support bodies, SITRA and Tekes	Started in 1990s with new Municipal Dump and Waste management company LHJ Development of biogas from waste and food processing by-products • Eco-industrial park; Forssa Envitech club (2006) • Forssa Cluster Cooperation. • Brightgreen Forssa concept, as a brand • Bioeconomy and sustainable use of natural resources one of 5 strategic foci in Hame Regions NorwayStrategy 2013-14.
Norway	• Carbon tax • National bioenergy targets • Innovation Norway and ENOVA support for small as well as large investments. • Policy environment has been unstable in terms of biofuels.	Municipalities active in all 4 cases: as customers; as investors; as local regulators (e.g. of building regulations) and in some cases as infrastructure providers (district heating pipe network); as member of GRIPs; as branders; as legitimisers of the industry; and as co-ordinators, link agencies with sources of expertise
Denmark	• Focus on Green and Sustainable Development since the 1990s • Vestas (Wind Turbines) a world leader	• Lolland Community Testing Facility (CTF) developed 2007 • Development of Innovative Partnerships including Community (Quadruple Helix) • Co-creation with cluster development, Industrial Synergy • Innovation Platforms, meetings and networking • Regional Advisory Group developing ideas for bioeconomy • Membership of National Innovation Networks • Green Centre, Lolland (est. 1988), started Algae Innovation Centre with Aalborg and Roskilde Universities

Nordic countries see considerable future potential as seen in the forest, marine and "waste" bioeconomy. Investments in these areas are important for the countries' transition to a "low carbon economy" and for rural and regional development. Synergies and symbiosis are very important for the success of such projects and locational clustering has been found to be advantageous. Local policies and engagement in local and regional innovation platforms around the bioeconomy are critical to the success of these developments.

Source: Bryden, J. (2015), "Making the Bioeconomy Work for Rural Development: Some Nordic Experience", OECD Rural Policy Conference, Memphis, May 2015.

The OECD's 2012 study *Linking Renewable Energy to Rural Development* focused on the implications of the shift to renewable energy for the rural economy. Case studies from across North America and Europe demonstrated the many positive impacts of renewable energy developments. Such developments were found to: increase local revenue through taxes; create new jobs and business opportunities; support innovation in products processes and policies; support local capacity building and empowerment; and generate affordable and reliable energy. Table 4.2 describes some of the innovations observed in the case study areas. The presence of a number of actors in a renewable industry has a snowball effect – the presence of knowledge and skills in the sector supports further development of the renewables industry and related support industries.

In supporting such efforts, it is critical that governments take local interests and issues into account. Local engagement is particularly important for renewable energy projects in rural areas since such developments can be land intensive and/or alter the landscape. Communities need to be meaningfully involved early on in the process for such projects to be a success.

Table 4.2. **Innovations in renewable energy products, practices and policies in case study regions**

Region	Products	Practices and policies
Tennessee, US	Electric vehicles, cellulosic ethanol	Collaboration between universities and national energy research centre
Maine, US	Deep sea floating wind mills, tidal energy	Ex ante evaluation of the impact off-shore installations will have on maritime communities
Vermont, US	Manure management on dairy farms, green electricity	Branding of electricity: small-scale farm based biogas for decentralised ("cow power") electricity production
Iowa, US	Ethanol from maize, cellulosic ethanol	Focused systemic research strategy
Oregon, US	Small scale energy integrated into existing activity	Community based co-ordination approach – "energy has to have a job"
Québec, Canada	Low temperature turbine blades for wind installations	The *Bureau d'audiences publiques sur l'environnement* (BAPE) mandate is to protect, among other things, the interest of rural communities vis-à-vis RE deployment
Prince Edward Island (PEI), Canada	The Wind Enery Institute of Canada in North Cape – PEI	The Wind Energy Institute of Canada in North Cape, PEI advances the development of wind energy across Canada through research, testing, innovation and collaboration. The site features a 10-MW Wind R&D Park, a 2-MWh storage test bed, meteorological towers and a small wind test bed, as well as other facilities
Tromsø, Norway	Low temperature turbine blades, tidal energy, extraction of heat from water and sewage	Research collaboration between the University of Tromsø and renewable energy companies
North Karelia, Finland	Wood based biofuels, efficient wood burners, related machinery and equipment, CHP and district heating	North-Karelia Climate and Energy program (est. 2011) sets ambitious targets such as doubling the use of forest chips by 2020
Mellersta Norrland, Sweden	Bioenergy from wood, with CHP and district heating. The "green highway" for transport between Sweden and Norway.	Grant for research and development for wind energy
Region Sjælland, Denmark	Wind, wind installation maintenance and testing facilities; algae production for biofuels; straw based bioenergy	Local consortia to organise land-use and to link demonstration processes to regional economies
Fryslân, Netherlands	Solar powered boats and related systems for battery control, etc.; green gas based partly on cow manure	Development of niche opportunities (PV powered boat industry)
Extremadura, Spain	Mounts for solar installations	The non-profit Extremadura Energy Agency (AGENEX) promotes RE (est. 2001)
Puglia, Italy	Small wind generators; emerging policies to encourage small scale decentralised renewable energy	RE policy has been modified several times to reduce distortions and rent-seeking behaviours
Abruzzo, Italy	Bio-gas for electricity.	Aesthetic principles are explicitly put in the guidelines to site RE installations in rural landscapes, land remediation
Shetland Isles, Scotland	Hydrogen from wind; energy storage systems; tidal generators	The Promoting Unst Renewable Energy (PURE) project is a community driven partnership to promote RE

Source: OECD (2012b), *Linking Renewable Energy to Rural Development*, OECD Green Growth Studies, *http://dx.doi.org/10.1787/9789264180444-en*.

There is great potential in biomass energy to support environmental and economic sustainability

The renewable energy sector is generally more capital than labour intensive; however, this is less true of biomass energy projects (OECD, 2012b). The use of biomass (e.g. forest and crop residues, animal manure, etc.) as a renewable feedstock for the production of electricity, heating or biofuels is a largely untapped opportunity for rural development that actually creates permanent jobs. Renewable heat tends to be systematically ignored by renewable energy policy in most countries, despite being competitive with conventional sources. The direct conversion of a renewable power source to heat involves a relatively cheap transformation and the industry is likely to have a larger impact on local labour markets than other renewable energy technologies.

In general, biomass energy requires the organisation of a specific productive process and involves a large number of people. In many Nordic regions (North Karelia in Finland and Mellersta Norrland in Sweden, for instance), the collection of forest residues has generated new and sustainable job opportunities and improved forest management. Policy makers, however, rarely tap in the biomass potential due to the high transaction costs and the need to organise collective action. This is a missed opportunity.

The vast majority of renewable energy investments are located in rural areas and so the shift to renewable energy is a rural issue, as well as being a wider global issue. Transition to renewable energy industries requires spatially targeted policies and very strong engagement with local communities. Governments can also support such efforts by changing their procurement practices, as was done in the United States through the BioPreferred Program (2002 Farm Bill). While biomass energy projects may take a while to get off the ground, they are worth the effort and can propel regions on to a path of environmental and economic sustainability.

Beyond renewable energy, the rural environment provides a vast number of benefits, both to those who live there and the whole of society. These include: environmental services such as carbon capture and removing pollutants from the air, water and soil; opportunities for tourism and recreation; and the calming effects of green space and wildlife preservation. Many of these benefits lack market prices and have been undervalued and under produced in the past, but are now seen as important. In particular, they are important components of quality of life, and as such, are major new advantages for rural regions. Box 4.5 offers some examples of how a well-being framework can be incorporated into policy design, implementation and evaluation by governments.

Box 4.5. **Incorporating a well-being framework into policy design, implementation and evaluation**

The OECD's regional well-being indicators ("How's life in your region") demonstrate the value of territorial analysis and encourages policy makers to go beyond the boundaries of their own policy sector in order to anticipate potential interactions with other policies and, when possible, to capitalise on complementarities. Understanding well-being and its determinants can help policy makers enhance policy design and better target initiatives. Such indicators can also empower citizens to demand placed-based policy actions that respond to their specific expectations and, in turn, restore people's trust.

Box 4.5. **Incorporating a well-being framework into policy design, implementation and evaluation** *(cont.)*

Monitoring well-being performance at the regional and local levels can reveal an important self-diagnosis of the major issues facing a region. For example, well-being indicators were used in Sardinia, Italy to help more effectively structure the regional planning of the 2014-20 Cohesion Policy. Both objective and subjective well-being are important in measuring quality of life alongside other social and economic dimensions (OECD, 2013b). In the Netherlands, an indicator of "liveability" was introduced in the mid-1990s to better understand and act on community safety issues. Subjective indicators were used to understand how safe people felt in their communities along with actual rates of crime.

Well-being indicators can also be used to guide policy prioritisation across dimensions and territories. In the United States, the "Partnership for Sustainable Communities" involved collaboration between three federal bodies together with the University of Pennsylvania to develop a set of national sustainability indicators that were used to, among other things, co-ordinate and leverage federal policies and investments.

It should be a major goal for government to translate well-being objectives into policy relevant indicators and use them to align policies across and within levels of government. Wales' recent "Well-being of Future Generations Act" (passed 17 March 2015) encompasses such an approach. It places sustainable development as the central organising principle of the devolved public service in Wales and requires all public bodies to pursue common well-being goals and objectives and measures performance towards achieving these goals (Krawchenko and Foster, 2016).

Note: The OECD well-being indicators can be accessed at *www.oecdregionalwellbeing.org*.
Source: OECD (2013b), *OECD Guidelines on Measuring Subjective Well-being*, *http://dx.doi.org/10.1787/9789264191655-en*.

Policy focus: Competitive advantages for low-density economies

A key strategy for low-density economies is to focus on competitive advantages

Rural policy has recently been shifting towards a holistic approach that identifies how the various components of a local economy, including non-farm activities, interact. Previously, rural policy in OECD countries focussed on support for specific sectors, such as agriculture and forestry (and in many still does). But, as a result of an ongoing process of restructuring and modernisation through the substitution of labour for capital and improved connectivity (i.e. road, rail and broadband), other non-farm activities, including the service sector, have emerged in rural areas.

The current emphasis is on identifying the areas of competitive advantage that are present across rural regions. This is done in order to valorise new economic functions in these areas and diversify around them. In order to support this approach, it is important to understand how low-density economies function and how opportunities occur in the absence of economies of agglomeration.

Export-oriented economies located far from the major centres of demand face an exceptional competitiveness challenge, particularly in manufacturing sectors. A major problem is that producers in tradable sectors require an edge in terms of efficiency simply to offset the cost of distance. They need to be that much better than their urban rivals; being just as good may not be enough. Moreover, the limited scope for pursuing economies

of scale in many sectors in rural regions suggests that producers in the non-resource tradable goods sector need other sources of competitive advantage – for example, by focusing on unique qualities of products, where scarcity can add value.

Economic diversification is, in essence, about identifying one or more new and profitable niches in the international division of labour. While cutting-edge innovations might meet this challenge, for many economies, all that is needed is to discover new potential for producing established products profitably. It is difficult to know ex ante what new activities might be competitive, given the cost structure of the economy, if only because the existing set of market prices in an economy reveals nothing about the potential profitability of alternative (as yet hypothetical) resource allocation (Rodrik, 2004). Moreover, entrepreneurs moving into new (to the economy) sectors must often compete directly with established producers elsewhere, even before they have achieved critical mass or reached the levels of productivity they might be capable of attaining. As described above, this challenge is even more daunting in geographically remote, low-density places. Producers in such places who are oriented towards external markets must often cover higher transport and capital costs and then compete on distant markets with rivals who source inputs and services in much deeper, more competitive markets.

Diversification efforts are likely to involve a great deal of trial-and-error: outcomes cannot generally be determined and planned ex ante. This implies that the outcomes of successful diversification policies will be difficult to predict, so policy makers should resist the temptation to try to define the production structure towards which they believe the economy should evolve. The emphasis should be not on pre-determined "strategic sectors" but on fostering the emergence of new activities, some of which will fail and others of which will take root. For most mining and hydrocarbon regions, this is likely to involve, to some extent, helping industrial producers to move up the value chain, thus diversifying on the basis of existing strengths. However, the particular directions that this evolution will take are impossible to foresee, and other new activities are also likely to take off, given the right conditions.

The example of Finland is instructive as its comparative advantage in forestry products is long-standing and obvious, but most of its other competitive strengths are not. Indeed, not even the most well informed economist could have foreseen its development of strong comparative advantages in such products as lifts, satellite navigation equipment, off-shore drilling equipment or – to name the most famous of all – cellular telecommunications. In 1990, the last of these products would hardly have merited a mention in any industrial strategy for Finland; ten years later, they were a cornerstone of Finnish growth, and a decade after that the country as a whole felt the fall-out from the rise of the iPhone, the eclipse of Nokia being as unexpected as its rise. Yet new sources of growth rapidly began to emerge based on the human capital and infrastructure associated with the telecoms sector. Finland thus continues to adjust, its success is a product not of anyone's ability to predict, let alone direct, the productive structure of the economy, but of a set of transversal, sectoral and regional policies that create conditions favourable to innovation and entrepreneurship.

Realising competitive advantage through "smart specialisation"

The Rural Policy 3.0 emphasises how business development policies are best designed for low-density economies where distance plays a key role in shaping how businesses operate. The old approach to supporting business growth in rural areas was

characterised by governments providing subsidies to large firms. The contemporary role of government is as a facilitator in the face of complexity and uncertainty, enabling closer co-ordination between individual economic agents as well as greater experimentation in the economy. This new approach to business development and innovation in rural areas draws from a broader shift in industry policies which exhibit some or all of the following characteristics (Warwick, 2013; Warwick and Nolan, 2014):

- greater emphasis on building networks, improving co-ordination, and promoting awareness
- less reliance on direct support in the form of state aid and (market-failure correcting) subsidies
- greater emphasis on strategic (rather than defensive) industrial policy
- a shift away from sector-based strategies and towards certain technologies and activities.

"Smart specialisation" is a term currently used to describe an approach increasingly adopted by many regional (and national) governments to encourage investments in domains that leverage local assets. The focus is on creating future domestic capability and interregional comparative advantage (Foray, David and Hall, 2009). What distinguishes smart specialisation from traditional industrial and innovation policies is mainly the process defined as "entrepreneurial discovery" – an interactive process in which market forces and the private sector are discovering and producing information about new activities with the government acting to assess outcomes and empower those actors that are the most capable of realising the potential (Hausmann and Rodrick, 2003). As a result, smart specialisation strategies are much more "bottom-up" than traditional industrial policies. There is a wealth of literature on this approach – particularly from in the EU context as smart specialisation is part of EU policy as an ex ante condition for Structural Funds (McCann, and Ortega-Argilés, 2014; Foray, 2014).

In designing smart specialisation strategies, policy makers should create a framework that is adaptable to the context and specifics of each rural region. Innovation policies are often designed from an urban perspective for regions characterised by a higher density of economic activity, technological spillovers, and complex relationships between industry, universities and other actors. There is also the risk of seeking to replicate highly successful examples from one place to another. Rural regions often have more specialised industry structures that are embedded within the region and closely related to their natural resource base. Smart specialisation strategies should relate to these areas of comparative and absolute advantage and seek to open up opportunities for local businesses to participate in global value chains (GVCs). There also tends to be lower levels of skills attainment, thin and fragmented labour markets, and a lack of innovation related resources. National policies related to skills, employment, and innovation need to be adaptable. For example, enabling local skills providers to offer tailored programmes that are more closely aligned to the needs of the industry in the region is an important part of smart specialisation strategies.

Like traditional industrial policy, smart specialisation strategies aim to address market, systems and co-ordination failures. But, traditional industrial policies had tended to require significant levels of information to justify subsidy support and they have tended to be implemented in vertically-integrated sectors with stable technological paradigms. In contrast, smart specialisation – as well as new industrial policies – recognise the lack of perfect information, the level of advancement of a given activity, and the relative risks for policy. Smart specialisation focuses on helping entrepreneurs identify their knowledge-based strengths at the regional level and in forwarding a more exploratory approach in which

public decision makers listen to market signals using a range of assessment tools (e.g. SWOT analysis, surveys) and mechanisms such as public-private partnerships, technology foresight and road mapping. Box 4.6 offers an overview of the major policy messages of the smart specialisation approach.

Box 4.6. **Smart specialisation: Policy messages**

A recent OECD report on smart specialisation identified the following key policy messages (OECD, 2015b):

- *Policies for entrepreneurial discovery.* The smart specialisation approach calls for an "entrepreneurial selection" of market opportunities (e.g. to minimise failures and to avoid ill-informed policy decisions). While successful companies will constitute the new specialisation of the country/region (self-discovery), the role for policy is to develop a flexible strategy focusing on measurable intermediate goals, identifying bottlenecks and market failures and ensuring feed-back into policy learning processes. The approach includes incentives to strengthen entrepreneurship and encourage agglomeration.
- *Promoting general purpose technology platforms and networks.* Given the range of applications of general purpose technologies, technology platforms involving public and private actors but also standard-setting organisations can help increase productivity in existing sectors and help identify sectors in which to concentrate resources.
- *Diagnostic and indicator based tools and infrastructure.* Smart specialisation requires regions and countries to maintain an infrastructure and indicator base to monitor and evaluate performance and policies.
- *Strategic governance for smart specialisation.* Good governance and the development of local capabilities are key to identifying local strengths, aligning policy actions, building critical mass, developing a vision and implementing a sound strategy.
- *Openness to other regions:* the specialisation strategy of regions should take into account that other regions are also involved in knowledge creating activities and that duplication might lead to lower effectiveness and finally failure. Hence, co-operation with other regions with complementary capabilities and strategies is important.

Source: OECD (2015b), *The Innovation Imperative: Contributing to Productivity, Growth and Well-Being*, *http://dx.doi.org/10.1787/9789264239814-en*.

Ultimately, smart specialisation strategies provide an opportunity for regions to identify their core areas of competitive advantage and diversify around them. It is particularly important that this is done in a collaborative way between the private and public sectors. This enables the identification of often latent assets and resources and directs how to best combine them to generate new business opportunities. This is important for rural areas because they lack economies of agglomeration and often have only a few economic activities that are competitive in international markets.

There are a number of examples of such smart specialisation approaches in practice across rural regions in the OECD. Many rural regions have pursued strategies to maximise the economic development opportunities that come from better aligning local agricultural, food production, and tourism. Another example is creating value from agricultural and industrial waste in the form of new products and energy production. By pursuing these collaborative strategies, some regions have identified unexpected opportunities. For example, the region of Norrbotten, in northern Sweden, has attracted IT investments and

car testing due to its cold climate. It has embedded this economic activity in local universities, and it is now internationally competitive in an activity outside of mining and forestry. Another example is that of Nordland's smart specialisation strategy (Box 4.7).

Box 4.7. **Rural innovation: The case of Nordland, Norway**

Nordland is a region located in northern Norway and has 240 000 inhabitants, and the largest city, Bodo, has a population of close to 50 000. The land and topography of the region is diverse with fjords, high mountains, narrow peninsulas, and islands. Nature based attractions such as the Lofoten Islands are critical for the region's tourism industry. Forestry and agriculture have also developed in the valleys and coastal areas. As a result of this physical environment production is dispersed across the region – some in locations which are remote and difficult to access.

Nordland has a rich endowment in terms of water resources, landscapes, productive land, and mineral resources. These resources provide the foundation for mining, agriculture, forestry, fisheries and aquaculture, and tourism.

These industries are performing strongly and are integrated into global markets. They make an important contribution to the economic prosperity of Norway. However, these highly productive and export orientated industries are not generating significant new jobs for the region (with the exception of tourism). How the region overcomes this "growth paradox" to capture greater value-added and jobs in the region will be critical to the future of the region.

In terms of skills and innovation, the region has a number of key strengths and challenges. The region has one university, two university colleges and three research institutions. These institutions are increasingly engaged with local businesses and R&D investment is rising. The county has recognised the importance of innovation and was the first region in Norway to have its own R&D strategy, which has provided a platform to forge closer links with local businesses. However, the region has an ageing population and lower educational attainment than the rest of the country. Although R&D activity is increasing, it still lacks scale and there is not a strong culture of innovation amongst smaller businesses in traditional industries. Enhancing the competitiveness of tradable sectors outside of oil and gas is challenging in Norway, which has a high cost base.

The region has adopted smart specialisation as a framework to promote innovation within the region's tradable sectors. The county's smart specialisation strategy – Innovative Nordland – has identified the process industry, seafood, and tourism as key opportunities for future growth. The county has three key strategies to shape innovation outcomes:

- supporting co-operative projects between business and R&D institutions
- brokering education projects within clusters
- supporting competence building in universities and R&D institutes that align with cluster development in the region.

The development of this strategy involved close collaboration between the public sector, business, research, education and training organisations in the region. Priorities were identified using techniques such as SWOT and foresight planning to reveal the region's comparative advantages. The design and delivery of this strategy also involves co-operation and peer review with the region of Österbotten, in Finland. Collaboration, consistent and transparent methodologies to identify strengths, and peer-review have all been identified as success factors within Smart Specialisation Strategies in a European context (OECD, 2013c).

Source: OECD (forthcoming), Territorial Review of the Northern Sparsely Populated Areas; OECD (2013c), *Innovation-driven Growth in Regions: The Role of Smart Specialisation*, *www.oecd.org/sti/inno/smart-specialisation.pdf*.

The application of these strategies will be different in rural areas close to cities relative to more remote rural areas. Rural areas close to cities generally have the advantage of lower land costs and can be attractive locations for industries such as manufacturing and transport and logistics. These regions should look at leveraging these advantages and building partnerships with businesses and research institutions located within cities. One of the key considerations for more remote areas is how to leverage local networks and value chains to promote innovation across domains such as environmental amenities, food production and tourism. In this context, land use is crucial for rural areas in terms of managing urban growth, combining agricultural and tourism activities, and managing land use conflicts (e.g. extractive industries, energy production and tourism). In rural remote regions, it is particularly important that land use strategies be closely aligned and integrated with economic development.

Tools: Policy complementarities and integrated investments

Mutually reinforcing policies generate higher returns

There has been a notable transition in rural policy approaches across OECD countries in the 1980s and 1990s. Rural policies in many OECD countries have focussed in the past on providing subsidies that aim to bring income in a sector up to the national average, without any real concern for how well the subsidies worked or whether there were any undesirable consequences (Pezzini, 2001). Firms, communities and individuals were deemed entitled to specific subsidies by virtue of their rurality. By contrast, the *New Rural Paradigm* advocated shifting the orientation of rural policy from subsidising sectors towards investments in rural regions, by recognising that development is inevitably unequal across space and that the focus should be on investing in the opportunities that are present in specific rural areas.

The Rural Policy 3.0 extends this framework by focusing much more on integrated investments and delivering services that are adapted to, and meet the needs of, rural areas. There is strong pressure to make better use of public and private investments and more efficiently deliver services in rural areas, which inevitably face higher per unit costs than urban areas, due to their lower economies of scale and higher transportation costs. Integrated investments have the potential to reap the benefits of complementarities when they are adapted to the needs of different types of rural areas.

The concept of policy complementarity refers to the mutually reinforcing impact of different actions on a given policy outcome. Policies can be complementary because they support the achievement of a given target from different angles. For example, increased broadband in rural areas should proceed along with policies that focus on the accessibility and diffusion of these services to the population.

Policies – territorial and sectoral – are more effective when they are co-ordinated and aligned along similar goals and objectives. In effect, governments should frame interventions in infrastructure, human capital and innovation capacity within common policy packages that are complementary to sectoral approaches as well. This requires that policies are integrated horizontally, through management arrangements and development plans amongst different sectors, services and agencies within a given level of government. It also requires that policies are vertically integrated, from the national to the local level of government, and that interventions are territorially integrated and consider the interrelationships and interdependencies between different territories.

Integrated investments and policy complementarities will differ by type of place

The specificities of place are a critical consideration within an integrated policy approach. For a rural area close to a city, a critical goal is to limit sprawl while increasing the connectivity between locales. This requires a delicate balance. On the one hand, it is beneficial to increase the connections between rural and urban areas so that urban dwellers can have access to natural and cultural amenities in rural areas, and so that rural dwellers are able to engage in urban labour markets. On the other hand, if the population of the rural areas expands, this imposes costs related to traffic congestion and sprawl, which make it difficult to provide and maintain services and infrastructure. Policies should pursue a balance that facilitates connections between spaces such that rural and urban areas maintain their distinctiveness. Key policy issues in this regard are transportation, land use and resource use.

The columns of Table 4.3 identify five specific policy domains that are important in rural regions and for which complementarities are particularly important. These are typically managed at different levels of government and almost always each is the responsibility of a specific agency that has little responsibility for the other four policy areas. In peri-urban areas (rural areas close to cities), a central issue is land conversion from rural to urban uses and this is generally managed through formal land use plans that regulate conversion. However, pressure for land use changes are influenced by decisions to improve transport connections or extend sewer and water capacity, or by encouraging greater connections between rural and urban residents through integrating labour markets or providing access for rural citizens to urban services. Consequently, land use policy is most successful when these other policy domains reinforce its actions.

Considerations for rural remote regions are somewhat different than for rural regions close to cities. Much depends on local conditions. For example, while remoteness may be a problem for many rural industries, it can be a competitive advantage in tourism. Remoteness, combined with attractive landscapes, as in the Scottish Highlands and Islands, can become a major attraction (Mahroum et al., 2007: 30). As an economic strategy for such regions, it becomes important to maintain environmental quality in such areas.

In more remote rural areas, land use conversion to urban uses is not an issue, but the loss of important environmental, natural and cultural capacities is a policy concern (Table 4.3). Here direct land use regulation may play a smaller role than the other four

Table 4.3. **Policy complementarities for different types of rural regions**

Type of rural region	Land use	Infrastructure / accessibility	Resource Use	Public services	Employment
Close to cities	Manage land conversion to limit urban sprawl	Control expansion of sewer and water systems to slow land conversation Plan road and public transit to manage development	Maintain environmental quality and restrict activity that is not sustainable Work to valorise rural amenities used by urban residents	Provide local high quality services that are integrated into adjacent urban capacity	Integrate rural labour markets into the urban market by supporting niche products and stronger supply chains
Remote	Restrict land use practices that create environmental externalities (pollution, soil erosion etc.) Preserve high value land that provides natural or cultural benefits	Improve connectivity to urban regions (broadband, roads, rail)	Maintain environmental quality and restrict activity that is not sustainable Work to valorise rural amenities used by urban residents	Develop innovative ways to deliver high quality public services in health, education, business support and workforce training Local countercyclical revenue stabilisation plan/support	Expand employment and local opportunities through entrepreneurship, support for business expansion and new market penetration

domains that can lead to land use changes by altering private property owners' incentives to manage land in different ways. Once again, it is crucial that the five policy domains send a consistent and coherent set of signals to property owners to ensure that economic development takes place in a way that maintains other goals, including sustainability and preservation.

Service delivery is an important area for policy complementarity

The service or tertiary sector in OECD economies now accounts for the largest share of income and employment. Access to an appropriate set of public and private services is crucial for the quality of life of citizens and the competitiveness of firms. This makes service availability a central feature in rural development policy and strategy. However, rural regions face a particular challenge in the form of relatively high costs of service delivery driven by several factors (Table 4.4). In the current context of tight fiscal budgets, discussions around how to deliver services in more cost effective ways in rural areas has come to the forefront of the discussion in many OECD countries.

Table 4.4. **Factors impacting the cost of rural services**

Factor	How it impacts service delivery costs
Distance	All forms of connectivity are more scarce and accessibility to rural areas more expensive than in urban areas. Transportation costs and overall costs to provide goods and services are also higher in rural areas on a per capita basis.
Low population	It is difficult to achieve scale economies for production of goods and services including public services.
Low density	In rural regions people tend to be dispersed, or even scattered, across much of the territory, making connectivity harder to achieve.
Ageing population	As the population ages the mix of services demanded changes; this may require new investments or outlays, especially concerning health care.
Diminishing subsidies	In the aftermath of the global financial crisis, governments are cutting expenditures. This has an obvious impact on government services and costs.
Increasing diversity	Rural populations are becoming more diverse, representing a mix of residents historically rooted in the region, newly retired people, second home residents or newcomers who commute to a city for work. The result is a fragmenting of demand and a population where significant numbers of people choose to obtain goods and services away from the place where they live.
Few service providers	Choice is valuable. Too often rural service providers seek to exploit a local monopoly situation while paying little attention to actively marketing their own businesses or improving the quality of services that they provide.

If rural communities are to play their full role in strengthening national economies, it is important that the correct set of services be in place. The challenges associated with delivering public services vary across different regions and countries. However, certain policy strategies used in OECD countries to overcome the challenges illustrated above can be considered as practices that are "good-enough" (if not necessarily "the best") and could provide ideas to governments facing similar problems. These practices often emphasise "innovation" (alternative methods to achieve the result) and "inclusiveness" (co-design and co-delivery) which are important for a holistic approach. For instance, because end users at the community level are an integral part of the process, there are far better odds of providing services that are useful in the community and of providing them in a cost-effective way. More specifically, these good-enough practices include the following:

- *Consolidation, co-location and the merger of similar services*. Consolidation involves concentrating customers on a smaller number of service locations. It increases effective demand by increasing the size of the service territory for each remaining location. One example would be the merging of several weak local newspapers to create a single regional paper that has more viability. Co-location is another approach that seeks to build demand.

Basic overhead costs – energy, security and administrative expenses – can be pooled, generating economies of scope. If post office services are consolidated with a shop, people can obtain their mail and purchase food in one trip. Finally, service merger takes similar or substitute services and combines them into a single entity.

- *Alternative delivery mechanisms*. Where the demand for services is widely dispersed, it may be more efficient to bring the service to the user. One example is, adopting mobile service delivery approaches, such as book-mobiles that bring library services to communities that are too small to have a physical library or mobile dental clinics. The Internet offers the possibility to provide services in rural areas and for providers in rural areas to offer services outside their immediate territory. Telemedicine allows x-rays and other diagnostic services conducted in rural areas to be processed and analysed elsewhere.
- *Community-based solutions for different types of providers*. Some rural communities have volunteer fire departments. Others have fire departments that are operated by local governments. In some communities there are for-profit village shops, in some villages there are community owned shops that provide equivalent access to services, but which operate as social enterprises.
- *Improve quality and marketing*. Technology can help rural residents provide and access information about service quality and about alternative providers. Geolocation facilitates the matching between the supply of and demand for services.
- *Alternative energy sources*. Renewable energy can reduce "fuel poverty", that can be a common feature of remote regions, by allowing isolated communities to produce their own energy instead of importing expensive conventional fuels. Increasing the use of affordable and reliable energy in remote rural communities can improve their capacity to deliver goods and services. For instance, the availability of a reliable electricity supply is essential for a local restaurant that needs a refrigerator.
- *Innovate – create a new service to achieve better outcomes*. In rural areas there is often insufficient business to support a full range of services provided through independent firms. A region may not be able to support a fully-fledged home repair business, but could make use of the services of a travelling handyman that operates out of a fully-equipped vehicle. Mobile entrepreneurs are important in these types of areas (Bryden and Munro, 2000; Markeson and Deller, 2012).

Governments are also realising policy complementarities by grouping service delivery providers across policy fields. This often includes administrative services, health care, shopping and so on, in specific places with transport networks organised so as to make them as accessible as possible to the rural population of the surrounding areas. Often these arrangements are referred to as "one-stop shops", as illustrated in a programme in France (Box 4.8). They can vary in scale: some are quite basic and limited to essential functions, while others, where population and resources permit, come to act as local centres of innovation, playing a role in supporting efforts to bridge primary, secondary and tertiary activities in rural areas and in promoting renewable energy generation. In some communities, the proximity of these services can help service providers be more integrated with one another, as practitioners have more opportunities to interact and learn about each other's work – including across levels of government.

Box 4.8. **France's "one-stop-shop" for citizens**

After an initial experimental period, the French government decided in July 2013 to develop one-stop shops for citizens, called *Maisons de services au public* ("Public service houses"), offering access to such public services as post offices, public transport ticketing, energy utilities, unemployment insurance and welfare services (pensions, family allowances, health insurance, etc.). The purpose of the"*maisons*" initiative is to guarantee public service delivery in low-density or isolated territories by sharing costs and employees as far as possible. For technical and statutory reasons, the sharing of employees has proved more complex than the sharing of costs or premises.

The "*maisons*" are usually financed by local authorities (50%), public operators (25%) and the national government (25%). Beyond subsidising them, the French government plays an important role in promoting this policy, harmonising the services provided and giving them a common label. It has also set up a partnership with the French postal service, *La Poste*, to transform some post offices with low activity (mainly in rural or mountainous territories) into *Maisons de services au public* in order to make them more profitable and to avoid financing specific buildings.

In March 2015, the government's Interministerial Committee for Rural Development set a goal of increasing the number of "*maisons*" threefold, up to 1 000, by end 2016, in accordance with the departmental schemes for the accessibility of public services that are enshrined in legislation for a new territorial organisation of the French Republic adopted in the summer of 2015.

This initiative is similar to those observed in other places, for example, the Citizen Service Offices in Finland, to name just one. These and other one-stop shops can cut provider costs and increase access by rural dwellers to necessary services. The range of services offered by OSS in OECD countries can include anything from education, childcare, government information, referrals and advice, health and elderly care, social support services (rehabilitation and housing support), to cultural and recreational activities. Driven largely by community need and involvement these "all purpose" service centres are expected to continue to grow in rural areas because they allow governments to provide rural services on the basis of cost-efficiency (OECD, 2010a).

Source: OECD (2010a), *Strategies to Improve Rural Service Delivery*, *http://dx.doi.org/10.1787/9789264083967-en*.
For further information see: CGET (2016), Maisons de services au public, *www.cget.gouv.fr/maisons-de-services-public* (accessed 1 June 2016).

The proliferation of ICT connectivity in rural regions has created opportunities to deliver a broader array of services to both citizens and businesses through such mechanisms. For instance, the use of telemedicine to deliver health care services, particularly to remote populations, has proliferated. This can include videoconferencing technologies to improve access to health services for patients, families and health care professionals. Minimising the need to travel reduces costs and means that health care professionals can spend more time treating patients as opposed to travelling. Japan has established connectivity as a major policy objective together with more compact spatial development (Box 4.9).

Box 4.9. **Japan's "small stations" initiative**

In Japan, the need for innovative and cost effective service delivery is driven in large part by demographics. The country has both an ageing population and overall population decline. On current projections, the government anticipates that Japan's population will fall by about 22-23% between 2010 and 2050, with the elderly (ages 65+) share of the population standing at roughly 40% at the end of the period. To meet these challenges, Japan's National Spatial Strategy (NSS) has adopted a vision based on "compact" and "networked" cities and villages.

In order to ensure effective service delivery, the settlement of Japan should become more compact. At a national level, the NSS acknowledges that some areas will become effectively depopulated, though it seeks to sustain a broad settlement pattern throughout the national territory. At smaller scales, the policy addresses the restructuring of urban and rural settlements that will be needed to maintain their cohesion and the efficiency of service delivery.

A Japan in which cities and towns are shrinking will need to be networked: improved connectivity will be critical to maximising the potential economic benefits of agglomeration. Better connectivity among towns and cities, as well as within them, is meant to offset, to some extent, the loss of agglomeration potential that will occur as a result of a shrinking population (and, even more, as a result of a shrinking workforce). This applies to both transport and communications connectivity. Better networking of people and firms should help encourage innovation and the exchange of ideas, as well as goods and services.

These concepts – "compact" and "networked" – are to be applied differently at different scales and in different circumstances. In smaller towns and rural areas the emphasis is on creating basic service-delivery hubs that will help sustain rural communities around small, multi-functional cores (the so-called "small stations"). Networking will entail improved connections between very small hamlets and nearby service hubs ("small stations"). These "small stations" will concentrate basic service delivery, including administrative services, health care, shopping and so on, in specific places with transport networks organised so as to make them as accessible as possible to the rural population of the surrounding areas. These too are to vary with scale: some will be quite basic and limited to essential functions, while others, where population and resources permit, may come to act as local centres of innovation, playing a role in supporting efforts to bridge primary, secondary and tertiary activities in rural areas and in promoting renewable energy generation. These, and similar initiatives, are intended to promote a degree of de-urbanisation, in an effort to deconcentrate the economy and the settlement pattern and help revive rural areas and non-metropolitan regions. Indeed, promoting migration to rural areas is an explicit aim of the NSS, as well as a central priority for the government's new Headquarters for Overcoming Population Decline and Revitalising Local Economies.

The creation and maintenance of small stations will largely be left to prefectures and local authorities, although the funds involved will often come from the central government. This is clearly an area where prefectures can play a central role: the ministries in Tokyo lack the local knowledge and information needed to plan the location of small stations, but leaving it to municipalities alone risks triggering a race to invest public funds into too many small stations in an effort to stem local population decline. Even the prefectures may be inclined to over-supply them. For example, Kochi prefecture, on the south coast of the island of Shikoku, plans to create 130 small stations over the next decade. This implies a catchment area for each small station of about 54km^2, meaning that one would never be more than 4-5km from a small station. On a nationwide basis, this would imply the construction of around 7 000 small stations.

The small stations initiative is similar to approaches to service provision undertaken in some other OECD countries (Box 4.8).

Japan's small station initiative looks in some ways even more ambitious than one-stop shops found in most other OECD countries, since small stations are to play a role in concentrating the delivery of private as well as public services, in reshaping the settlement pattern over time and, in some cases, acting as centres of innovation.

Source: OECD (2016b), *Territorial Review: Japan*, *http://dx.doi.org/10.1787/9789264250543-en*; OECD (2010a), *Strategies to Improve Rural Service Delivery*, *http://dx.doi.org/10.1787/9789264083967-en*.

ICT accessibility can be a barrier to the accessibility of such services. To this end, Portugal has adopted a novel approach: their "Net on Wheels" project uses vans equipped with notebook computers to provide access to the internet and professional training to marginal groups. Since inception, the project has reached over 26 000 users and provided over 250 courses with 860 basic ICT skills diplomas. Technology can help rural residents provide and access information about service quality and about alternative providers. Geolocation facilitates matching-up between the supply of and demand for services.

Policy complementarities are supported by collaborative governance

On a positive note, three-quarters of responding OECD countries report that rural policy is co-ordinated across levels of government. In addition, almost all responding countries reported involving subnational actors in one way or another, be it through co-ordination of actions or through design and delivery of rural programmes by subnational governments.[2] However, challenges to vertical integration remain. OECD governments have reported that some of the greatest challenges in this regard are: a lack of private sector participation in public investments, regulatory and administrative obstacles to vertical integration, and a lack of subnational government understanding of central government priorities and vice versa (OECD 2012c).

OECD governments have recently endorsed the importance of policy complementarities through the 2014 *Recommendation of the Council on Effective Public Investment across Levels of Government* (OECD, 2014). The Recommendation highlights the importance of co-ordinated strategies for public investment (both physical infrastructure, such as roads, and soft infrastructure, such as human capital development) in order to make the most of funding. Recommendations are that OECD governments should seek complementarities and reduce conflicts among sectoral strategies. At higher levels of government, such complementarities can be facilitated by: i) using strategic frameworks for public investment to align objectives across ministries and levels of government; and ii) minimising administrative barriers through co-ordination mechanisms such as, but not limited to, interministerial committees and programmes, and harmonisation of programme rules. Governments can also establish joint investment funds that pool monies across public agencies and ministries to encourage consideration of a broader set of priorities.

Entrenched institutional interests can present an obstacle to the creation of policy complementarities. It is often remarked that institutions are "sticky", and the same can be said of policies which are of course linked to the institutional logics that carry them along. As a strategy to overcome this, it can be useful to use new measures to generate reforms, establish new institutional relationships and evaluate their outcomes. As findings from Massachusetts demonstrate, new programmes can create an opportunity to establish policy complementarities since public actors will be less entrenched in pre-existing roles (Box 4.10). They can generate different ways of working across sectors or agencies and the joint-evaluation of such programmes can help generate understanding of how policy measures work together (or not). Interestingly, among OECD countries, around three-fourths of responding EU countries use both indicators and evaluations of their rural policies, against just over half of non-EU countries (indicator types and evaluation principles have similarities across EU countries due to their partnership agreement framework).[3] Pilot projects can be useful to carve out a space for collaboration in cases where actors are entrenched in pre-existing roles. If effective, this can help propel support for broader institutional action.

Box 4.10. **Sharing best practices for regional service delivery: Massachusetts, United States**

Communities across OECD countries are increasingly turning to collaboration and shared service delivery as a way of offering better and more cost effective programmes than they may be able to provide independently. The types of services and arrangements will differ depending on political-institutional contexts.

In the United States, Massachusetts has created a guide to the regionalisation of services which is largely directed towards municipalities (Massachusetts Association of Regional Planning Agencies, 2012). The longstanding "home rule" tradition in the United States can create a deterrent to the shared accountability and control required for such partnerships. Drawing on the successful implementation of regionalised services, the Massachusetts Association of Regional Planning Agencies has established best practice guidelines. In general, these focus on how to overcome entrenched organisational interests. For example, they recommend that it may be easiest to establish collaborative projects though existing regional plans or to start with small projects and build collaboration from there. Further, new programmes that have emerged through the passage of state and federal laws can offer an opportunity to establish new regional services and entirely new organisational structures. In other instances it is recommended that expiring service contracts of staff attrition may also create the space to adopt new joint actions. Examples of regionalised services from Massachusetts include: building inspection, clean energy collaboration, emergency dispatch, public health and waste management.

Source: Massachusetts Association of Regional Planning Agencies (2012), *Regionalisation Best Practices*, *www.regionalbestpractices.org* (accessed 1 June 2016).

Key actors and stakeholders: Rural-urban partnerships and multi-level governance

In rural areas, a pooling of resources and capabilities across entities creates the ability to collectively accomplish what no individual can achieve independently. Whether the entities are local governments, individual firms or community organisations, a defining characteristic of rural areas is that the individual units have limited resources and limited capabilities to act. This makes collaboration a necessary strategy if economic and social progress is to occur and if it is to include all the relevant stakeholders. Yet, in many rural areas there is a tradition of not co-operating with nearby places and too often high levels of social and economic exclusion limit decision making to a narrow elite.

The Rural Policy 3.0 promotes broadening the set of actors engaged in economic development in rural areas to include a much wider spectrum of collaborators. There are two key aspects of such collaborations. The first is multi-level governance and how to improve vertical connections among tiers of government in order to better co-ordinate policies and programmes. The second is the idea of improving horizontal connections among governments in the context of rural-urban linkages between an urban core and its rural hinterland. Results from both aspects suggest that collaboration results in better economic and social development outcomes and benefits for all participants.

Rural governments can work with a much broader range of partners than is common today

New forms of collaboration involving rural governments offer opportunities. They could include rural-to-rural partnerships where communities in more remote rural regions co-operate in an approach that parallels rural-urban partnerships, but which reflects the specific conditions of rural places. Partnerships between local governments and third sector organisations could also be effective instruments for economic and social progress, especially when the voluntary sector is involved. Finally, partnerships between rural governments and private enterprise, the so-called public-private partnerships (PPP) could be useful in rural regions even though they are usually structured in metropolitan contexts. Because the focus is on rural policy – and only governments make and deliver policy – the following discussion is restricted to collaborations where at least one participant is a government. But of course, collaborations can occur among firms, or among any group of stakeholders with a common interest, and need not include governments.

Rural-urban partnerships strengthen synergies between rural and urban places

One promising type of collaboration to achieve better policy outcomes is that of rural-urban partnerships. Rural areas – either inside functional urban areas, or in close proximity to them – account for the vast majority of communities across OECD countries. Urban and rural areas are connected through a broad range of linkages: i) demographic linkages; ii) economic transactions and innovation activity; iii) the delivery of public services; iv) exchange in amenities and environmental goods; and v) multi-level governance interactions (OECD, 2009a: 22). These linkages include migration patterns and commuting. Among these, the latter is particularly important. Commuting is a major driver of territorial integration and can be used to define functional economic regions. The labour market flows between rural and urban areas are an important characteristic for analysis in the structure of public policies in such areas as housing, economic and spatial planning, transport and skills training. New measures of functional urban areas have important implications for rural policy as they consider a new framework with which to address rural-urban interactions (Chapter 3).

How do rural-urban partnerships help achieve better regional conditions? First, such partnerships facilitate the production of public goods that are useful for economic development. Examples include co-operation to better connect firms to large and more integrated markets (e.g. Forlì-Cesena, Italy; Lexington, Kentucky) or to foster territorial image and visibility, which increases the attractiveness of the regions for investment and tourism (e.g. Nuremberg). Second, rural-urban partnership makes it possible to achieve greater economies of scale in the provision of public services. Partnerships aggregate the limited local resources of rural governments with more plentiful urban resources to provide services more efficiently to the entire region. One example is, the use of ICT to provide public services to the most remote areas, avoiding depopulation and increasing well-being (e.g. Finland). Third, rural-urban partnership helps account for the cross-border effects of decisions taken by single urban and rural local authorities. Examples of partnerships were found to better co-ordinate land development within functional regions and to preserve the landscape.

OECD research has identified five key factors as having a positive effect on rural-urban partnerships. They include: i) understanding the interdependence of rural and urban areas; ii) mutual understanding and the need to act in concert; iii) clearly defined objectives; iv) representational membership and democratic participation; and v) leadership (OECD, 2013a). Table 4.5 summarises these factors that promote or hinder rural-urban partnership across 11 case studies in different countries. Among the case studies, clearly defined objectives and representational membership and democratic participation were important across almost all communities studied (10 out of 11 and 9 out of 11 respectively). Meanwhile, the most common hindrances to partnership were identified as a lack of private sector involvement (in 5 out of 11 cases) or incentives to partner (in 4 out of 11 cases).

Table 4.5. **Factors that promote and hinder rural-urban partnerships**

	Rennes, FRA	Geelong, AUS	Nuremburg, DEU	Central Zone, POL	Brabant, NLD	Prague, CZE	Forlì-Cesana, ITA	Extremadura, ESP	Castelo Branco, PRT	Central Finland, FIN	Lexington, Kentuky, USA
Factors that promote rural-urban partnership											
Understanding the interdependence of rural and urban areas	X	X	X	X	X		X				
Mutual understanding of the need to act in concert	X	X	X	X	X		X				
Clearly defined objectives	X	X	X		X	X	X	X	X	X	X
Representational membership and democratic participation	X	X	X		X		X	X	X	X	X
Leadership	X	X	X		X		X				
Factors that hinder rural-urban partnership											
Regulatory and political barriers						X					X
Lack of trust/social capital				X		X					X
Lack of incentives to partner						X		X	X		X
Policies that widen rather than shrink the gap between urban and rural areas								X		X	X
Low private sector involvement	X	X		X		X			X		

Source: OECD (2013a), *Rural-Urban Partnerships: An Integrated Approach to Economic Development*, *http://dx.doi.org/10.1787/9789264204812-en*.

National governments have an important role to play in supporting rural-urban partnerships. They can provide the necessary data/tools to understand interconnections and to create the incentives or remove the barriers to such partnership. In order to establish partnerships, communities need to understand their linkages. Across the OECD a range of approaches are used to address these issues, from providing data and analysis, to mandating common spatial framework studies and plans across a functional territory. Governments have an important role to play in supporting analysis across functional rural-urban areas. Such analysis creates the basis for joint action.

Rural-urban partnerships often require some initial incentives to get actors at the table since they face an inherent asymmetry in power relations between big and small places. Many OECD countries encourage rural-urban partnerships by mandating co-submission as a requirement to access programme funding (e.g. for transportation infrastructure). The European Union's Integrated Territorial Investments mandate that funding is based on such partnership. This creates an important first step towards lasting partnerships beyond the life of programme funding (Box 4.11). In a similar vein, governments should work to reduce disincentives to co-operation – in particular, programmes that pit communities against one another and reward or encourage isolated competition where co-ordination would in fact be a more effective form of public investment.

Box 4.11. **The European Union's Integrated Territorial Investments**

Europe is confronted by a multitude of economic, environmental and social challenges that are best addressed by integrated, multidimensional and territorial approaches. In recognition of this policy need, the European Union has created Integrated Territorial Investments (ITIs) which are tailored to place-specific features and outcomes and go beyond traditional administrative boundaries in order to co-operate and co-ordinate actions and achieve shared goals. This is in line with the new territorial cohesion objective introduced by the Lisbon Treaty, which acknowledges that economic and social cohesion cannot be achieved at the European level without a stronger focus on the territorial impact of EU policies.

ITI is a tool to implement integrated territorial strategies. It allows Member States to implement operational programmes in a cross-cutting way and to draw on funding from several priority axes in order to ensure the implementation of an integrated strategy for a specific territory. ITIs will help member countries to successfully implement integrated actions through simplified financing and can only be used if the territory in question has an integrated, cross-sectoral territorial strategy. Any geographical area with particular territorial features can be the subject of an ITI, ranging from specific urban neighbourhoods with multiple deprivations to the urban, metropolitan, urban-rural, sub-regional, or interregional levels. An ITI can also deliver integrated actions in detached geographical units with similar characteristics within a region (e.g. a network of small or medium-sized cities). It is not compulsory for an ITI to cover the whole territory of an administrative unit.

An important element of ITIs is that they encourage the use of cross-cutting funding. They can involve investments from the European Regional Development Fund (ERDF), European Social Fund (ESF) and Cohesion Fund. The funding can be complemented with support from the European Agricultural Fund for Rural Development (EAFRD) or the European Maritime and Fisheries Funds (EMFF). Combined investments from ERFD and EAFRD are particularly relevant for support to urban-rural partnerships. This instrument is also linked to Community-led Local Development (CLLD) which can be used as one of the building blocks to implement an ITI (see Box 4.16 for more background on CLLDs). There are, however, important differences between an ITI and CLLD. While CLLDs are strictly a bottom-up approach, ITIs can be top down, bottom up, or a combination of the two.

As an instrument that promotes the integrated use of funds, ITIs have the potential to lead to a better aggregate outcome for the same amount of public investment. They also have the potential to empower sub-regional actors (local/urban stakeholders) by ensuring their involvement and ownership of programme preparation and implementation. Because they have different funding streams at their inception, it is anticipated that there will be greater certainty regarding the funding for integrated actions. ITIs put forward a place-based approach to development that can assist in unlocking under-used potential at local and regional levels.

Source: EU (2014), *Integrated territorial Investments, Cohesion Policy 2014-20*, *http://ec.europa.eu/regional_policy/sources/docgener/informat/2014/iti_en.pdf*.

Finally, public policies can foster such partnerships by supporting new kinds of institutional arrangements to govern across functional territories. Rural-urban linkages often cross traditional administrative boundaries and thus challenge established policy frameworks. Each type of interaction encompasses a different geography or "functional region". Flexibility is required in the space considered for governing these complex relationships. Yet, national and subnational policy frameworks are often unprepared to organise and orient rural-urban interactions. In many cases this can require changes to statutory legislation (e.g. Poland recently passed the Metropolitan Association Act 2015 which establishes an institutional framework for such partnership). France's reciprocity contracts offer one example of an approach that promotes inter-municipal collaboration, and are complemented by the new State-metropoles pact (Box 4.12).

Box 4.12. **France's reciprocity contracts**

Well-aware of the complementarity potential of its different urban and rural territories, France has developed a new experimental tool to promote inter-municipal collaboration: "contracts of reciprocity for the city-countryside" (*Contrats de réciprocité ville-campagne*). These agreements are adaptable to different territorial realities; their jurisdictions are not pre-defined which allows them to cover different areas depending on the issue at hand. The process is primarily led at the inter-municipal level, with the state, regions, and departments being asked to support local initiatives.

France's "contracts of reciprocity" acknowledge the diversity of rural areas and seek to strengthen and valorise urban-rural linkages. This is driven by an understanding that urban-rural interactions should address not just proximity issues (e.g. commuting patterns) but also consider reciprocal exchanges in order to build meaningful partnerships. Potential areas for co-operation include:

- environmental and energy transition (e.g. waste management, food security, the preservation of agricultural land and natural areas, and bio energy development)
- economic development (e.g. the joint promotion of the territory and the development of joint territorial strategies, land use policies, support for businesses, and the development of teleworking to help maintain remote towns centres)
- the quality of services (e.g. promoting tourist sites, access to sports facilities, leisure, heritage, and access to health services)
- administrative organisation (e.g. mobilisation of staff with specific skills to support key projects or needs).

Four territorial partnerships have been selected for the first round of experimentation under the "contracts of reciprocity" starting in March 2015 (see below). It is part of CGET's mission to support local actors in the definition and conception of the "contracts of reciprocity" between each territorial entity. They include: the metropolis of Lyon and the Pays d'Aurillac; the metropolis of Brest and the Pays Centre Ouest Bretagne; the metropolitan territory of Toulouse and the Massif des Pyrénées; and the urban community of Le Creusot – Montceau les Mines and Natural Regional Park of Morvan.

In July 2016, the framework for a new State-metropole pact (*pacte Etat-métropoles*) was signed. It recognises the excellence in the 15 French metropolitan areas labelled as a metropole as well as the importance of the polycentric urban network for the development of the territories linked to these metropoles. One axis of this pact focuses on the relations of interdependence with the surrounding peri-urban areas and the small and medium-sized cities nearby. The pact also commits the parties to identify good practices in territorial co-operation.

Source: CGET (2015), Note d'information sur les contrats de réciprocité ville-campagne; CGET (2015), Point sur l'expérimentation de contrats de réciprocité, *www.logement.gouv.fr/experimenter-les-premiers-contrats-de-reciprocite-ville-campagne-crvc* (accessed 22 June 2016); *www.gouvernement.fr/conseil-des-ministres/2016-07-06/le-pacte-etat-metropole* (accessed 18 July 2016).

Remote rural regions can benefit from forming rural-rural partnerships

While the majority of rural people live in close proximity to an urban centre, the majority of rural territory is far from an urban place. Rural communities in remote rural regions tend to be even smaller than those in rural regions close to metropolitan areas. Unlike the rural-urban case where there are clear complementarities among rural and urban places, in the rural-rural context there are more similarities among places than differences. But, while being highly similar can lead to competition, the necessity to pool limited resources can lead to collaboration. Increasingly, local governments in remote rural regions are finding that they can no longer afford to maintain independent schools, independent emergency services, or even independent solid waste facilities.

Only if resources are pooled and responsibilities for particular tasks are fairly distributed among multiple rural governments, can adequate services be provided at an affordable cost. In many countries service standards are being raised by national governments even as they cut subsidies for their provision. This leaves small rural places where service cost delivery is high with few choices other than collaboration. In remote rural regions where communities are in close proximity, the importance of collaboration is reinforced by there being a single labour market, which results in everyone benefiting if employment opportunities expand in any of the communities.

Closer collaboration among proximate local governments can strengthen development efforts and the potential to provide a better quality of life and a better business environment. Sometimes it takes action by senior governments to bring this about. For example, between 1979 and 2002, the province of Québec, Canada, reorganised rural county governments by dissolving traditional administrative boundaries. Subsequently, the province realised that the communities in the new administrative units lacked a tradition of working together. To overcome this, it introduced the Rural Pact (*Pacte Rurale*) in 2002, which provided several rounds of multi-year funding to support a broad variety of joint actions by local governments that was mainly intended to facilitate better collaboration in order to ultimately lead to the creation of a bottom-up regional development strategy. This Rural Pact programme had a regional focus, embraced a multi-sectoral approach, created a long-term framework for collaboration, empowered community actors and was adaptable to local contexts. A new National Rural Policy 2014-24 has been issued, along with a new Rural Pact signed in the spring of 2014 (Box 4.14).

Rural governments can partner with "third sector" organisations to improve well-being

In small rural communities, volunteers commonly provide services that are either provided directly by local government employees or by private firms in metropolitan areas. For example, volunteers may staff the local fire department or provide transport services when there is no bus or taxi. In small places there are demands for services but insufficient volume or prohibitive costs make them unfeasible for government or private enterprise to provide. However, volunteers may be willing to provide these services with support from local government both because they are direct beneficiaries if the service exists and because they have a strong desire to improve the quality of life in their community.

However, relying on volunteers alters how government can behave. In particular, governments may have to cede authority to volunteer organisations in areas where it would normally be in charge. Otherwise, volunteers may abandon their activity, leaving the situation worse off than before. In addition, it is important that volunteers be cultivated since public recognition can be an important form of compensation and a way to motivate additional volunteers.

Public-private partnerships in a rural setting can strengthen both governments and firms

Public-private partnerships (PPPs) try to bring the service delivery role of government into harmony with the profit objective of firms. While the best known examples involve major infrastructure projects that link large city or provincial/state governments with large corporations, PPPs can also be found in small rural regions. A similar approach is found in every case. A government wishes to improve conditions in a territory under its jurisdiction and sees engaging with a private firm to accomplish this as a cost-effective and timely way to meet the objective. The private firm in turn sees the potential for an adequate rate of return on its investment in the PPP. Risk should be shared equally between both parties in the agreement.

These conditions restrict PPPs to areas where a clear revenue stream can be identified either from users or government. Typical examples include when local governments in rural areas contract with a private firm to provide services such as garbage collection, snow removal or road maintenance because the cost for a small local government would be far higher than for a private firm that can serve multiple jurisdictions, or use its equipment and labour for multiple purposes. Other relevant examples involve the colocation of public and private services in a single building where some costs can be shared and colocation reduces user costs. National strategies such as, "The Pub is the Hub" in the UK allow colocation of: postal functions, meetings for local groups, elderly services and other functions to occur at a village pub. A singular case is in the village of Trangsviken in Sweden where a local group used the assets of a declining community church to leverage the construction of a new community centre that houses: a library, a chapel, pharmacy, restaurant, meeting rooms and a day care centre.

Approaches to resolving local problems can require bringing new players to the table

The problems confronting rural regions are highly diverse and the resources available to apply to these problems are held in a wide variety of hands. Given this, it is important to find ways to bring potential stakeholders together. While in principle, the small size of rural places should make this a relatively easy task, the reality of most rural regions is that there are strong factions, even in small places, that have long traditions of not co-operating. In an environment where local resources are scarce, the lack of co-operation can be devastating. Conversely, if new ways to build collaborative efforts can be found, there is a much stronger chance of an inclusive "bottom-up" development strategy emerging that does not rely only on national resources and leadership for action. The small island municipality of Ama-Cho Japan is an illustrative example of such new collaborative efforts (Box 4.13).

Box 4.13. **Community driven and collaborative local revitalisation in Ama-cho, Japan**

The small island municipality of Ama-cho in Shimane Prefecture offers an excellent illustration community driven local revitalisation. Ama-cho (Shimane Prefecture) is a municipality on the island of Nakanoshima, one of the four inhabited islands of the Oki Archipelago in the Sea of Japan. In 2013, it had a population of 2 343 and an estimated population density of 69.6 persons per km^2. With an economy based primarily on agriculture and fisheries, Ama saw its population fall by more than 70%, from almost 7 000 in 1950 to less than 2 000 a half-century later. It has since begun to grow again, attracting an influx of new residents from elsewhere, and the local economy has picked up considerably. The area is viewed as a model for regional revitalisation. Its turn-around involved a multi-partner community driven approach.

Box 4.13. **Community driven and collaborative local revitalisation in Ama-cho, Japan** *(cont.)*

Falling population and the consequent strain on public finances generated considerable pressure on Ama to merge with its larger neighbour during the Heisei merger wave of the early 2000s, but the town's leaders feared the resulting loss of identity and control over their own fate. They were afraid of being neglected as a small part of a larger municipality. Retaining independence, in turn, meant drastic cuts in spending: the mayor and other municipal staff took large pay cuts, some residents surrendered benefits such as public transport subsidies for the elderly, and the community pulled together to provide some services informally.

Ama was perilously close to being unable to sustain its school, which at one point had just 89 pupils and could not maintain enough staff to ensure a full range of subjects, let alone high-quality programmes. In response, Ama began working to attract "exchange students" from cities in Japan – young city-dwellers keen to spend a semester or a year in a rural setting – and to introduce new curricula, such as regional studies and career planning. As a result, student numbers nearly doubled, allowing an expansion in the number – and range of qualifications – of teaching staff. There are plans to begin attracting overseas exchange students as well. The Oki Dozen learning centre was established to help students outside of school to prepare for national exams and future careers.

Ama has in recent years benefited from important product innovations. The best-known is the cell-alive system (CAS) for freezing seafood products in a way that retains more of the quality of fresh produce than other technologies. This allows for the marketing of Ama's rock oysters (another new product) much further afield and at higher prices than would otherwise be possible. Other new ventures include the raising of Oki premium beef (50% of which has been given the highest possible grade of A5) and seaweed cultivation. Many of the above changes were the fruit of collaboration between private entrepreneurs and the municipality. For example, a public-private partnership was established to create a sea-cucumber processing facility, which now exports to the People's Republic of China. This co-operation has been most evident in efforts to market Ama-cho to Japan and the rest of the world.

Ama-cho's experience is instructive in a number of ways, and the lessons it holds are relevant to remote rural communities that are struggling for survival elsewhere in Japan and, indeed, around the OECD. First, it is important to note that Ama-cho's turn-around took time and that there were numerous false starts and failures: the town had been struggling with decline for decades before it hit upon a mix of policies that enabled it to change trajectory. Secondly, there was no "silver bullet", no single intervention that put the town on course for recovery: on the contrary, the change in Ama-cho's fortunes has been the product of a multi-faceted strategy. It involved measures to put public finances in order; innovation in public service provision (especially education); innovation and entrepreneurship that combines technologies from elsewhere with local assets; and a mix of public and private initiative, as well as public-private collaboration. Thirdly, Ama-cho's turnaround was engineered locally, it was not the result of large-scale intervention or funding from without. Finally, Ama-cho has not turned in on itself but has rather reached out to the world, working to export its products and attract visitors and newcomers. One characteristic of many remote rural communities, particularly islands, is a failure to see residents as a fungible commodity: there is little interest in attracting newcomers and selling one's home to an outsider is frowned upon (Chavez, 2014).

Source: Quarshie, J. (2014), "The Town That's Battling the Demographic Tide", *The Japan Times*, 21 September; Abe, H. (2014)", Pursuing local economy and well-being in Ama Town, Shimane Prefecture", *JFS Newsletter*, No. 140, April; Ama-Cho (2015), "A bold challenge from a tiny remote village", brochure, Oki, Ama-cho; Chavez, A. (2014), "On this island, depopulation isn't the problem – inertia is", *The Japan Times*, 27 August 2014, *www.japantimes.co.jp/community/2014/08/27/our-lives/island-depopulation-isnt-problem-inertia/#.V07rZ_l95D8* (accessed 1 June 2016).

Policy approach: Community capacity building

Community capacity fosters economic and social resilience

Community capacity underpins the implementation of rural policy. Simply channelling money to rural areas is not enough to address their needs. Long term capacity building in communities makes them more engaged in processes of development and more resilient to shocks. But what is community capacity? And where does it come from?

Community capacity involves both tangible assets and intangible assets. Tangible assets include services, infrastructure, natural resources, and cultural amenities. Less tangible assets can include local skills, social cohesion, capacity for action, adaptability and openness to others. Community capacity building encourages local actors – residents, businesses, faith groups, non-profit organisations, industry/business associations and so on – to work together, make collaborative decisions and develop a common vision for their community's future development.

Community capacity building requires knowledge about the opportunities and challenges facing a place. It requires overcoming conflict and division to work collaboratively both within and among communities and other levels of government. Some communities may have a lot of capacity already, but for others, capacity needs to be fostered and developed. Achieving this rests on engaging local actors who see a stake in community and economic development and who are able to collectively act on opportunities.

Across OECD governments there has been a reduction in redistributive policies since the 1980s, as well as an increasing focus on identifying and targeting local economic opportunities. However, there remains reluctance by many national governments to actually devolve responsibility and build capacity at the local level. Continuing control of decision making at national levels creates little incentive for rural people to engage in community and economic development. Experience with LEADER in the EU, Québec's rural policy (Box 4.14), and the Micro-Regions programme in Mexico, all point to the possibility for effective local leadership if national governments are prepared to invest in building this capacity.

Box 4.14. **Empowering local government and civil society actors in Québec, Canada**

Québec has one of the most advanced policy approaches to promote rural development in the OECD area; it is closely in line with the New Rural Paradigm (OECD, 2010b: 18). The province's rural policy ("*le Politique nationale de la ruralité*", PNR), was first launched in 2002. The latest iteration is for 2014-24. Regional county municipalities are the locus of intervention, ownership and decision making under PNR and the policy, directed from the *department of Affaires municipales et des régions et occupation du territoire*, is very much focused on empowering local government and civil society actors (*Solidarité rurale du Québec*, 2013, 2016).

A recent OECD territorial review of rural policy in Québec describes this approach as being based on networks of small and medium-sized communities that feed into the "historic social priority of occupying land to protect Québec's cultural heritage" in such a way "that stimulates ownership both among levels of government and within society" (OECD, 2010b: 17).

Box 4.14. **Empowering local government and civil society actors in Québec, Canada** *(cont.)*

Rural Québec is quite different from other rural areas in Canada. Employment in the former has increased on average since the 1980s, there has been population growth, and the economy is increasingly diversified, although these trends are not uniform across geographies (OECD, 2010b). However, for comparability purposes, it is the institutional landscape that is of interest here. The PNR is structured as a formal partnership between the provincial government and local governmental institutions and networks, each with defined roles and formalised obligations. This is a true devolution of power to the local level, because it also involves the accompanying resources. Further, the PNR outlines formal commitments related to rural development of other governmental departments and agencies, presenting a co-ordinated effort. Finally, the plan explicitly values and prioritises cultural and social outcomes alongside economic ones. Related to this, indicators for success entail both quantitative and qualitative components (e.g. quality of life, sense of belonging and community engagement) (*Affaires municipales et des Régions*, Québec, 2006: 54). The PNR approach has been described as "innovative public policy offering a genuine model of sustainable territorial development" – one which entails both regional development and rural development elements and subsidiarity (Jean, 2012).

Québec invests in community capacity building to a greater extent than other provinces in Canada (OECD 2010b: 200). Granted, the approach taken in Québec is grounded in the province's own historical and political economy. Nevertheless, the institutionalised partnership process with local governmental actors offers a model of best practice for other jurisdictions.

Source: OECD (2010b), *OECD Rural Policy Reviews: Québec, Canada 2010*, *http://dx.doi.org/10.1787/9789264082151-en*; Affaires municipales et des Régions, Québec (2006), "Politique nationale de la ruralité: Une force pour tout le Québec", Gouvernement du Québec; Jean, B. (2012), "Les territoires ruraux au Québec: vers un modèle de développement territorial durable", *Revue d'Économie Régionale & Urbaine*, Vol. 4, pp. 649-671; Solidarité rurale du Québec (2013), "Politique nationale de la ruralité" *http://www.ruralite.qc.ca/fr/Ruralite/Politique-nationale-dela-ruralite-PNR* (accessed 30 March 2016); Solidarité rurale de Québec (2016), "Politique nationale de la ruralité (PNR)" *http://www.ruralite.qc.ca/fr/Ruralite/Politique-nationale-de-la-ruralite-PNR* (accessed 18 July, 2016).

Community capacity building is supported by place-based and bottom-up policy frameworks

Community actors are critical to the success and resilience of rural areas. Governments can support community capacity building by working with community based actors towards common goals. Considerations about the types of investments that should be made in rural communities should flow alongside decisions about how priorities are determined and who should be involved in decision making.

Place-based policies can help to improve community capacity. Across the OECD there are many positive examples of how this has been effectively done. There are, for example; programmes in Korea (Saemaul Undong Community Development Program), and Germany (Active Regions), to name but two. Effective policy and project/programme design requires knowledge of underlying local conditions and trends and the ability to react to them in a timely fashion. The deployment of optical networks through collaborative approaches in Sweden are a case in point – from public-private co-ordination to overcoming legal and regulatory issues, timeliness and flexibility has made such projects a success (Box 4.15).

Box 4.15. **Deployment of fibre optical networks through collaborative approaches**

As an increasing amount of economic and social activity is undertaken over communication networks it becomes more challenging to be restricted to low capacity broadband when living in some rural or remote areas. Given that most countries have regions that are sparsely populated, it raises the question of how to improve broadband access in these areas.

There is a growing "grass roots movement" in Sweden to extend optical network fibre coverage to rural villages. There are around 1 000 small village fibre networks in Sweden, in addition to the 190 municipal networks, which on average connect 150 households. These networks are primarily operated as co-operatives, in combination with public funding and connection fees paid by end-users. People in these communities also participate through volunteering their labour or equipment, as well as rights of way in the case of the owners of land. The incumbent telecommunications operator, as well as other companies, provide various tool kits and services for the deployment of village fibre networks in order to ensure that these networks meet industry requirements. As the deployment cost per access in rural areas can be as high as four times the cost in urban areas, such development may not attract commercial players and rely on such collaborative approaches.

Aside from any public funding, Sweden's experience suggests village networks require local initiatives and commitment as well as leadership through the development of local broadband plans and strategies. They require co-ordination with authorities to handle a variety of regulatory and legal issues. They also demand competence on how to build and maintain broadband networks. The most decisive factor is that people in these areas of Sweden are prepared to use their resources and contribute with several thousand hours of work to make a village network a reality.

In the United Kingdom, Community Broadband Scotland is engaging with remote and rural communities in order to support residents to develop their own community-led broadband solutions. Examples of on-going projects include those in Ewes Valley (Dumfries and Galloway), Tomintoul and Glenlivet (Moray), which are inland mountain communities located within the Moray area of the Cairngorm National Park. Another example of a larger project can be found in Canada and the small Alberta town of Olds with a population of 8 500, which has built its own fibre network through the town's non-profit economic development called O-net. The network is being deployed to all households in the town with a number of positive effects reported for the community.

Source: Mölleryd, B. (2015), "Development of High-speed Networks and the Role of Municipal Networks", *OECD Science, Technology and Industry Policy Papers*, No. 26, *http://dx.doi.org/10.1787/5jrqdl7rvns3-en*.

Good community-based information can empower places to respond to change and develop new opportunities

Effective bottom-up community and economic development requires large amounts of information and the involvement of subnational entities. That information should pool knowledge regarding untapped resources, emerging needs, and short- and long-term trends in rural communities. Governments can support community actors by providing them with good information to meet their needs in accessible formats. But, this runs both ways – communities are also a strong source of information about themselves, which is valuable in the structure of public policies and support. Better public engagement and knowledge sharing with communities can help structure more effective responses. This should entail community actors learning from each other and governments at different levels also sharing knowledge and expertise. Governments play an important role as knowledge brokers by making

connections between people and communities and by creating opportunities for shared learning. This is particularly important in the voluntary sector where limited resources mean that groups often have few chances to meet and learn from one another. This may require the development of new methodologies to capture and share community-based knowledge.

Public policy can thus support communities to identify their local assets and amenities to make the most of them. Because rural areas account for more than 75% of land in OECD countries, policies for rural places play an important role in land management and must therefore take into account a range of environmental and economic development issues. Rural stewardship of a nation's natural resources is of concern to all given the potential for widespread harm that can occur through the failure to appropriately deal with natural systems related to land, water, air and other associated natural resources. Some of the most important antiquities, historical sites and other recreational amenities that can be important for rural economic development, such as ski and water resorts, are in rural areas. Policy makers should work with communities to identify and valorise the wide range of resources of rural areas and their use.

For rural firms, the connection to community assets and community dynamics is also important. Rural firms often produce goods or develop skills that reflect place-based specificities, such as access to input materials. OECD research has pointed to numerous examples of successful rural business development which is based on local assets and the involvement and empowerment of community actors in the development process. While many rural firms are focussed on tradable activities and therefore outward-oriented in the markets they seek, community dynamics remain important to their success. Governments can play an important role by helping to build capacity at the local level and support the development and valorisation of local assets.

Capacity building provides an analytic function in rural economic development. It encourages and strengthens all of the other elements of an economic development strategy. Community capacity building enhances social capital, which is really about increasing the ability of actors to work together. The European Union's LEADER programme embraces such an approach (Box 4.16).

Box 4.16. **The European Union LEADER Programme**

The LEADER programme (*Liaisons entre actions de developpement de l'économie rurale*) is the central mechanism for fostering rural development and innovation in the European Union. It arose out of a growing consensus in the 1980s that endogenous models were the best way to deal with regional disparities (Diaz-Puente, Yague, and Afonso, 2008: 480). LEADER was established by the European Commission in 1991 and has since been renewed through several iterations (presently referred to as LEADER+, programming period 2007-13). Though it is an EU-wide policy, it is locally-scaled and framed within a discourse of bottom-up participatory governance. Local Action Groups (LAGs) identify and implement local development strategies and are meant to include a combination of private and public partners, but also a variety of social and occupational groups. This process is meant to engender meaningful local capacity building over a long term. Managing authorities of member states (national, regional or local, private or public bodies) fund LAGs. At the pan-European level, the European LEADER Association for Rural Development (ELARD, founded in 1999) acts as a network for LAG groups, of which there are over 800 across participating member states. Since its establishment, features of the LEADER programme have been adopted into the rural policy of member states (Farrell and Thirion, 2005). Further, it has become the mainstream approach for other EU initiatives (OECD, 2005: 23).

Box 4.16. **The European Union LEADER Programme** *(cont.)*

Recent iterations of the LEADER Programme have taken the important step of allowing communities to combine different EU funds and in doing so, take multi-sector needs into account. This multi-fund programme is called "Community-Led Local Development" (CLLD) – it helps communities forward more cross-cutting and integrated projects that better link rural, urban and fisheries areas. The four funds that can be combined under the new CLLD programme are: the European Regional Development Fund, the European Social Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund. CLLD is a specific tool for use at sub-regional level, which is complementary to other development support at local level. It is a programme that can be used to mobilise and involve local communities and organisations to contribute to achieving the Europe 2020 Strategy goals of smart, sustainable and inclusive growth, fostering territorial cohesion and reaching specific policy objectives.

LEADER prioritises capacity-building through the activation of social capital. Herein lays a similarity with Québec's PNR. The concept of social capital is normally traced to French sociologist Pierre Bourdieu, who defines it, distinct from economic and cultural capital, as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance or recognition" (Bourdieu, 1986: 248; 1980, cited in Portes 1998). In the plainest of terms, it treats relationships with others as a resource, i.e. a form of capital, with an exchange value. As an operationalised concept, it can be difficult to empirically evaluate. Hence, numerous studies focus on putting evaluative criteria around social capital – e.g. the work of Nardone, Sisto & Lopolito (2010), which establishes five criteria to evaluate the consequences of social capital within the LEADER programme, and that of Diaz-Puente, Yague and Afonso (2008), which employs "empowerment evaluation". Accompanying this interest in social capital is a shift towards social production and away from social control – toward "power to" and away from "power over" (Shucksmith, 2010). The key intention of the LEADER programme, fitting with this conceptual framework, is to introduce "long term rural development processes based on the capacity building of local actors rather than simply on the transfer of funds" (Nardone, Sisto and Lopolito, 2010: 64). Capacity building as a concept is intimately linked to the development of social capital – one flows from the other. Thus, the development of social capital is viewed as an instrument through which to achieve the policy goals of LEADER.

The LEADER programme is seen as one of the most successful initiatives reaching out to local areas and people to promote a collaborative and integrated approach to rural development. Said one scholar, "few other EU programmes have been able to make comparable connections, and thus establish similar popular legitimacy" (Vidal, 2009: 579). The programme's persistence since the 1990s, and the adoption of its principles by national rural development programmes, indicates that there is much of value in this approach. The central importance of social capital formation to local capacity and the broader aims of rural development offer lessons for other jurisdictions.

Source: Diaz-Puente, Yague and Afonso, 2008; Farrell and Thirion, 2005; OECD, 2005; Bourdieu, 1986; Portes, 1998; Nardone, Sisto and Lopolito, 2010; Shucksmith, 2010; Vidal, 2009. See bibliography for full details.

In rural regions there is often too little attention paid to systematically improving the capacity of local people to work with each other, with nearby communities, and with national governments. In a world where "top-down" policies are out of favour, it has become essential that efforts to increase local capacities are a first step in constructing this "bottom-up" development approach which was first advocated in the New Rural Paradigm and now with the Rural Policy 3.0.

Conclusion

In light of new evidence, rural development policies need to evolve towards Rural Policy 3.0. Many OECD countries are found to be shifting their policies towards these practices – from the European Union's Community-Led Local Development to community revitalisation in Japan and France's reciprocity contacts. These are among the many promising programmes and practices which are cross-sectoral and framed in a holistic way so as to focus on improving quality of life for residents, boosting firm productivity in non-farm sectors and enhancing the efficiency of services.

However there is also much scope for further reform. The adoption of the Rural Policy 3.0's major tenants by OECD countries has been varied. In many places, rural policy remains predominantly focused on agriculture. In implementing the Rural Policy 3.0, countries will need to rethink some of their approaches in order to harness new growth opportunities, invest in enabling factors of productivity growth, strengthen the capacity of local communities and build rural-urban linkages.

Rural areas are indeed places of opportunity, and policy makers need to further adopt this new mindset. They can work differently with communities to enhance their social, economic and environmental well-being. The Rural Policy 3.0 is fundamentally grounded in a place-based approach which, in order to be successful, requires the active engagement of local communities. Some places have a great deal of community capacity while in other places, such capacity needs to be nurtured and fostered. In either case, effective rural development requires new ways of working both between different levels of government and across all the local actors, businesses, community groups and others. This rich landscape is both a valuable source of information about communities' assets and strengths, and offers the potential of partnership to implement projects and programmes. A bottom-up approach is critical to develop and implement successful rural policies.

Notes

1. For an overview of the literature on "counter-urbanisation", see Stockdale, A., A. Findlay and D. Short (2000), "The repopulation of rural Scotland: Opportunity and threat", *Journal of Rural Studies*, Vol. 16(2), pp.243-257.
2. Per the Regional Outlook Survey, 2015.
3. Per the Regional Outlook Survey, 2015.

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PART III

Regions and cities implementing global agendas: A policy forum

The chapters in Part III should not be reported as representing the official views of the OECD or of its member countries. The opinions expressed and arguments employed are those of the author(s).

PART III

Chapter 5

Investing in "voice" to implement global agendas

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The recently adopted global agendas, notably the Sustainable Development Goals (SDGs), the Paris Agreement of COP21, Habitat III, Financing for Development and the Sendai Framework, provide a vision for common values through a global governance system. This chapter raises questions about when and how localising these agendas makes sense to ensure that policy meets people's expectations and needs by giving them a greater "voice" in the process and implementation. The chapter considers three questions: i) Are regions and cities indeed the places where policies and people meet? ii) Do regions and cities have the right tools and capacities to localise SDGs and other targets? and iii) How can national and subnational governments work better together, using a more structured engagement with people in the process?

Introduction

The set of new global agendas in 2015 and 2016 can be celebrated in many ways. They have generated momentum and are a victory for building legitimacy in our global governance. They require us to look forward and set a vision for the future that considers the quality of life for people. Whether it is stagnant labour productivity, ageing and rising inequalities in OECD countries, or population growth and urbanisation in developing countries, all countries share the common challenge of ensuring a sustainable and inclusive future. Many of these recent global agreements are related, but they help identify where different fields of action can contribute to societal progress in multiple dimensions (Table 5.1).

Table 5.1. **Key 2015-16 global declarations**

March 2015	Sendai Framework for Disaster Risk Reduction 2015-30
July 2015	Addis Ababa Action Agenda of the Third International Conference on Financing for Development
September 2015	Transforming Our World: the 2030 Agenda for Sustainable Development
December 2015	Paris Agreement within the United Nations Framework Convention on Climate Change (COP 21)
October 2016	The New Urban Agenda* (Habitat III)

* Title at the time of printing.

At the same time, governments today face continuing and renewed challenges to demonstrate that they generate real change in people's lives – they need to (re)build trust. People are increasingly aware of the scale of challenges such as inequalities, migration and climate change. They expect governments to listen to their concerns and to look beyond electoral timetables and bureaucratic silos to find durable solutions.

Achieving progress across the Sustainable Development Goals (SDGs) and other global targets will require governments to work across policy areas and levels of government to steer the delivery of these ambitious goals. However, this is not an easy task and the obstacles to joined-up government are well known. For example, immediate economic and social pressures often crowd out longer-term strategic policy initiatives. In addition, public budgets and accountability systems are usually aligned with departmental structures and have difficulty tracking progress and valuing outcomes that occur in multiple policy areas. But progress requires more than governments simply co-ordinating amongst themselves.

There are different elements of inclusive governance that could help increase the likelihood of success to achieve these global targets, and this chapter focuses on one in particular, "voice". But the other elements of inclusive governance are intimately linked, such as design, delivery, and accountability (OECD, 2015a). Governments can work better in an integrated fashion if they engage with people on their needs and expectations, giving them a voice to set the agenda, but also to help achieve its aims. Giving "voice" therefore means engaging with people at all levels of government and ensuring that the process does not "leave people behind."

The issue of localising SDGs and other agendas raises some provocative questions. More research is needed to check the assumptions and look for evidence on what works to give people a voice in ways that will meet the high expectations set on a global scale. Questions to consider include:

1. Are regions and cities indeed the places where polices and people meet?
2. Do regions and cities have the right tools and capacities to localise SDGs and other targets?
3. How can national and subnational governments work better together, using a more structured engagement with people in the process?

Are regions and cities indeed the places where policies and people meet?

Several of these global agendas have begun to recognise the role of subnational governments as actors in the global landscape. While some seeds have been planted in prior agreements, and some agreements do not go far enough in recognising these facts, there is progress. The Sendai Framework notes explicitly the role of the "national and local level" under each of its four priorities for action. The subnational level is found front and centre in addressing disaster risks.[1] The Addis Ababa Action Agenda recognises that "expenditures and investments in sustainable development are being devolved to the subnational level"[2], which implies a need to strengthen local capacity. The Paris Agreement has taken steps in acknowledging the role of subnational governments. "…the importance of the engagements of all levels of government and various actors… in addressing climate change"[3] is recognised. Further, "… adaptation is a global challenge faced by all with local, subnational, national, regional and international dimensions"[4] and "capacity-building should be country-driven…including at the national, subnational and local levels"[5].

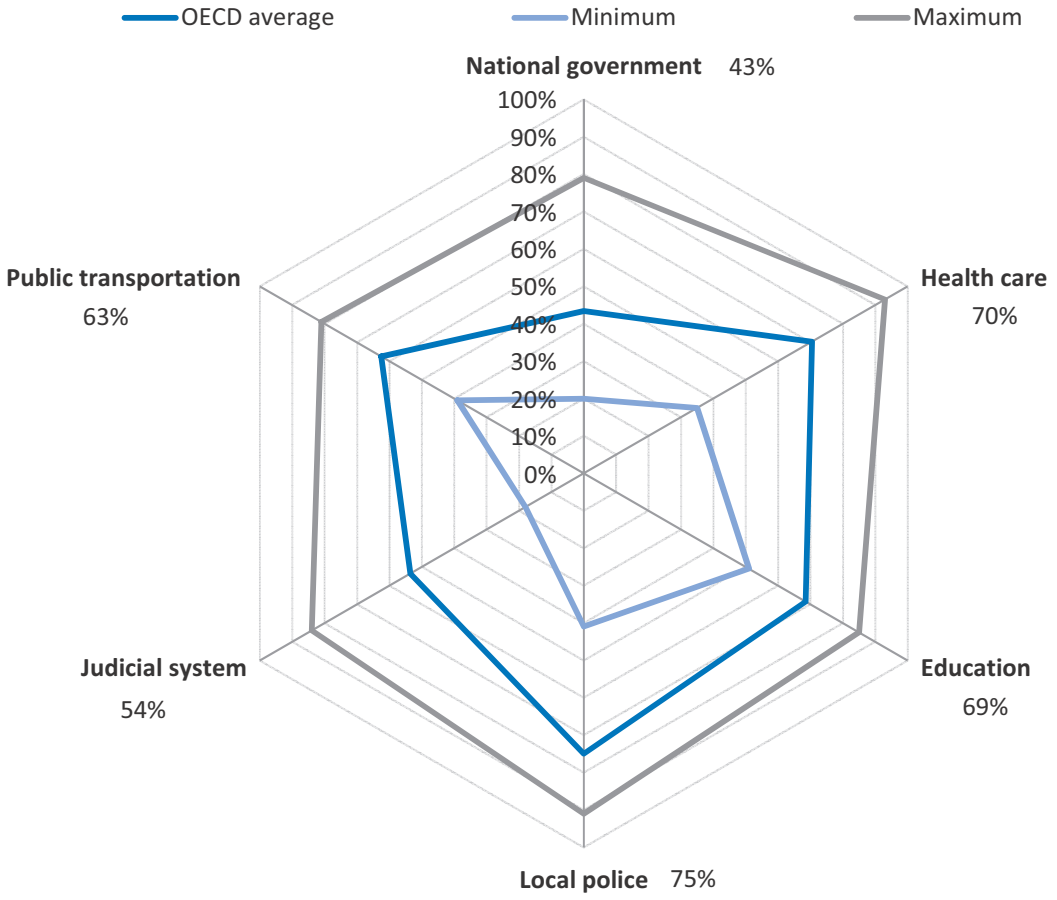
While modest in their language on this point, the agendas nevertheless turn the spotlight on cities and other subnational governments. Cities have been the beacon of economic and social development throughout the ages, from the city-states of antiquity to the leagues of cities in the middle ages to the global cities of today. It also makes sense to turn to cities as this "metropolitan century" will see the share of the global population living in cities reach 70%. Another notable share of the rural population lives in the vicinity of cities, and that proximity offers opportunities. It should be noted that many metropolitan areas are larger than some countries, but not with the same set of policy tools at their disposal.

The achievement of SDGs and other targets will require national governments to work with regions and localities. SDG 11 has a special focus on cities, and this designation was based on significant efforts to raise awareness of the subnational role. It is nevertheless difficult to imagine the achievement of any goal without considering that national performance is the sum of its parts, and since a chain is only as strong as its weakest link, national progress depends on the ability to ensure progress everywhere, not only where it is easy. Lessons from the world's experiences with the Millennium Development Goals (MDGs) found that success in achieving targets was uneven and that national and global averages do not necessarily ensure that the most marginalised groups are reached.

Public investments and services are critical for these goals, and people tend to trust what they see in action where they live, more so than in a national government per se. Within the OECD, while only 43% of people report confidence in their national governments, a much higher share are satisfied with local services such as police (75%) or education (69%) (Figure 5.1). There is a strong correlation between trust in local public services and trust in local public institutions.[6] Therefore, it is fair to say that generally people trust more subnational institutions over national ones. A country example of higher levels of trust at lower levels of government is found in the United States, where trust in local government (72%) is higher than in regional (i.e. state) governments (62%).[7]

Figure 5.1. **Greater trust in local public services than national government**

Self-reported confidence and satisfaction with national government, public institutions and public services in OECD countries, 2014



Source: Calculations using the Gallup World Poll Database.

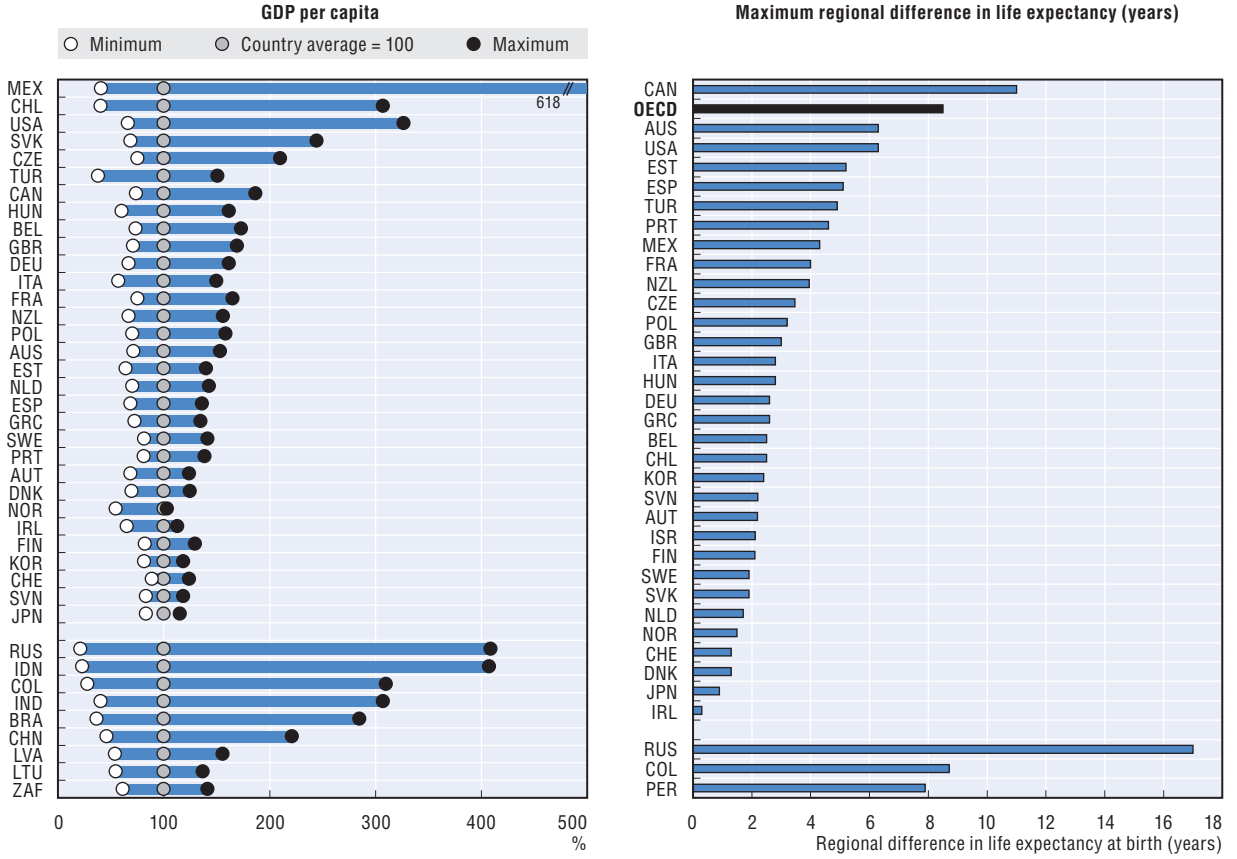
Better subnational data in all places is a pre-requisite for tracking progress related to people's subjective evaluation as well as actual outcomes. Indeed, differences across regions within OECD countries in terms of GDP per capita, the standard yardstick of progress, are greater than across countries (Chapter 1). While in some countries the leading region may be up to 15 times richer per person than the worst off region, generally in the OECD that figure is between 1.5 to 3.5 times richer (Figure 5.2). But what does it mean for societies when some regions have twice the GDP per capita levels of another? In some cases those differences may be offset by lower living costs or other compensating

well-being factors. In other cases, these differences may simply translate into lower access to services and opportunities and thus worse outcomes for people living in those places.

Considering a broader concept of well-being orients our thinking away from simple yardsticks to consider the wider range of dimensions that constitute progress for people. Such approaches help policy action focus not simply on outputs that are the easiest to measure (new roads built) but on the outcomes for people (commuting time to jobs or exposure to air pollution). Well-being differences at the regional, city or even neighbourhood level can be quite striking. Life expectancy can be several years higher in one region of a country as compared to another (Figure 5.2). Across neighbourhoods in the same metropolitan area, such as London or Baltimore, this difference in life expectancy can be as high as 20 years or more. The OECD's work on well-being offers a valuable tracking tool for societal progress in dimensions beyond GDP.[8] It considers both material and non-material aspects of well-being, and at the subnational scale, place-based elements that influence well-being.

Addressing different elements of well-being, when applied to regions and cities, brings to the fore a place-based dimension. Evidence shows that above and beyond individual characteristics, the unique conditions in a particular place can further add to, or detract from, well-being today and in the future (see also Chapter 1). Multidimensional living standards that combine income, health and unemployment are found to have wider disparities across OECD regions than income alone (Veneri and Murtin, 2015). In other

Figure 5.2. **Significant interregional gaps within countries in wealth and life expectancy**



Note: OECD value represents the difference between the maximum and the minimum national average life expectancy among OECD countries.
Source: OECD (2016a), *OECD Regions at a Glance*, OECD Publishing.

StatLink http://dx.doi.org/10.1787/888933412153

words, when different elements of well-being are considered simultaneously, the cumulative effect can result in some places being worse off on multiple dimensions, exacerbating disparities in well-being. Furthermore, place has a notable impact on subjective measures of well-being, i.e. what people report they actually feel. Indeed, one study found that regional characteristics explain 40% of the variation of OECD residents' self-reported life satisfaction, with individual characteristics explaining the rest of that variation (Brezzi and Diaz Ramirez, 2016). When policy approaches neglect these realities, this is done at the cost of leaving people in some regions or cities further and further behind.

This measurement agenda also calls for us to consider the appropriate regional and local scale. Statistics available at the subnational level, when they do exist, are often based on outdated realities as reflected in regional and local jurisdictional borders, sometimes set centuries ago. However, for achieving these different targets, statistics need to measure these realities. OECD work on "redefining urban" helps develop indicators at the metropolitan scale defined in a standardised way across countries (OECD, 2012). The OECD Metropolitan Database is a unique example of a tracking tool at this scale.[9] Understanding the dynamics of rural areas also requires more detailed classifications to better orient national policies to the needs of, for example, rural areas that are close to cities and those that are more remote (Chapter 3). Water is another sector where the "functional" area is not dictated by an administrative boundary.

OECD work on well-being and the definition of relevant subnational scales can also be useful models for non-OECD countries seeking to track their progress towards SDGs. Even if a national statistical office has not collected the data, regions and cities can use these tools to frame subnational efforts. New data sources, including big data, allow progress to be measured on what is relevant and at the appropriate geography. The development and tracking of indicators can be used to build a constructive dialogue with residents on what matters and how to overcome roadblocks to achieving those aims, as observed in several OECD regions (OECD, 2014a). Efforts need to be made to measure the right things, at the right scale, with the right data.

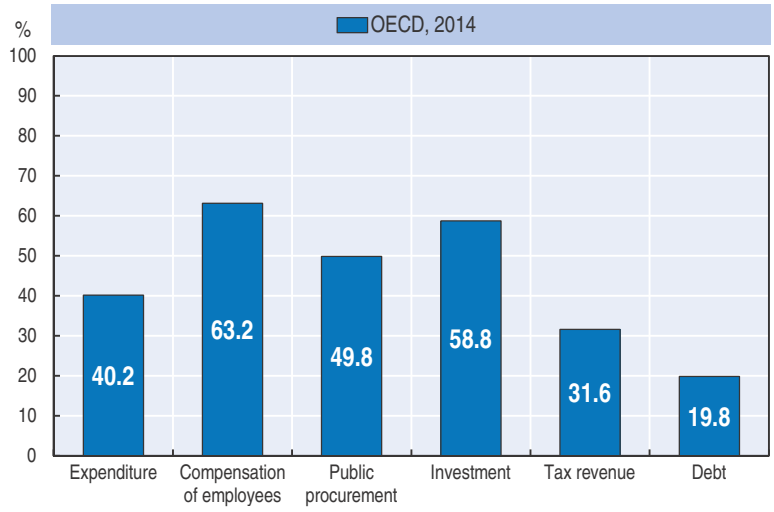
Do regions and cities have the right tools and capacities to localise SDGs and other targets?

Subnational governments have a number of roles to play and advantages in doing so

Subnational governments are already on the frontlines tackling these challenges. Indeed the spending and planning decisions made by regions and cities determine to a large extent the well-being of people and the conditions for achieving different targets. Within the OECD, for example, subnational governments are responsible for 59% of public investment and a large share of many other types of expenditure (Figure 5.3). The top investment areas for these subnational governments are economic affairs (including transport) and education. They are also managing many investments for housing, water, sanitation, and other public services that underpin the SDGs and other targets (OECD, 2016a). In developing countries, while the share of total government spending by subnational governments may be lower than in OECD countries, it is nevertheless growing. However, the demands may outstrip local resources and revenue generating capacities (see Chapter 7). Many land-use decisions that influence how settlement patterns occur are also very local. In terms of reducing greenhouse gas (GHG) emissions and adapting to climate change, according to UNDP, between 50% and 80% of investments for mitigation and up to 100% of investments for adaptation take place at the subnational and local levels (UNDP, 2016).

Figure 5.3. **Subnational role in public finance**

Share of subnational government spending in total government spending



Source: Calculations based on the Subnational government structure and finance database; *http://dx.doi.org/10.1787/05fb4b56-en*.

StatLink http://dx.doi.org/10.1787/888933412169

Meeting the infrastructure gaps to fulfil these different global targets therefore requires improvements in the governance of infrastructure at all levels. Analyses by the OECD and others have shown that better governance of public investment throughout the investment lifecycle is critical. The quality of that governance can enhance growth outcomes at the national and subnational levels (OECD, 2013). It can also help achieve cost savings and greater efficiency and productivity of that infrastructure. National governments play a key role by providing the right framework conditions, but subnational governments have a critical role in choosing the right investments and at the right scale. Whether it is for new construction or ongoing maintenance (the latter being the lion's share of public investment in OECD countries), those choices require local knowledge of needs and impact.

Cities and regions have in some places set more ambitious goals than national governments. In the area of climate change, for example, some cities have set, and outperformed, GHG emissions objectives set at the national level. The Carbon Neutral Cities Alliance (CNCA), a network of major cities such as London, Berlin and Copenhagen, is also pursuing the target to reduce their GHG emissions by 80% or more by 2050. In Copenhagen, for example, GHG emissions have decreased 31% since 2005, while its population increased 15% and the local economy grew by 18% (CNCA, 2015). Cincinnati, Ohio was the first large US city to opt for the provision of 100% sustainable electricity to its citizens and businesses, pre-dating a national plan (ICLEI, 2015). Thousands of subnational governments worldwide are active in setting targets.[10] Many organisations such as R20 (Chapter 11), C40, ICLEI and CNCA, among others, have brought together regions and cities to show leadership in combating climate change.

Regional and local governments are also able to develop inspiring innovations. It is hard to be innovative in tackling these myriad challenges in the same way across all places. Cities such as Cardiff have used climate change as an opportunity to address local social issues. With its high energy costs and low income households, Cardiff was a city with a fuel poverty problem. The city launched a project to heat the city through renewable energy

sources: by 2015, the city had managed to reduce household energy bills by USD 400 on average (C40, 2015). Washington, D.C. decided to purchase its power from renewable sources at a fixed rate, lower than fossil fuel power rates, for the next 20 years. This will reduce government emissions by 17% compared to 2013 and save taxpayer money through a smaller energy bill. The deal is the largest of its kind ever concluded by an American city and is expected to have a similar impact to planting 28 million trees (C40, 2015). Furthermore, it is expected to support jobs and investment in the wind energy sector. Cities and other non-national actors are inviting us to rethink our preconceptions about climate change mitigation. Some argue that the transition will yield a higher energy bill or that social challenges will remain. These initiatives show that this need not be the case, if we think smart, at the right scale and implement innovative policies.

However, there remain legitimate concerns about the quality and capabilities of all subnational governments

The quality of subnational governments is not uniform, and raises questions for their capacity to deliver in some locations. The European Quality of Government Index finds notable variation in quality across subnational governments, which can be higher in the same country than the difference across several countries. Importantly for addressing SDGs, one study shows that among European regions, 60% of the variation in the regional Human Development Index (HDI) is explained by the variation in the quality of governance (Charron, Lapuente and Dijkstra, 2012). They also find a positive and significant relationship between social trust and quality of government, although it is not clear which is the cause and which is the effect. There does not appear to be a consistent link between variations in the quality of government within a country (or generally higher levels of quality of government throughout a country) and political decentralisation. These findings raise interesting questions about when, where and how public participation in the policy process can be applied with more or less likelihood of success.

There is no clear trend regarding the prevalence or impact of corruption at subnational relative to national scale. Actions that are decentralised to subnational governments may narrow the scope for corruption by making politicians more accountable to the citizens they serve. Furthermore, the size of many procurement projects may be smaller than at national level. Alternatively, there may be greater opportunity and fewer obstacles to corruption (notably linked to procurement) at the local level compared to the national one, due to greater discretion of local politicians, weaker governance capacity at the local level, less developed local auditing functions and less visibility to the press and the public. So far, the research is inconclusive on the link between decentralisation and corruption (Shah, 2014).

A number of technical capacities such as in procurement and public-private partnerships may be difficult to ensure in all subnational governments. Institutional and workforce capacity can be particularly challenging for some subnational governments. In OECD countries, an ageing public workforce, high levels of turnover, and weakly competitive salaries, can make attracting the skills needed a challenge – precisely at a time when tasks, such as supporting innovation, addressing climate change, or engaging in more complex financial instruments, require new skills not previously held in many subnational governments. Large regions, particularly long-standing ones with significant autonomy and numbers of staff, can access a more diverse range of professional skills. The same is not necessarily true for small regions, municipalities, newly created regions, or subnational governments where the demands of decentralisation have outpaced growth in

administrative capacity. Smaller subnational governments simply do not have the scale individually to develop expertise in certain aspects of public procurement or public-private partnerships.

How can national and subnational governments work better together, using a more structured engagement with people in the process?

Many of these global agendas are tackling intimately interconnected problems where the particular conditions in a place matter. The 17 SDGs and related 169 global targets are an expression of the complexities of these challenges. For example, achieving the targets on water will also have a considerable impact on the targets relating to gender in developing countries. Better planned urbanisation processes will have important implications for CO_2 emissions. Improved rural development has considerable benefits for food security in rural areas (Chapter 10). Focusing on targets in a single-minded way ignores both the compounded benefits of joint action as well as the potentially perverse effects of supporting one target in a way that detracts from success in another target.

Regional, urban and rural development policy has emphasised a holistic approach to solving problems. Governments still operate in policy silos, with sectoral policies such as transport, often developed independently of the related policy areas, such as housing. The purpose of regional development policies and their adaptations in different types of urban and rural settings is to get the combination right for different circumstances. Ensuring access to quality education requires different measures in a capital city, and for different income groups within that city, as compared to a remote rural region. Regional development strategies will therefore differ across regions. OECD Territorial Reviews at cross-border, country, regional and metropolitan scale provide guidance on how to adapt those regional development strategies across different sectors to promote economic development and well-being in a holistic manner.[11]

National urban policies can improve the framework conditions for cities to function more efficiently. The OECD has been actively contributing to the Habitat III process, including as a co-lead with UN Habitat of the Habitat III Policy Unit 3 on national urban policies. National urban policy is a dynamic field among OECD countries as many countries are updating, or even creating for the first time, such policy frameworks (Chapter 2). More attention is being paid worldwide to the importance of such policies for urban development (Chapter 6). Indeed, national governments provide the frameworks that can help or hinder quality urbanisation that has implications for environmental performance, the productivity of firms and the quality of life for residents. OECD Urban Policy Reviews are a tool to help national governments in their quest to improve these national frameworks for a country's system of cities.

Designing better rural development policies can help unlock the economic, social and environmental potential of these areas to contribute to national prosperity. The OECD's 10th Rural Development Conference, held last year in Memphis (United States), issued a Chair's statement that highlights several considerations to guide rural policy going forward (Chapter 9). Part II of this Outlook highlights the different types of rural areas and the strategies to build on their strengths and address their challenges. The lessons from these experiences of applying different elements of a "Rural Policy 3.0" will be critical for achieving the SDGs and to ensure that rural areas are not left behind. The OECD Rural Policy Reviews are designed to help countries upgrade their rural development strategies to this version 3.0.

In addition to place-based policies, national governments can organise themselves in ways that address interconnected challenges, such as through a Centre of Government. These Centres are increasingly playing a leading policy co-ordination role on complex issues. They have different ways of providing a leadership role, such as: i) integrating cross-disciplinary perspectives into policy advice; ii) leading policy co-ordination via both traditional committee architectures and more innovative and informal channels; iii) facilitating resource sharing through a closer partnership with ministries of finance; and iv) supporting experimentation and testing of new delivery systems, many of which are based on shared service models (OECD, 2014b). These Centres of Government are therefore institutions that can help steer the delivery of complex agendas, such as the SDGs, because they can bring ministries or agencies to work together on cross-cutting issues. In some cases they are more policy neutral than sectoral departments, and their convening power can bring pressure to bear on departments to adjust policies and commit resources.

Working across levels of government between national and subnational governments requires the right tools. The OECD *Recommendation on Effective Public Investment across Levels of Government* highlights the importance of co-ordination across policy sectors, levels of government and different territorial scales (Box 5.1). For various reasons, such as information asymmetries, inadequate funding arrangements or poor capacity, effective co-ordination is difficult, both vertically and horizontally across jurisdictions. Central-local co-ordination is the area where advanced economies tend to fare worst among 15 dimensions of institutional quality for efficient public investment management (IMF, 2015). The Implementation Toolkit for the OECD Recommendation helps countries and regions put the principles into practice, with practical recommendations on how to link planning to budgeting, develop partnerships, or pool procurement or capital funding across jurisdictions.[12] Better governance at national and subnational levels is a critical backbone for achieving all of the SDGs, above and beyond Goal 16, which commits countries to build effective, accountable and inclusive institutions at all levels.

Multi-level governance is the term used to describe the relations between different levels of government, however there is also a need for a multi-level governance of public participation. The classic "ladder of participation" highlights that some forms of participation are actually not real participation, but rather are associated with education at best, and manipulation at worst (Arnstein, 1969). The ladder then progresses to include different forms of informing and consultation, but if these are available to the "haves" and ignore the "have-nots", they fail their purpose. Moving towards the top rungs, there are opportunities for partnership, delegated power, or even citizen control in the most extreme case. More research is needed to understand how the type and scale of participation influences policy outcomes. There are several types of engagement, and different scales at which it can occur. Better tools to map this out and identify the role at each level of government are still needed.

One area where the OECD has been working in-depth on stakeholder engagement is in the field of water governance, which has a strong local dimension. The water crisis is mainly a governance crisis (Chapter 8).[13] A recent report finds six guiding principles that are also relevant for other fields where stakeholder engagement is solicited (OECD, 2015b). This practical application recognises that there are costs and benefits associated with engaging stakeholders, and obstacles to overcome. But governments cannot afford to ignore their public, private and civil society stakeholders. The first step is to map all stakeholders who have a stake in the outcome, or that are likely to be affected, as well as

to identify their responsibility, core motivations and interactions. A second step is to define the ultimate line of decision making, the objectives of stakeholder engagement and the expected use of inputs. A third is to allocate proper financial and human resources, and to share relevant information for result-oriented stakeholder engagement. This is followed by the need to regularly assess the process and outcomes of stakeholder engagement to learn, adjust and improve accordingly. The report suggests that these engagement processes be embedded in clear legal and policy frameworks as well as organisational structures/ principles and by responsible authorities. Finally, it helps to customise the type and level of engagement to the needs and to keep the process flexible to changing circumstances.

Box 5.1. **OECD Recommendation on Effective Public Investment across Levels of Government**

Pillar I: Co-ordinate public investment across levels of government and policies

- Invest using an integrated strategy tailored to different places.
- Adopt effective instruments for co-ordinating across national and subnational levels of government.
- Co-ordinate horizontally among subnational governments to invest at the relevant scale.

Pillar II: Strengthen capacities for public investment and promote policy learning at all levels of government

- Assess upfront long-term impacts and risks of public investment.
- Engage with stakeholders throughout the investment cycle.
- Mobilise private actors and financing institutions to diversify sources of funding and strengthen capacities.
- Reinforce the expertise of public officials and institutions involved in public investment.
- Focus on results and promote learning from experience.

Pillar III: Ensure proper framework conditions for public investment at all levels of government

- Develop a fiscal framework adapted to the investment objectives pursued.
- Require sound and transparent financial management at all levels of government.
- Promote transparency and strategic use of public procurement at all levels of government.
- Strive for quality and consistency in regulatory systems across levels of government.

In many countries, it is youth that have been active in pushing governments to think about the environment and future generations, as they feel their voices are not heard. In fact, in several countries it is indeed younger people that have been plaintiffs in lawsuits against governments asking them to do more to address climate change. Their efforts are inspiring and make us all think about the future, and what is needed to make positive changes happen. However, the current state of affairs in OECD countries is not what it should be. Young people have limited information on how to engage with civic life, including how the political and decision-making systems work. Youth are concerned that politicians are not truly listening to their voices. There is also a lack of existing structures in place to encourage youth to participate and be engaged with civic life, such as youth parliaments, councils, and other participatory structures.[14]

Conclusion

Business as usual is not enough to achieve these global agendas, there is a need to invest in "voice" to engage with people for the right reasons and at the right scale. Changes may be needed to both the policies governments implement and the governance arrangements they use to do so, including governance that goes beyond government. The holistic approaches used in regional, urban and rural development offer lessons for how to better adapt the mix of policies to particular circumstances in achievement of these global goals. Progress needs to be measured at the level that matters to people, where they live and work, and considering a dashboard of indicators to capture the full picture. Localising these global targets can further help all residents to have a voice, and ensure that no region or city is left behind. But more work is needed to know how to make this all work in practice, given the varying quality of subnational governance. The OECD stands ready to support national and subnational governments in their efforts, as part of the: OECD Action Plan on the Sustainable Development Goals; OECD work on regional, urban and rural development; and OECD work on public governance more generally.

Notes

1. The role of the local level was raised in some elements of the Hyogo Framework for Action 2005-15: Building the Resilience of Nations and Communities to Disasters.
2. Addis Ababa Action Agenda of the Third International Conference on Financing for Development (2015), paragraph 34.
3. Paris Agreement within the United Nations Framework Convention on Climate Change (2015), Preamble paragraph 15.
4. Paris Agreement within the United Nations Framework Convention on Climate Change (2015), Article 7, paragraph 2.
5. Paris Agreement within the United Nations Framework Convention on Climate Change (2015), Article 11, paragraph 2.
6. In an analysis of OECD EU countries, the correlation between those that are satisfied with local public services (using Gallop World Poll data) and those that trust in regional or local public authorities (Eurobarometer data) had an R^2 of 0.75. Data for trust in local authorities for OECD non-EU countries are not available.
7. Gallup (2014), see *www.gallup.com/poll/176846/americans-trust-local-government-state.aspx*.
8. OECD, *https://www.oecdregionalwellbeing.org/*
9. OECD Metropolitan eXplorer, *http://measuringurban.oecd.org*; OECD. *https://stats.oecd.org/Index.aspx?DataSetCode=CITIES*.
10. NAZCA, see *http://climateaction.unfccc.int* for more examples.
11. The Regional Development Policy Committee of the OECD is a premier international forum to discuss regional development policy and the accompanying governance arrangements to make them successful among peers.
12. OECD, *www.oecd.org/effective-public-investment-toolkit/* for more details.
13. OECD Principles of Water Governance, *www.oecd.org/governance/oecd-principles-on-water-governance.htm*.
14. For more information, see the conclusions of the Youth Dialogue with Ministers held 27 October 2015, in Helsinki (Finland), in connection with the OECD Public Governance Ministerial Meeting held 28 October 2015.

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PART III

Chapter 6

A New Urban Agenda for the 21st century: The role of urbanisation in sustainable development

by
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This chapter discusses why urbanisation is a necessary tool for achieving the Sustainable Development Goals (SDGs). It proposes a strategic and pragmatic framework for how governments at all levels, across all regions, can activate a positive pattern of urbanisation to improve the lives and livelihoods of all human settlements. UN-Habitat is advocating for a transformative model of urbanisation in the New Urban Agenda (NUA), set for adoption at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador in October 2016. This chapter first offers an overview of trends and challenges for sustainable urbanisation, which provide the basis for understanding why a New Urban Agenda is needed. The second section explains how quality urbanisation and the role of cities are critical to achieving the aims of all post-2015 global agendas. The chapter concludes with a discussion on the strategic actions needed to implement the New Urban Agenda.

Introduction

Urbanisation is one of the most important global trends of the 21st century. As the United Nation's (UN) specialised agency in sustainable urban development, UN-Habitat approaches urbanisation as a transformative source of sustainable development for all human settlements that can be harnessed to enhance prosperity, and provide solutions to the most significant global challenges of our age – from poverty and inequality, to climate change and security.

Cities are now home to 55% of the world population and account for 80% of global GDP. By 2050, the urban population will be larger than the current total world population, with cities accommodating 3.5 billion new urban dwellers. This unprecedented rate of urban expansion demands new approaches to how we conceive and arrange our urban landscapes: spatially, physically, culturally, economically, and environmentally.

History has shown that no country has ever achieved economic prosperity without urbanising. Urbanisation in the People's Republic of China – occasioned by massive economic growth – helped pull 680 million people out of extreme poverty between 1981 and 2010, and reduced the rate of extreme poverty from 84% in 1980 to 10% in 2013. China alone accounts for three-quarters of the global reduction in poverty.

However, given that today's urbanisation is occurring against the backdrop of a relatively weakened global economy will make it tougher to pull up the remaining billion people living on less than USD 1.25 per day. The current pattern of spontaneous urbanisation that is leading to widespread inequality poses another significant barrier to achieving the 2030 Agenda. This is because, along with GDP growth, equity and poverty reduction go hand-in-hand. Today, 75% of the world's cities report higher levels of income inequality than a generation ago.

In Africa, which has the highest current rate of urbanisation globally, 62% of people live in slum conditions without access to clean water, sanitation, education, and social services. This is the case in cities around the world. UN-Habitat's research shows that the absolute number of the world's slum population has been rising over the past 25 years, from 650 million in 1990 to nearly 1 billion today. At the same time, cities now account for between 60% and 80% of energy consumption, and generate as much as 70% of the human-induced greenhouse gas (GHG) emissions, primarily through the consumption of fossil fuels for energy supply and transportation.

A new pattern of urbanisation is needed to reverse these trends. Urban expansion must be adequately planned and managed, supported by sound and enforceable legal frameworks and opportunities for local-level revenue generation. Only then can the growth of our cities support the economic stimulus and equitable conditions that are essential for sustainable development.

Trends and challenges for sustainable urbanisation

Today's urban landscape is radically different than it was 20 years ago, when the Habitat II Agenda was adopted. Cities around the world are facing a number of challenges resulting from the outmoded urban model of the 20th century – characterised by a high reliance on industrialised forms of transport, and the spread of gated communities and sprawl that have led to increased inequality. This raises an urgent need to revisit the urban agenda, and to reposition our collective approach to urban development.

An important feature of 21st century cities is that most of the urban growth is now occurring in developing countries. These countries often lack the national and local capacities to adequately plan for and design a sustainable model of urbanisation. Other common challenges include ineffectual governance and legal frameworks, limited municipal revenue generation opportunities, and lack of co-ordination between different levels of government.

As observed in UN-Habitat's World Cities Report (WCR) 2016, cities also face emerging challenges, including massive growth of small- and medium-sized cities and towns, climate change, large-scale migration, and the growing population of young people, which now represent the dominant demographic in several developing economies that are ill-equipped to cater for the socio-economic needs of this new generation.

New trends in the governance and finance of cities must also be taken into account. One of the most notable trends is the devolution of power from the national to the local level. However, in many developing countries, decentralisation has not corresponded with adequate financial resources to enable municipalities to translate their new-found authority into action. Consequently, municipal finance is not keeping pace with the huge demand for urban infrastructure and services. This was clearly observed in the Addis Ababa Action Agenda on Financing for Development, which acknowledged that, "expenditures and investments in sustainable development are being devolved to the subnational level, which often lacks adequate technical and technological capacity, financing and support".

Globally, some 60% of the area expected to be urban by 2030 remains to be built. The World Economic Forum estimates the corresponding infrastructure investment needed stands at USD 4 trillion per year until 2050. However, this kind of analysis frequently misses the amount of urban value that can be generated by such investment.

Particular attention must be given to the rapid rise of medium and small-sized cities with less than one million inhabitants, which now account for 59% of the world's urban population. Despite the demographic importance and potential role of such cities, urban planning efforts in developing countries have so far focused disproportionately on the problems of large metropolitan areas.

Similarly, the current pattern of housing production and consumption shaping urban growth has, regretfully, led to cities that are fragmented, unequal and dysfunctional. In many countries, the housing gap has become a housing crisis. This has contributed to pronounced inequality across developing and OECD countries alike.

The sustainable future of cities will, therefore, strongly depend on meeting accelerated demand for affordable housing, which is connected to economic opportunities, transport systems, and other infrastructure and basic services. These future cities must also be welcoming to new inhabitants, including those fleeing conflict, and provide opportunities for young people so that all urban residents equitably share the human, social, cultural and intellectual assets of the city.

Regional trends and challenges in urban development

In many ways, the battle for sustainable development will be won or lost in Asia's cities. This reflects the fact that the success of the Millennium Development Goals was by and large the result of progress made in Asia over the last decades, which is particularly attributable to an approach to urbanisation that linked urban planning with the urban economy, building cities with efficient supply chains, and therefore enhancing the production and business environment. According to PwC and Oxford Economics (2015), global infrastructure spending may grow to USD 9 trillion per year by 2025, with most of this investment made in Asia. Correspondingly, the region has greatest potential to gain most from urbanisation.

Today, just under half of the region's residents live in urban areas. However, Asia's economic success has come at a cost to its level of equity and the environment. The challenges facing Asian cities include stagnant slum populations, inadequate housing, and a rising environmental footprint from urbanisation. Cities in the Asia-Pacific region are also particularly prone to natural hazards. From 1970 to 2011, the region accounted for three-quarters of disaster-related fatalities worldwide.

The upside is that Asia-Pacific has learnt and gained considerably from the past. The economies of scale which fostered rapid urbanisation across the region – first in Japan and Australia, and thereafter in Singapore, Korea, Malaysia and China – has produced significant skills and capacity that are now driving the necessary innovations and partnerships needed to confront new challenges, and mark another leap forward.

For Africa, achieving sustainable urban development largely depends on the success of ensuring positive connectivity between urban and rural areas. While the region's rural population growth rate will continue to decline, the absolute number of people living in rural areas will keep rising to over 1 billion by 2050. This has an implication, not only for labour absorption capacity within the process of structural transformation, but also emphasises the need for a deeper understanding of rural-urban linkages. Rural areas benefit from the transformative power of urbanisation through increased demand for rural goods, which can have a significant impact on rural poverty. Other benefits from rural-urban linkages include increased urban-rural remittances and increased rural non-farm employment.

To fully unlock the region's "urban dividend"[1] potential, however, governments must address Africa's growing slum population, which comprises 60-70% of residents in large metropolises. This suggests that sustainable urbanisation that responds to proper planning is directly related to the prosperity of a city.

Over the last decade, some countries in the Arab Region have been defined by intense and violent conflicts. This has resulted in large numbers of internally displaced people and refugees settling in urban areas (fourfold in some areas of the Syrian Arab Republic). With 56% of its residents living in cities, most Arab countries are already challenged to steer balanced development, provide access to safe and affordable housing, basic services, and economic opportunities, let alone cater for mass population movement. This huge unplanned growth is physically manifested in the spread of informal settlements, slums, urban sprawl, and the decline of agricultural land.

This is compounded by weak governance capacities, corruption, and the oppression and exclusion of women from the workforce and political decision making in many parts of the region. The growing population of disenfranchised youth is another concern. Today,

60% of the region's population is under the age of 25, with many turning to the informal job sector for employment. Further, many cities lack the comprehensive systems for land management needed to ensure security of tenure and property rights, affordable access to land, and the protection of natural resources.

Despite these conditions, Arab leaders increasingly recognise the role of sustainable urbanisation in driving innovation, investment, job creation, and poverty reduction. Efforts are underway to realise the economic advantage of cities and achieve balanced spatial distribution of the population, by developing national urbanisation strategies and ambitious planning projects. This includes developing systems of interdependent urban agglomerations and growth nodes, linked by development corridors, leading to the emergence of metropolitan urban regions. Morocco, for example, has successfully led slum upgrading and resettlement programmes, often through partnerships between public agencies and the private sector.

The Latin America and Caribbean region (LAC) is among the most urbanised in the world, with eight out of ten citizens residing in urban areas. By 2050, 86% of the LAC population will live in cities of different sizes. While urban areas in the region continue to face challenges such as spatial segregation, congestion and crime, there is an increasing consciousness about the transformative power of urbanisation. This is owed, in part, to the increased influence of mayors and cities in driving social, political and economic advancements, and evidence that poverty reduction has been associated with urbanisation and social innovation.

Over the past decade, the LAC region saw its highest economic growth period since the 1960s. This economic boom, along with job creation and some of the world's most innovative social policies, have lifted over 90 million people into an emerging middle class, representing about one-third of the region's population. Correspondingly, LAC has seen declining levels of official development assistance (ODA), which has focused attention on the capacities of governments at all levels to deliver socio-economic policies that will contribute to the region's future sustainable development. However, this has highlighted the fact that an estimated 110 million people continue to live in slums and informal settlements, and subsist on informal employment.

In spite of the progress seen in the last decade, about 216 million Latin Americans (38% of the population) risk sliding back into poverty. This begs the question of how to protect previous development gains and leverage these successes to finance future urban development. It is a question confronting many cities around the world in developing and OECD countries alike.

The role of quality urbanisation in achieving sustainable development

Agenda 2030, which aims to "leave no one behind", clearly recognises the importance of leveraging good urbanisation as a solution to the global challenges of poverty, exclusion, peace, and security. The necessary qualities of good urbanisation are framed in SDG-11, to "make cities and human settlements inclusive, safe, resilient and sustainable", as well as being reflected in other goals.

Agenda 2030 does not promise prosperity, but it does set the targets needed to get there. By emphasising comprehensive and quality approaches to housing and services, mobility, territorial integration, heritage, clean and safe cities, and the role of cities in bringing people together, the SDGs have greatly advanced the concepts of inclusive and

integrated human settlements. This lays the path for cities to be masters of their own fate, avoid past development mistakes, and harness the transformative opportunities brought by urbanisation.

Wealth creation and urbanisation go together

"No country has ever reached middle-income status without a significant population shift into cities (Spence, Clarke Annez and Buckley, 2009)." As engines of growth, cities have played a key role in the economic recovery of countries by providing jobs and supporting investment in critical infrastructure. Unfortunately, wealth distribution is more unequal today than in the previous generation. In the United States, large metropolitan areas such as Atlanta, New Orleans, Washington, DC, Miami and New York experience levels of inequality akin to cities in developing country such as Abidjan, Nairobi, Buenos Aires and Santiago.

Economic inequality, combined with stagnant and/or declining levels of economic growth and consumption patterns – particularly in rapidly urbanising developing regions like Africa – present the most profound challenge to sustainable development. It is why the Addis Agenda, like the SDGs, rightly recognised cities' role in global development and committed to strengthen municipal capacities to implement sustainable actions.

Municipal finance and urban design can play a central role in driving equity and wealth creation. This includes providing local governments with the financial resources and frameworks required to design and invest in local infrastructure and basic services, and ensure that growth is distributed equitably amongst the urban population. UN-Habitat focuses on three areas for improving municipal revenue: land value finance and assets management and registration; urban infrastructure and design; and financial management.

First, land is the primary source of endogenous revenues and wealth. Therefore, by improving property rights via land registration through a central system, it is possible to achieve an efficient collection of property taxes and design land value sharing schemes. Valuation rolls and land registration enable all interested parties to apply urban planning tools to renew and expand cities while simultaneously increasing property values (Kamiya, 2016).

Second, improving the productive capacity of cities requires adequate urban infrastructure and design. Cities that sustain growth and thrive have adequate urban infrastructure (e.g. transportation, electricity, telecommunications, energy, etc.) and are designed to maximise the use of space while also bringing the urban community together (UN-Habitat, 2013). Failure to provide adequate infrastructure and urban design has a deleterious effect on cities; municipalities effectively increase the transaction costs of production and hamper urban mobility, which results in lost revenue for the city. Therefore, providing basic urban infrastructure and design must be a priority for municipal authorities if they are to improve local revenue generation and wealth creation.

The third area of municipal financial management includes accounting rules, auditing practices, capital investment plans, sustainability financial ratios, and rules for revenue and expenditures. Many UN-Habitat projects that emphasise accounting principles, training in capital investment planning, and electronic financial management systems in Africa and Asia have been effective in improving municipal financial resources and capital funds for infrastructure development that supports and sustains urban wealth creation.

In addition to these priority areas, local governments should consider financing instruments, such as national municipal corporations, local infrastructure funds, and municipal bonds. Regardless of the mechanism used, it will be important for municipal authorities to simultaneously consider both the financing options available to them and the ways in which they can improve municipal revenues via programming and urban design. Improving municipal financial resources through outside sources such as bonds, and prioritising urban design that supports wealth generation, must be considered in tandem.

Local urban authorities need to enhance their financial resources by focusing on public and private land asset registration, urban infrastructure and design, and financial management (Bourdic, Kamiya and Salat, forthcoming). While improving efficiency and capacity in these areas, municipal governments should also consider different financing instruments that are well suited to their local conditions. In short, a multidimensional approach to urban finance, design, and wealth generation is essential to fulfilling the achievement of SDGs and goals of other urban development agendas.

Effective rules, regulations and governance are key to capturing the full economic potential of cities. Good quality urban law contributes to investment, strong economic performance and wealth creation, as it provides predictability and order in urban development. Effective local governance also rests on participatory service delivery planning, budgeting, management and monitoring. When endowed with appropriate legal powers, adequate financial allocations, and human capacity, cities can drive the transformation agenda.

Cities and climate change

Climate change, and cities' role in addressing its causes, cannot be divorced from sustainable development efforts. Cities emit a significant proportion of the world's GHG emissions and are home to a concentration of people and assets vulnerable to the impacts of climate change. The relationship between urbanisation and climate change was clearly reflected in the Paris Climate Change Agreement, as was cities' role in contributing to the long-term global response to climate change, as expressed in the Agreement's call upon cities and subnational authorities to "scale up their efforts" and showcase them via a global platform.

The intersection between disaster risk reduction, sustainable development, climate change, and human settlements was also reflected in the Sendai Framework for Disaster Risk Reduction, which took specific note of the number of cities facing risk from climate-induced disasters, as well as their role in incubating adaptive solutions to the unavoidable impacts of climate change. Likewise, Agenda 2030 explicitly calls for a "substantial increase [in] the number of cities and human settlements [that have] adopted and [are] implementing integrated policies and plans towards […] mitigation and adaptation to climate change […]."

Even before these agendas were adopted, the Intergovernmental Panel on Climate Change (IPCC) observed that the largest mitigation opportunities with respect to human settlements are in the rapidly urbanising areas in developing nations where urban form and infrastructure are not yet "locked in". In this regard, the next 15 years presents an enormous opportunity for progress, as the majority of urban infrastructure is yet to be built, with urban land cover witnessing up to a threefold increase between 2000 and 2030 (Edenhofer et al., 2014).

Many of the actions needed to help cities combat their contribution to climate change can also serve as pathways to sustainable development in terms of closing equity gaps and generating new finance opportunities and jobs. Some of these include co-locating high residential with high employment densities, achieving high diversity and integration of land uses, increasing accessibility, and investing in public transport.

Some actions cities are taking to mitigate the impact of climate change[2] include: constructing buildings that use resources more efficiently (e.g. buildings rated four star under Green Star SA in Johannesburg); providing mass transit and non-motorised transit options (e.g. bus rapid transit in Jakarta); and establishing programmes for reducing, reusing and recycling waste (e.g. Curitiba, Brazil). In terms of adaptation, a number of cities are piloting storm water capture systems, crisis management, including warning and evacuation systems, and flood mapping. For example, Ho Chi Minh City's Climate Adaptation Strategy includes channelling new development away from flood-prone lands to less vulnerable areas. With assistance from UN-Habitat, the coastal city Maputo in Mozambique zoned a critically placed mangrove forest threatened by urban development as an ecological area – an ecosystem-based approach to buffering settlements from storm surge.

As cities represent more than 70% of global energy demand, they play a central role in moving the sustainable energy agenda forward. The current global share of renewable energy supply is 11%, but has a potential contribution of 60% of total world energy supply. Germany's innovative *Energiewende* (Energy transition) policy of 2010, which combines targets for significantly increasing the share of energy from renewables with a shift from centralised to decentralised (distributed) energy generation, hints at the potential benefits from such an approach. Germany's transition to distributed energy coincides with a significant increase in the share of renewables in the electricity mix, from around 5% in 1999 to 22% in 2012. For developing countries facing an infrastructure gap, decentralised energy generation may represent an apt strategy for increasing access to energy, while at the same time transitioning to renewables (Edenhofer et al., 2014).

Another area where cities can have an impact on reversing global climate change trends is sustainable urban mobility. Sustainable forms of mobility provide efficient access to goods, services, job markets, social connections and activities, while limiting both short- and long-term adverse consequences on social, economic, and environmental services and systems.

An evolving transformative trend is the shift away from auto-dependency. Singapore, Hong Kong, China and Tokyo are examples of cities where the costs of car ownership and use are purposefully high and planning strategies have emphasised mass transit, walking, cycling, as well as efficient supply chains to scale-up productive sectors. More compact, better-connected cities with low-carbon transport could help cities save as much as USD 3 trillion in infrastructure investments over the next 15 years.

A New Urban Agenda for the 21st century

There is no "silver bullet" to sustainable development. Likewise, there is no "formula", or "one-size-fits-all" solution to the complex and interrelated challenges confronting cities in both developing and OECD countries. Rather, the keys to the sustainable development of all human settlements require a set of strategies that are integrated, adaptable, flexible, and evidenced-based.

UN-Habitat's vision of the New Urban Agenda represents a paradigm shift that views urbanisation as a transformative force to harness economic growth, inclusiveness, and prosperity. It aims to be concise, action-oriented, forward-looking, universal, and spatially integrative – recognising distinct globally evolving trends, regional specificity, and transformative potential, as well as taking into account a wide range of realities and contexts, cultures, and historical urban and human settlement landscapes. In this way, the New Urban Agenda marks a first step in operationalising sustainable development in an integrated and co-ordinated way at global, regional, national, subnational and local levels (UN-Habitat, 2016).

The proposed New Urban Agenda aims to reinforce the 2030 Agenda, by proposing a framework that is universal in scope, and sets out priorities and actions at the global, regional, national, subnational, and local levels. In particular, it proposes a commitment to work with local authorities and communities in an inclusive and effective manner to renew and plan our cities and human settlements in a way that fosters social cohesion, stimulates innovation and employment, and ensures environmental sustainability.

Specifically, the New Urban Agenda can be implemented through five strategic areas of intervention:

National Urban Policies (NUPs). A fundamental aspect of evidence-based decision making in NUPs is that they must promote systems that can be effective, regardless of available capacity and resources. NUPs must be rooted on productivity achieved by better layout and planning and spatially built on three foundations: i) promoting good urban design at the national, regional and local level that can respond to human needs; ii) requiring functionally effective legislative and regulatory tools that drive equality; and iii) including financial tools and strategies that promote inclusion and sustainable urban development over the long term.

Urban legislation, rules and regulations. There is consensus that good governance is crucial for developing, maintaining, and restoring sustainable and resilient services and social, institutional, and economic activity in cities. Many city governments are weakened due to limited power and responsibility over key public services, including planning, housing, roads and transit, water, land use, drainage, waste management and building standards. Rule of law, sound legislation, and the ability to enforce rules and regulations are therefore necessary to ensure that planned urbanisation is achieved and inclusive governance prevails to enable the voices of urban citizens, particularly women and youth, as well as poor and marginalised groups, to be heard in decision-making processes.

Urban planning and design. Good urban planning and design promotes compact, efficient, and people oriented cities, which are integrated, well-connected, and equitable. They encourage environmental sustainability, create access to jobs and essential services, and provide adequate public space. Good urban plans are also a pre-condition for urban resilience. This requires a pro-active approach from governments to prevent construction in high risk or vulnerable areas; a well-planned, well-connected network of streets, public spaces and infrastructure with an inherent redundancy; and sound regulatory frameworks with incentives to adhere to appropriate building codes.

Urban economy and municipal finance. The urban economy means that good urbanisation improves a city's competitiveness. This occurs by providing a spatial layout where businesses can grow and develop, thereby increasing opportunities and access to jobs and wealth, and reinforcing urban planning and the economy as a system that

connects through supply chains. Municipal finance enables the value generated by urbanisation, such as land value sharing, to be expanded and shared in order to sustainably finance the upfront and maintenance costs of urbanisation. It further emphasises that local governments require sustainable finance and an adequate flow of endogenous resources to invest in increasingly higher quality urbanisation that will create a virtuous financial circle.

Local physical implementation. This area covers planned city extensions, urban regeneration projects, and the provision of basic services and affordable housing, among others. It is based on realistic business and investment plans, taking into account the interplay and balance between the provision and deployment of national, regional and local infrastructure, which do not necessarily always share the same priorities among layers of governments, nor the same capacity to invest.

Conclusion

Implementing quality urbanisation is critical to achieving the goals of the SDGs and other global agendas. It will require a re-imagination of cross-scalar governance arrangements and an unprecedented level of co-operation across administrative boundaries and between different levels of government. Responsibilities for implementation must be devolved to the most appropriate level, with stable transfers of funding. This includes mitigating the risks of lending to cities; increasing cities' access to bonds; and permitting more decentralised revenue generation.

In addition, the institutional structures and capacities to integrate implementation and monitoring must be strengthened at multiple scales, particularly the local level. While the success of Agenda 2030 will require action towards all 17 goals, localising the SDGs will be critical to their achievement. Local governments, therefore, have a pre-eminent role in implementing the 2030 Agenda.

Realising the potential gains of urbanisation is not automatic. This will depend on how well urban growth and its evolving challenges are planned and managed, and the extent to which the benefits accruing from urbanisation are equitably distributed. Formulating the necessary policies, including effective urban planning, management and governance, is a vital precondition for enhancing the transformative potentials of urbanisation. Sustainable development efforts must also consider the urban-rural continuum. The adequate provision of infrastructure and opportunities in small- and medium-sized cities can promote "rural urbanisation" and contribute to achieving balanced population and wealth distribution.

The urban space can be a strategic entry point for driving sustainable development. However, this requires innovative and responsive urban planning that utilises density, minimises transport needs and service delivery costs, optimises land use, enhances mobility and space for civic and economic activities, and provides areas for recreation, cultural and social interaction to enhance quality of life. While new spatial configurations play an increasing role in creating prosperity, there is an urgent demand for more integrated planning, robust financial planning, service delivery and strategic policy decisions. These interventions are necessary if cities are to be sustainable, inclusive and ensure a high quality of life for all.

Sustainable, resilient and inclusive cities are often the outcome of good governance that encompasses effective leadership; land use planning; jurisdictional co-ordination; inclusive citizen participation; and efficient financing. If the world is to achieve its

sustainable development goals, and reach targets that range from eradicating poverty and social inequity, to combating climate change and ensuring a healthy and liveable environment, global efforts in the transition to sustainable energy are pivotal.

A New Urban Agenda, with well-combined sets of principles and recommendations, can be a catalyst for the transition to sustainable development. This follows from a realisation that urbanisation is not a threat or a process to be curtailed: instead, well-managed urbanisation is a necessary driver of sustainable, equitable, and prosperous societies. Habitat III will mark a generational opportunity to define the transformative role of our cities and secure a new vision of the urban environment for the 21st Century.

Notes

1. Adapted from Rodin, J. (2014), *The Resilience Dividend: Being Strong in a World Where Things Go Wrong*, Public Affairs.
2. At the end of 2015, two major platforms - Carbon*n* (a registry of local climate action) and C40 (a network of 80-plus large and mega-cities) - summed up such actions. Carbon*n* reported that 486 local and subnational authorities were undertaking a total of 6 181 mitigation and adaptation actions and action plans, while C40 found that 66 cities were carrying out 9 831 climate actions.

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OECD Regional Outlook 2016
Productive Regions for Inclusive Societies

PART III

Chapter 7

Financing subnational and local governments: The missing link in development finance

by
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Unlocking the potential of territories at the local level is key to financing the amount of investment urgently needed to reach the Sustainable Development Goals (SDGs) and to meet the needs of the population. The series of international debates on development are paying increasing attention to city-level development financing, but local authorities are still not recognised as central to the debate. Focus should be brought first on improving the mobilisation of local endogenous resources, through expanding local taxation and relying on land-based finance and taxation of economic activities to improve local fiscal autonomy. Then, guarantee mechanisms should facilitate the process of leveraging external resources, encompassing private finance, climate finance, and borrowing, to finance long-term infrastructures.

Introduction

The intensive discussions taking place on the new sustainable development agenda[1] will mean very little without adequate financing and renewal of financing mechanisms. While the major role that local and regional governments will play to achieve the SDGs is now widely acknowledged, the issue that is still pending relates to the effective implementation of the public policies and infrastructures necessary to reach these objectives, to make the transition towards green and inclusive regional territories.

Financing, together with inclusive planning and multi-level governance frameworks are the three main transformative levers of implementation upon which we must act. On one hand, multi-level governance provides structured dialogue between the various levels of government, and between subnational governments themselves, to ensure consistency and synergies of national and subnational goals and policies; on the other hand, local financing must be based on multi-annual investment plans and long-term strategies rooted in inclusive and flexible planning policies.

United Cities and Local Governments' (UCLG) work is focused on bringing the voice of local and regional governments to the international development stage, to ensure the four pillars of sustainable development, i.e. the economic, social, environmental and cultural dimensions, are taken into account in territorial development strategies. Cities and territories are where people live, where poverty is tackled, where prosperity is generated, where access to fundamental rights must be guaranteed through access to health, culture and education services, and where ecosystems are protected. As a consequence of many decades of chronic under-investment in urban development, massive public and private investments will be necessary to improve access to basic services in these areas in order to eradicate poverty, cope with the impacts of climate change and prepare cities to host and protect the rights of 2.5 billion new urban residents over the next 3 decades, mostly in developing countries.

According to a number of studies, the amounts currently dedicated to these investments will have to be on average doubled, and even tripled, over the next two decades in order to meet this challenge. Sub-Saharan Africa, for instance, will likely need some USD 93 billion per year in the coming years, yet today such investments reach barely USD 45 billion per year (Foster and Briceño-Garmendia, 2010). Taking the additional costs of climate change into account, dedicated amounts should be tripled. According to a 2013 estimate by the World Economic Forum, the "investment gap" in green infrastructure could be as high as USD 700 billion a year. Likewise, the International Energy Agency (IEA) says that nearly USD 360 billion is invested annually to cope with the consequences and challenges of climate change – a massive figure, yet little more than one-third of the USD 1 trillion a year needed by mid-century.

As a result of the global decentralisation process, characterised by the transfer of key responsibilities, including the provision of basic services, to local and regional governments, "many of the investments to achieve the SDGs will take place at the subnational level and be led by local authorities," according to the United Nations

Secretary-General's "Synthesis Report" on the post-2015 agenda (2014). Nonetheless, this transfer of responsibilities most often occurs without devolving the corresponding human and financial resources to exercise these new missions.

Local finance is the missing link in sustainable development finance, and we must advocate for the creation of financial mechanisms to unlock the economic potential of urban areas and territories. In response, the Global Task Force of Local and Regional Governments, an umbrella group of over 30 networks facilitated by UCLG, is mobilising member states and its accredited partners to support the implementation of adapted financial mechanisms at the local level.

A global imbalance between local government revenues and responsibilities is at the core of the deficit in infrastructures

The mobilisation of local and regional resources is becoming crucial to the future of many countries undergoing rapid urbanisation. High-level debates increasingly use the terms "endogenous" and "domestic" resources to encompass the full range of resources that could be mobilised. These resources come from the concentration of production factors, wealth and economic activities within urban centres and metropolitan areas all over the world. Cities are engines of growth, responsible for the major part of the investments in utilities networks that make these urban centres attractive to households and private entities. Their role to promote fair, responsible and creative economic development policies that meet the needs of their inhabitants should be fully acknowledged.

Yet, they are not equipped with the necessary fiscal autonomy and well-adjusted financial instruments to receive a fair return on investment from their contribution. Confronted with the combination of a rapidly growing urban population, and the impacts of pollution and disaster risks, local governments generally lack the buoyant tax sources that would produce revenue growth in line with their growing responsibilities. This inaction has a cost: economic, with the loss of income generated by the slowdown of infrastructures; social, with increasing inequalities and social unrest; and environmental, generating irreversible damage with negative impacts on living conditions.

A key challenge to tackling this issue is the wide diversity of local financing systems worldwide.

Local finances are closely related to the national and local institutional context, history, culture and political situation, among other things, and local expenditure must answer to specific needs on the ground. For instance, in the late 2000s, local governments spent around USD 3 000-4 000 per person annually in the United States and Europe but just USD 36 in Africa. In Eurasia, the average annual local government budget in terms of expenditure per person is around USD 232; in Latin America, USD 133; and in low- and middle-income countries in Asia, this figure is just USD 92 (UCLG, 2013). This is a highly diverse and creative field, with high potential for innovation, but as a consequence, one cannot advocate for a "one-size-fits-all model". That is why we attempt to bring out our key fundamental principles, including those in economics, to build UCLG recommendations in favour of fiscal decentralisation.

In essence, this imbalance originates from an inequitable sharing of national financial resources. Depending on each economic context, intergovernmental transfers are key mechanisms for ensuring national solidarity and to mitigate horizontal inequalities that can be generated by decentralisation. However, systems of redistribution to local governments

through transfers and grants do not guarantee equitable distribution, as a consequence of poor accountability, transparency and reliable data at the national and international levels. In addition, in the current context of decentralisation and budget austerity in most countries, local finances are perceived as adjustment variables and local development as a source for potential private business opportunities.

Another cause for the inconsistency of equalisation mechanisms is the hazardous identification of territorial needs. Yet, without precise knowledge of the costs, it is difficult to take well-informed decisions, and to finance properly these needs (unfunded mandates). The lack of clarity in local governments' allocation of responsibilities is worsened by spillovers induced by the mismatch between the perimeters of local government jurisdiction and the economic development and residential maps.

Reliable and comparable data on subnational finance is essential, yet, the range of instruments available to obtain a better knowledge of the financial health of subnational governments, including cities, is very limited. UCLG, together with the OECD and the French Development Agency (AFD), are working on a study of prefiguration of a global observatory on subnational finances. Gathering financial data and qualitative information, the observatory will highlight the concrete financial capacities of local governments to implement the recommendations of the international community regarding urban development.

Financing the city by the city: Acknowledging the role of local governments to promote development policies

In order to compensate for this gap, local sustainable self-financing systems should then provide local governments with a necessary predictability on their resources to make best-planned decisions regarding the city-investment strategies. In other words, the city must be facilitated to better finance the city. This includes strengthened support for local financing in relation to land and property income as well as the productive urban economy. The history of urban development proves the potency of this opportunity, in particular for rapidly growing and economically dynamic cities.

Currently, mechanisms that would enable local public authorities to mobilise part of the wealth produced within their jurisdiction to be reinvested in local infrastructures are not in place in many low- and middle-income countries. Local taxation remains underdeveloped, and the tools and expertise needed to capture a portion of the capital gains in land value and economic activities are often lacking. Local tax systems rely too heavily on property taxation, which has low performance and high political cost. Therefore, diversifying fiscal instruments is crucial, and some countries do allow local authorities to benefit from national economic growth through the taxation of economic activities or individual income, while others resort to taxation of consumption sales.[2] On the other hand, expanding local tax bases by investing in municipal staff, training and new technologies can rapidly improve tax collection.

Allowing cities to capture part of the land and property added value attributed to public investment, for instance in roads or new equipment, is another promising way to finance urban investments. This is especially important in countries undergoing rapid urban growth, by producing substantial immediate revenue that reduces reliance on debt. It also helps to enhance the efficiency of urban land markets and to direct urban growth toward areas most suitable to effectively accommodate that expansion. Recent experiences suggest the value-added contribution of land could represent between 10% and 50% of public investment made in the context of development or urban restructuring projects.

The use of such tools should be accompanied by well-adjusted regulations, participatory mechanisms, and profound knowledge of their impact and potential social and environmental consequences. Local authorities need to reform land rights and to have inclusive planning strategies, as well as the necessary instruments, such as updated land registries, accounting systems, and electronic networks.

Meet the deficit in infrastructures and finance basic services through enabling access to external resources

While these endogenous resources are the core base of the financial health of local governments, they also provide reimbursement capacity and, therefore, access to external resources to leverage the amounts of investments to effectively meet the urgency and magnitude of their needs. Knowing that financial conditions at the global level, characterised by low interest rates and abundant global saving, are in favour of long-term investment, local governments should have access to long-term prefunding. This access can be provided whether through direct loans or private capital contributions (including special purpose companies, public-private partnerships or infrastructure facilities).

In many low- and middle-income countries, however, local government borrowing remains legally constrained. Restrictive institutional frameworks, weak creditworthiness and local administrative constraints curb access to finance for local governments outside of metropolitan areas and large cities. Private investors and financial institutions require the sound financial management of local governments, including long-term stability and the ability to generate revenue sustainably. In the same vein, in directly funding a public service, investors conduct "due diligence" processes to ensure performance and long-term profitability. International and regional development banks also have a role to play in financing the infrastructure needed for basic services in urban areas. However, they rarely grant credit directly to local governments, with the exception of the French Development Agency which is moving in this direction. Such banks can play a key leverage role for local and regional governments, particularly in middle- and low-income countries.

Financial intermediation institutions such as special finance institutions (SFIs), national municipal corporations or bond banks, can enhance access for local governments of all sizes to external financing, in particular through pooling of resources, and to help overcome the mismatch between the duration wanted by investors and the depreciation of urban investments.

When these institutions do not exist, and in parallel to reinforcing local capacities and creditworthiness and creating such institutions, there is a need to develop appropriate guarantee mechanisms to secure investors and channel global savings, public and private, towards the local level. It is true these mechanisms have a cost, but they can represent a strategic way for official development assistance (ODA) and climate finance to exercise a multiplier effect on the amounts raised.

Indeed, local government access to global, regional and national climate-change-financing mechanisms – for instance, the Green Climate Fund or the Global Environment Facility – can trigger investments in mitigation and adaptation infrastructure. In this sense, it is necessary for national governments to involve local authorities in the design of the financial mechanisms and their management, as well as supporting them to generate climate friendly projects.

Towards fiscally capable local governments and effective local and regional financial institutions

In this context, providing increased institutional capacity to local governments should be a priority on both national and international agendas. Legal, institutional and financial decentralisation frameworks are critical to create enabling environments for local authorities. Particularly with risk and creditworthiness given such significant priority, commitments by central governments to support local governments is indispensable, having a direct impact on local authorities' access to adequate resources.

Firstly, governments and international organisations have an important role to provide an enabling environment and legal framework towards more fiscally capable local governments and effective local financial institutions, through decentralisation reforms and to fight against corruption. Such reforms can lead to the creation of legal and regulatory frameworks for public-private partnerships, provide grants and credit enhancements for the development of infrastructure projects, secure investors and help to develop subnational debt markets. Help provided through prudential frameworks are all in favour of enhancing the relationship of trust between investors and the demand for long-term resources. This also encompasses the maturation of broader intergovernmental fiscal systems through reforms that focus on transparency, monitoring and evaluation, and simplifying institutional requirements for local and regional governments.

Secondly, accompanying local government access to external resources relies heavily on support with project preparation, to make an attractive project that meets the needs of investors. It is particularly challenging for low-emission and climate resilient projects to meet climate investors' criteria. Indeed, the World Bank estimates project preparation to cost from 5% to 10% of the total project cost (CCFLA, 2015). Project preparation facilities can work on changing project selection criteria to improve the sustainability aspect of traditional infrastructure projects. In this sense, it is often necessary in developing countries to establish specialised operators to take part in these facilities, to accompany urban development operations and the delivery of basic urban services, which may take the form of public or semi-public companies.

In a global and local environment that is increasingly complex, characterised by multi-stakeholder involvement, comprehensive approaches, extensive requirements and regulations, there is also a crucial need for cities' Chief Financial Officers and their teams to increase their expertise. They must be empowered to negotiate well-structured partnerships with private actors, ensuring a fair allocation of risk between all stakeholders involved and with sustainable partnerships that will last throughout the project timeline. Moreover, cross-sector management should be implemented to ensure the coherence of local policies. In this sense, capacity building in financial management and promoting innovation through learning from experience and peer-to-peer exchanges are assets highly needed to support the empowerment of local authorities.

Finally, we must highlight the crucial role played by political leadership for cities in developed and developing countries to directly seize economic opportunities and take over key fiscal responsibilities, when they have the necessary local legitimacy, institutions and support from the population, e.g. the case of Ulaanbaatar in Mongolia that hosts more than half of the country's population.

Empower local authorities to play a key role in the transition towards sustainable territories

Recent achievements in international negotiations include many new references to local authorities in declarations and international statements. Paragraph 33 of the Addis Ababa Action Agenda promotes more financial autonomy and integrated urban planning at the local level as key to sustainable development. It underlines the importance of urban-rural linkages as well as the strengthening of debt management and municipal bond markets or financial institutions, when appropriate. References to local authorities have also been included in the Zero Draft of the Habitat III conference with regard to financing, mechanisms for monitoring progress and accountability, as well as capacity-building.

However, the global framework still does not recognise local authorities as crucial to these international debates. International development focus is progressively shifting towards municipal finance. This is due largely to the joint commitments of networks of local and regional governments, UN agencies and member states. Yet, local stakeholders remain in the background of the negotiations. The issue of local fiscal policies remains primarily a political decision to be taken by member states within their respective governments, closely linked to the decentralisation agenda. The only way for local elected officials and representatives to take part in the official negotiations is to be part of national delegations, whereas many mayors and local elected officials want to commit and get involved on this issue.

This is in stark contrast to the fact that two other important non-state actors – civil society and business – have been given specific roles and allocated seats at the roundtables of finance negotiations. Initiatives of non-state stakeholders are an attempt to give more unity and more visibility to coalitions of actors ranging from local governments, civil society and business sectors, as in the case of Climate Chance, to be held ahead of the COP22; on the other hand, local authorities have to work jointly with business and civil society committees to have a seat at official roundtables in the framework of Financing for Development.

The current debates are a critical step on the way to defining the post-2015 Development Agenda. Yet it will not reach its objectives without devoting substantive attention to local financing and offering bold new recommendations for strengthening related systems. The collaboration between UCLG and the OECD is a powerful message that shows the increasing awareness of the role territories have to play in development policies. The UCLG World Secretariat shares the values of the *OECD Recommendation on Effective Public Investment across Levels of Government*, which highlights the roles of all levels of government in ensuring sound investments for development. The dialogue between levels of governments is essential to the design of comprehensive development strategies. This dialogue must take into account local representatives, by involving national associations of local authorities, with the political legitimacy to ensure national priorities are in line with policies needed to ensure the needs of their inhabitants.

Notes

1. Financing for Development, the Sustainable Development Goals, Climate negotiations, Sendai Framework for Disaster Risk Reduction, Habitat III Conference.
2. Brazil, Chile and Colombia, for example, have adopted various types of local taxes based on economic activities; several countries in Europe and North America resort to a local tax or surcharge on personal income; taxes on local sales are notably used in Canada and the United States. Morocco, has given 30% of value-added tax (VAT) to local governments, but in the form of transfers.

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PART III

Chapter 8

Cities and regions – Connected by water in mutual dependency

by
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This chapter argues that cities and regions have a crucial role to play in facing existing and future challenges of managing water – whether too much, too little or too polluted. While no blue-print exists on how water challenges are to be met, inaction is certainly not an option. On the contrary, there is momentum to move from vision to action towards the implementation of the global agenda to 2030, which aims, amongst other things, to "ensure availability and sustainable management of water and sanitation to all". The chapter argues that there is room for better efficiency and inclusiveness when connecting between territorial scales and water boundaries, and across water-related policies. The OECD Principles on Water Governance *provide a framework to set and implement water policies across levels of government that contribute to better lives.*

Introduction

Anyone who has a look at thematic maps on food production, demographics and urbanisation sees at a glance that these issues are interconnected. Combine this picture with maps on water issues (too much, too little, too polluted) and we cannot escape the conclusion that water is a key factor of many – if not all – global challenges facing both current and future generations. If we look closer it also becomes clear that all of these issues may be connected globally, but that the day-to-day practice of water management, by definition, is a local and regional one. Cities and regions share rivers and aquifers, and it is at this scale that the challenges have to be met. The water crisis is global, but the solutions have to be found closer to home. It is therefore appropriate that the 2016 Policy Forum is about "Regions and cities implementing global agendas".

The OECD's contribution to the international discourse on water governance has been widely recognised, and solving the global water crisis cannot happen without broadening and deepening this discussion, and promoting the implementation of good governance principles into practice. Since its creation in 2013, the OECD Water Governance Initiative (WGI) has provided a platform for such discussions, through exchanging concrete practices and discussing policy developments with stakeholders and organisations involved in policy making and practical water management all over the world.

The WGI has proved instrumental to catalyse knowledge from different countries, especially during recent peer reviews of the national policy dialogues of Brazil, Jordan, Netherlands and Tunisia, but also from the ten-plus countries that shared national reforms during the WGI plenary meetings taking place twice a year. The common challenge to these different country reform processes lies in fostering good governance. Issues connected to this are: the focus on multi-level governance; decentralisation; capacity at subnational level; rural, urban and public, territorial indicators; investment; etc. These issues are all on the table of the Regional Development and Policy Committee (RDPC) of the OECD. RDPC's support therefore has been, and will continue to be, key to the promotion of good water governance globally.

Three decades of evolution in water management

The Netherlands, my country, struggles with water and is an example for what is happening in many places. The Low Countries (i.e. the Netherlands) have gone through early urbanisation and global connectedness for more than 500 years. Its geography at the confluence of four major European rivers was a crucial condition for this. The Netherlands is a delta, where 60% of the GDP is being produced behind dikes. If it were not for the dikes, the land would flood more than once every year. Therefore, the Dutch know more than a little about water management and have succeeded, in recent decades, in keeping their feet dry!

It was not always this way though. For centuries the Low Countries were flooded frequently. The last devastating storm-surge flood from the North Sea was in 1953. It took more than 2 000 lives in the Netherlands, Belgium and the United Kingdom. It was also a

tremendous economic setback, just years after the Second World War. It prompted a Dutch Delta programme of flood protection which took 30 years to complete. By that time the general feeling was that the Dutch had "engineered their way to flood safety" and that the Netherlands' physical lay-out was basically "finished". In the early 1980s, water management in the Netherlands was the exclusive domain of specialists and technocrats, and there was almost optimism about the future.

However, gradually disturbing negative consequences of this industrial and technological phase became clear. Pollution had peaked in the 1960s and 1970s, and social and economic functions such as drinking water production and agro-food production became stressed. After the wake-up call of the Club of Rome (Meadows et al., 1972), an increasing awareness that there were indeed limits to growth and to the exploitation of the natural resources of our planet was noteworthy.

This growing awareness translated into a new phase in the 1980s: of optimising and rationalising water management, curbing pollution, building chemical, and later biological, waste-water treatment plants and a growing awareness for aquatic ecology: the phase of integrated water management. The domain of irrigation and drainage, flood protection, sanitation and wastewater treatment was still predominantly in the capable hands of specialists with backgrounds in science and engineering.

In the 1990s and the first decade of this century, integrated water resource management and integrated river basin and groundwater management were the fashionable terms. In the Netherlands a new water awareness was dawning, after a couple of narrow escapes from floods due to extreme river discharges and torrential local rainfalls in 1993, 1995 and 1998, it became clear that water management should be taken to a regional and catchment area level. Physical planning in a densely populated urban and sub-urban continent has regional and supra-regional consequences for water safety, water availability, water quality, ecology, agriculture and industrial development. However, water-related risks also hold implications for land use and spatial planning at local and regional levels. In the Netherlands, this prompted a new phase of multi-disciplinary and even trans-disciplinary approaches to water management. The mottos "room for the river" and "room for water" were coined and in the designing disciplines the principle of "building with nature" was introduced.

More recently, in 2012, a Delta Programme towards 2050 was established in the Netherlands, together with a Delta Act, a Delta Fund and a dedicated Delta Commissioner. This development recognises the importance of multi-level stakeholder engagement, of a process geared to achieving broad consensus across administrative levels and sectors, and of a sound legal and financial basis. Good water governance then becomes essential to plan ahead rather than wait for the next flood, drought or toxic spill – not only in the Netherlands, and not only just in 2012. Much earlier, in 2002, HRH the Prince of Orange, in his contribution to the Panel of the UN Secretary-General, in preparation for the Johannesburg Summit, stated that "the world water crisis is a crisis of governance – not one of scarcity" (HRH Prince of Orange, 2002).

Meanwhile, there has been a gradual but global growth in the awareness that the planet's climate is changing and that extreme weather events are becoming more frequent. Emissions of greenhouse gasses have grown exponentially and there is little doubt that these phenomena are interlinked. The exact causalities may still be the object of study, but the potentially irreversible effects on ecosystems and human habitats and livelihoods are

so huge that inaction is not an option. However, even with climate change out of the equation, action is required because the world's population is growing fast, societies are becoming intrinsically physically and economically vulnerable, agricultural and industrial production capacities are higher than in the past, and much remains to be done in many countries, to ensure access to basic services (water, energy and transportation). This awareness has been translated in international political and industrial willingness to act.

First the Millennium Development Goals (MDGs) were adopted by the UN in 2000, followed in 2015 by the Sustainable Development Goals (SDGs). Water is prominently included and connected with most SDGs, and SDG 6 sets out to "ensure availability and sustainable management of water and sanitation to all".

In 2015, more international developments pertaining to climate and water led to agreements at the highest level. The UN Climate Change Conference COP21 was held in Paris and produced a consensus on the reduction of climate change to 2°C, and zero net anthropogenic greenhouse gas emissions to be reached by the second half of the 21st century. This political breakthrough is encouraging, but still has to be translated into practice by governments, by industries and, in the end, into a behavioural change by all of us. From the point of view of water a critical remark should also be made. Where the core of the political commitment in the Paris Agreement lies with the mitigation of climate change, also many references (47 in total) are made to the importance of adaptation to the effects of climate change (UNFCCC Conference of Parties, 2015). In that context, it is therefore totally incomprehensible that the words "water", "flood" or "drought" are to be found nowhere in the text.

In view of this omission it is however most promising that already 300 organisations worldwide, also including many cities and regions, have signed the "Paris Pact on Water and Adaptation to Climate Change in the Basins of Rivers, Lakes and Aquifers" (International Network of Basin Organizations, 2016). The drafting took place outside of the formal COP process. The Pact aims at supporting and implementing water and adaptation to climate change in an Action Agenda, and: i) reinforce capacity development and knowledge; ii) adapt basin management planning to climate change; iii) reinforce governance; and iv) ensure adequate financing.

Among the broad basis of organisations that have signed the Paris Pact, many already have to deal with the current and future effects of climate change. It underlines the necessity to act now in order to protect our societies against disruptive shortages of water supply, sanitation, flood protection and ecological degradation. Many hope that COP22, to be held in Marrakech in November 2016, will explicitly acknowledge at a political level the necessity to promote adaptation in water management along these lines.

On water governance

The need to look beyond the technical scope of water management has been recognised widely. To date many publications have been devoted to the importance of water governance. A comprehensive overview can be found in the recent publication of Havekes et al. (2016).

The Water Governance Initiative[1] produced in 2015 the *OECD Principles on Water Governance*[2], a first version of which was discussed at the 7th World Water Forum in South Korea (April, 2015). This overarching guidance, produced in a bottom-up fashion under the umbrella of the OECD's Regional Development Policy Committee (RDPC), is a direct

response to the governance challenges common to many countries. The Water Governance Initiative (WGI) was created as an international multi-stakeholder network in March 2013 out of the OECD's commitment to assist in closing the water governance gaps identified during the 6th World Water Forum (Marseille, 2012). It has the following objectives:

- Provide a multi-stakeholder technical platform to share knowledge, experience and best practices on water governance across levels of government.
- Advise governments in taking the needed steps for effective water reforms through peer-to-peer dialogue and stakeholder engagement across public, private and non-profit sectors.
- Provide a consultation mechanism to raise the profile of governance in the Global Water Agenda (SDGs, COP, Habitat III, etc.).
- Support the implementation of the *OECD Principles on Water Governance* by scaling up best practices and contributing to the development of water governance indicators.
- Foster continuity on governance discussions between two World Water Forums (every three years), in particular by supporting the Governance Implementation Roadmap of the 7th World Water Forum (Korea, 2015) up to the 8th World Water Forum (Brazil, 2018).

The WGI has met six times in plenary meetings since its creation (twice a year) and its working groups have been meeting in between these meetings. It currently counts 100+ members and is still growing. The *OECD Principles on Water Governance* are the main tangible outcome of the first two years of activities and their endorsement at the OECD Ministerial Conference on 4 June 2015 gave them a strong political impetus. The Principles have been translated in 15 languages and are available on line, which greatly promotes the dissemination and usage in discussions with stakeholders. The 12 principles in their entirety are also expected to be part of the OECD Council Recommendation on Water which is currently under preparation.

On regions and cities

Though the water crisis is a global one, the scale of resolving the imminent consequences are closer to home. This is why regions and cities are so important for water management, and to a certain extent will dictate the global agendas, rather than the other way round. The scale of stakeholder engagement also requires that some issues be managed internationally and others very locally. The importance of scale is also reflected in the EU water and urban agendas and the agenda of the upcoming UN-Habitat III conference. These agendas, and their follow-up, provide a unique opportunity to better connect territorial scales and water considerations.

The figures on the growth of the planet's human population and urbanisation are indeed daunting: from 34% of a global population of 2.5 billion people in 1960 to 70% of 9-10 billion in 2050 (UN-DESA, 2015). Within one century this implies a growth of the urban population by a factor of almost ten. It goes without saying that the next generations will draw upon natural resources at a level and with turn-over rates which have no precedent.

Recently, the former Dutch banker Prof. Dr. Herman Wijffels, who now teaches sustainability and social change, held a speech in which he presented two trends that will set the stage for the present century. Since the industrial revolution, natural resources on a global scale were virtually unlimited. The access to these resources was however limited by the monopoly of information. By the end of this century, some of the most essential

resources (e.g. phosphorus) will be depleted, but access to information will be virtually ubiquitous and instantaneous. So there will be a monopoly on scarce resources and unlimited information. Both trends have started already and the combination of these opposite developments, according to Wijffels, is potentially disruptive on a global scale. These trends, combined with climate, food and health risks and demography, led the World Economic Forum (2015) to rank water crises amongst the highest risk-impact factors for the coming decades.

Besides the economic dimension, there is also a geopolitical dimension to these trends. Secretary-General Lamberto Zannier of the Organization for Security and Co-operation in Europe (OSCE) regards co-operative water governance as a catalyst for sustainable development and comprehensive security. "Good water governance requires the accountable, transparent and equitable management of water resources. It contributes to confidence building and is essential for preventing water-related conflicts at all levels, including at the level of local communities," said Zannier on World Water Day 2015 (OSCE, 2015).

At the 7th World Water Forum (Korea, April 2015) OECD Secretary-General Angel Gurría also underlined that water issues are connected to other pressing developments regarding food, security and energy (OECD, 2015a). He highlighted three imminent issues which can be inspiring when defining priorities: i) the need for policy coherence; ii) the role of finance; and iii) improving institutional architecture.

Now how to move from policy to practice? From vision to action? These are trillion-dollar questions of course. And against which backgrounds of social, economic, ecological and technological scenarios? There is no foreseeable U-turn from the trend of global urbanisation. More and more people will live in mega-cities. The recent OECD report *Water Governance in Cities* (2016) sends a wake-up call to local decision makers and the crucial role they play given that water is mostly managed at the local level. It builds on a survey of 48 cities across OECD and non-OECD countries and proposes a "3Ps" co-ordination framework to better articulate policies, people and places. It showcases best practices to promote a strategic vision across sectors, to engage with stakeholders and to foster integrated urban water management in cities and their hinterland, through rural-urban partnerships and metropolitan governance.

On the OECD website the water governance profiles of the 48 cities surveyed are presented[3]. It shows how diverse cities are, and underlines the fact that no blue-print exists for how water challenges are to be met. In advancing the practice of water management and water governance, it is all the more important that the debate starts off with an exchange on values and principles, rather than the question of how these should be achieved. The *OECD Principles on Water Governance* provide and excellent basis for such a discussion.

Cities of the future will have no other option than to co-operate with their hinterland, with the regions and territories with which they are connected by rivers and aquifers, but also by flows of food, energy, transportation and information. As a biologist I draw from some ecological principles that describe the relationships between organisms. When an organism parasitises on another organism, be it plant or animal, eventually the unwilling host is killed. Likewise, if a city parasitises on the resources of its hinterland, it may benefit from it for an unpredictable period of time, but when the resources in the region are depleted, the city's metabolism will eventually fail. Ideally, the city and the region should

both benefit from a relationship which is described in ecological terms as mutualism. Examples from nature are the co-habitation of flowering plants and pollinating insects, of plants and fungi, and at an evolutionary level, even the co-habitation of humans and domesticated animals can be considered as mutualism. The examples are numerous and they all are characterised by the intrinsic web of interconnectedness of flows of food, energy and information between the partner species and partner populations. These connections have evolved through eons, and the interdependencies in most cases are unique and irreplaceable.

When the metaphor of mutualism is applied to the relationship between cities and their hinterland it must be clear that the governance dimensions of water management cannot be disconnected from those of the other policy and management domains. Effectiveness, efficiency and trust & engagement – the three dimensions of the *OECD Principles on Water Governance*, must be discussed among different stakeholders and at all scales of the ecosystem of the city, the region and the catchment area.

Finally, one may engage in a speculative futurism regarding the city of tomorrow. The signals of carbon and mineral circularity, of energy self-sufficiency, of a closing of the hydrological cycle of rainwater, drinking water and waste water, of incorporating principles of biomimicry in the design of buildings, houses and factories, are already noteworthy. Buildings can absorb water, sunlight and interact with their inhabitants in all kinds of ways. The future may see home 3D printing of animal protein from stem cells, and home grown production of plants and herbs, all in your own kitchen. The nutritional needs of individual people can be tailor-produced with minimal waste of water and minerals. Even personalised and home produced supplements and medicines are within reach inside two decades. These evolutions may become available beyond developed economies. The experiences with recent innovations in ICTs, transportation and other domains have however shown that the dissemination across economies and territories will take place in years rather than decades.

The mutualism and metabolism of cities and regions will therefore, by necessity, be dynamic, flexible and constantly evolving in an environment that will be unpredictable and even disruptive at times. The region should benefit as much as the city to prevent people from being forced into urban life, leaving the hinterland to waste. Fluidity of structures, social interactions and physical connections will be at the basis of the 21st century governance of water and all other essential resources. In the end, it is therefore simply a case of being part of it, or not.

Notes

1. *See www.oecd.org/env/watergovernanceprogramme.htm.*
2. *See www.oecd.org/governance/oecd-principles-on-water-governance.htm.*
3. See *www.oecd.org/gov/regional-policy/water-governance-in-cities-city-profiles.htm.*

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OECD Regional Outlook 2016
Productive Regions for Inclusive Societies

PART III

Chapter 9

United States rural policy: Increasing opportunities and improving the quality of life of rural communities

by
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United States rural policy seeks to mobilise the assets of rural areas for national prosperity and offer opportunities for greater quality of life across all rural communities. This chapter considers the diversity of rural places and how rural policy and other place-based approaches and bodies, such as the White House Rural Council, can contribute to their vitality. It further describes how several programmes and plans are being implemented to fulfil these goals, including: Promise Zones; StrikeForce Initiative; Partnership for Sustainable Communities; Local Food, Local Places; Community Economic Development approaches; Strategic Economic and Community Development; Investing Manufacturing Communities Partnerships, and rural elements of the Climate Action Plan.

Introduction

"Strong rural communities are key to a stronger America." – *President Barack Obama*

Rural America features a remarkable set of assets that contribute to the nation's economy and overall well-being. Not only is rural America home to the natural resources that feed and fuel the rest of the country and much of the world, it also hosts significant manufacturing, service sector, and recreational opportunities. In order to tap into the potential of rural economies and strengthen opportunities for the Americans who live there, the Obama Administration has set in place a modern approach to rural policy that ensures the federal government is working across agencies to support locally-led strategies that are asset-based and measured to track success toward both short- and long-term outcomes. This approach is aligned with the New Rural Paradigm that the OECD set out in 2006 and that was highlighted and affirmed in the Chair's Statement for the 10th OECD Rural Development Conference in Memphis, Tennessee in 2015, discussed below.

While "rural" describes a very diverse geography and can be characterised in many ways, one definition cited by the U.S. Department of Agriculture (USDA) Economic Research Service identifies rural areas as counties that feature communities with fewer than 50 000 people. By this definition, nearly two-thirds of the United States' 3 143 counties are rural, and rural communities comprise 14% of the population (46.2 million people) and about 72% of the country's total land area. These statistics only begin to describe the importance of rural places to the national economy.

From the hills of eastern Kentucky to the wide desert expanses of the southwest, the particular assets of rural regions varies greatly. At the same time, challenges such as low population density, physical remoteness, population decline and ageing, and limited diversity in economic structures expose rural communities to different types of economic barriers. The Obama Administration recognises that for communities to be more resilient, a federal-level approach to rural development policy that is specifically tailored to the attributes, resources, and priorities of each place is required. For these reasons, rural policy that reflects the diversity and realities of rural regions is an important part of any national strategy promoting inclusive growth. For example:

- Struggling rural economies are lost opportunities for national economic growth. Improving rural economic performance advances overall economic performance of cities and national economies as a whole.
- Job losses in rural communities tend to be structural and can be difficult to recoup. In general, rural economies can achieve solid economic performance over the medium and long run, but some rural communities are particularly vulnerable to economic downturns, especially in historically under-resourced, extraction-based, and high-poverty regions.
- Investments in young people, through programmes such as early childhood education, are especially important to the future of rural places, because most people who live in

rural places as adults were born and raised in rural places. Investing in children in rural areas today not only ensures that individuals in poverty have a ladder up, it also makes it possible for their personal success to contribute to the future success of their rural communities, as well as the national economy. These early-life stage public investments also serve to ameliorate the longer-term challenges of an ageing population base and demographic decline in many rural areas.

To ensure that individuals, families, and communities in rural America have an opportunity to reach their economic potential, the Obama Administration has championed a modern approach to federal engagement in rural communities.

Box 9.1. **USDA Rural Development**

In order to anchor federal support in rural places, the United States features a community economic development finance agency within the United States Department of Agriculture (USDA) called Rural Development. During the course of the Obama Administration, USDA Rural Development has invested more than USD 224 billion in more than 1.2 million projects in rural communities across the country. Rural Development has worked closely with partners to drive investment in rural small businesses and entrepreneurs; help rural families achieve the dream of homeownership; grow the bio-based economy; make critical upgrades to electric, water, and telecommunications infrastructure; and support renewable energy and energy efficiency. An increasing number of rural communities are looking for development approaches beyond the conventional dispersed land use patterns that make it difficult for them to meet their fiscal, social, public health, and environmental goals. They are using a range of strategies to pursue economic opportunities while maintaining the rural character that residents value.

USDA Rural Development investments nurture the growth that fuels the national economy. The Department's investments in rural communities run deep. Since 2009, USDA has made 1.1 million direct loans, guaranteed loans, and grants to support housing; 12 000 loans and grants to support community facilities; 10 600 loans and grants to support rural water and wastewater services; 2 500 projects to support broadband and rural electric services; and nearly 24 000 projects to support rural businesses and entrepreneurship. As a result, USDA's partnership with America's rural communities has supported the emergence of a more vibrant, diverse rural economy led by makers, creators and innovators. These significant and transformative investments in housing, community facilities, businesses, and infrastructure have empowered rural America to continue leading the way – strengthening America's economy, small towns, and rural communities.

US place-based strategies

The United States has created policy and programme innovations consistent with principles long reflected in the OECD's New Rural Paradigm, the OECD approach to rural development policy, including: i) promoting competitiveness in rural areas as the central goal of rural development policy; and ii) taking a more holistic, place-based approach to rural development, encouraging more flexible policy design and delivery, and supporting interaction across all levels of government and with the private and NGO sectors. In particular, the Obama Administration has deployed policy, programmatic and human resource levers to advance this approach, as discussed below.

White House place-based memorandum

On 11 August 2009, the White House released a memorandum addressed to the Heads of Executive Departments and Agencies on the subject of "Developing Effective Place-based Policies for the FY 2011 Budget". The document served as a visioning document for the federal government acting in service to community priorities, and it presaged the many place-based innovations developed by the Obama Administration. The memorandum includes the following language:

> "Place-based policies leverage investments by focusing resources in targeted places and drawing on the compounding effect of well-coordinated action. Effective place-based policies can influence how rural and metropolitan areas develop, how well they function as places to live, work, operate a business, preserve heritage, and more. Such policies can also streamline otherwise redundant and disconnected programs". (The White House, 2009)

This White House commitment, coming from the highest levels and so early in the new Administration, has framed the place-based principles in federal programme design, funding, and execution ever since. Over the last seven years, the Administration has worked to transform the federal government into a more effective partner for local communities. Based largely on the direction provided by the foundational memorandum, federal leaders are working hand in hand with local stakeholders to craft solutions that harness resources across multiple agencies in response to local needs and priorities.

Establishment of the White House Rural Council

On 9 June 2011, President Obama signed an Executive Order establishing the White House Rural Council. This Council, comprised of the President's Cabinet, along with other senior federal officials, was given a specific policy charge to:

> "[…]work across executive departments, agencies, and offices to coordinate development of policy recommendations to promote economic prosperity and quality of life in rural America; […] to address the needs of rural America, this order establishes a council to better coordinate federal programs and maximize the impact of federal investment to promote economic prosperity and quality of life in our rural communities." (Obama, 2011)

Since its establishment, the White House Rural Council has provided an avenue for cross-departmental discussion, policy, programme and funding co-ordination, as well as White House-level attention to the rural differential in all major US policy considerations. Recognising that persistent rural challenges such as poverty and de-population require a holistic approach beyond individual programmes and funding streams, the Rural Council seeks to engage disparate agencies to develop coherent and well co-ordinated solutions. The Rural Council is chaired by the Agriculture Secretary, ensuring a direct institutional and senior leadership alignment for US rural development policy and programme design.

Chair's statement from the 10th OECD Rural Development Conference

In May 2015, as the Chair of the White House Rural Council and Secretary of Agriculture, I chaired the 10th OECD Rural Development Conference in Memphis, Tennessee. The conference made clear the imperative that nations recognise the potential for growth in

rural areas, while also considering some of the localised features, such as low population density, remoteness, limited economic diversity that exposes rural places to downturns, and an ageing population.

To capture these opportunities and meet these challenges, the Chair's statement from the conference highlighted a number of strategies to guide new rural policy, including:

- Leverage private investment, mobilise skills, and capitalise on local assets.
- Provide rural communities with national policy that supports the assets, opportunities and needs of distinct regions.
- Connect rural and urban regions to optimise the regional assets and facilitate public services.
- Support Native communities with specific strategies appropriate to their culture and geography.

Initiatives in rural regions

Since 2009, more than 15 federal agencies have launched dozens of initiatives and partnerships with over 1 800 rural, tribal, and urban communities. From Fresno to Detroit, Southeast Kentucky to Baltimore, federal leaders are working across agency lines and offering hands-on support to build local capacity, provide expertise, and unlock resources to help community leaders achieve their goals. The Obama Administration's work to incorporate regional, place-based approaches for integrative community and economic development includes a variety of measures, discussed below.

Promise Zones

In Promise Zones, federal experts help local leaders more efficiently navigate federal resources, focusing on those that best advance a local plan for community vitality. The Promise Zone designation enables the federal government to work more collaboratively across all federal agencies and in partnership with local leaders on efforts to create jobs, improve educational opportunities, increase economic activity, and improve public safety, among other local priorities.

This initiative is bringing much-needed targeted investments and creating ladders of economic opportunity in impoverished rural and tribal areas that have the greatest needs. Thus far, over a dozen federal agencies have come together to help teams of local leaders across the country accelerate community revitalisation efforts in 13 designated Promise Zones. Investments in the first four rural and tribal Promise Zones – Choctaw Nation of Oklahoma, Kentucky Highlands, South Carolina Low Country, and Pine Ridge Reservation of the Oglala Sioux Tribe – are yielding substantial results.

For example, in Southeastern Kentucky, residents decided to help diversify the local economy by introducing high-speed Internet that would connect them to work in any kind of industry, anywhere in the world. Coal miners who were previously stymied by the perception that they lacked 21st century job skills are now learning to program computer code thanks to improved broadband, and federal agencies are co-ordinating through the Administration's TechHire initiative to provide quality training and tools.

Box 9.2. **Promise Zone rural success**

Southeastern Kentucky and Choctaw Nation have received USD 246 million and USD 169 million, respectively, since their Spring 2014 designation. USDA invested over USD 8 million in water and waste infrastructure in Hampton County, South Carolina, supporting the development of a regional industrial park. In total, the South Carolina Promise Zone reports a whopping USD 312 million in capital investment since September 2015.

The Pine Ridge Promise Zone has received federal technical assistance and investments to help build basic infrastructure such as water and waste systems, as well as vital community facilities supporting a tribal college and the Oglala Sioux Tribe's public safety system. The Kentucky Highlands Promise Zone has seen enormous strides in developing a strong local food economy. In early July, local partners of the Kentucky Highlands Promise Zone announced the creation of a low-interest loan fund for small farmers in the 54-county region of eastern and southern Kentucky. Investments like these mean real opportunities for small growers who want to make strategic plans to expand their operations, and they create opportunities for businesses throughout the regional food supply chain.

StrikeForce Initiative

Launched in 2010, the StrikeForce Initiative for Rural Growth and Opportunity is a USDA agency-wide effort to accelerate assistance to historically underserved groups. The initiative is part of the Obama Administration's commitment to address persistent poverty across America, where 85% of persistent poverty counties are located in rural areas. StrikeForce teams have collaborated with more than 1 500 community groups to bring targeted assistance to rural areas experiencing chronic poverty. StrikeForce delivers results by building partnerships with community organisations, businesses, foundations, universities, faith-based, and other groups to help challenged communities shape a future based on local assets and regional strengths. Each StrikeForce project is a commitment to America's economic future.

Box 9.3. **StrikeForce results**

- Since 2010, these efforts have invested more than USD 23.5 billion to create jobs, build homes, feed children, assist farmers and conserve natural resources across more than 20 states.
- In 2015, StrikeForce projects resulted in:
  - USD 7.49 billion invested
  - 75 482 986 summer meals for kids
  - 9 997 farmers assisted
  - 14 629 conservation efforts
  - 133 232 home investments
- In 2016, StrikeForce expanded to include Florida, Missouri, Montana, and Ohio.
- StrikeForce teams now operate in 970 counties in 25 states and Puerto Rico.

Partnership for Sustainable Communities

The Partnership for Sustainable Communities includes the U.S. Department of Housing and Urban Development (HUD), the U.S. Department of Transportation (DOT), and the U.S. Environmental Protection Agency (EPA). Along with these three formal agency partners, other agencies such as the USDA collaborate to support locally-led regional strategies. The aim is to ensure that the agencies' spending, policies, and programmes are aligned to support communities' efforts to be economically vibrant and environmentally sustainable.

Sustainable communities' approaches are as diverse as the communities themselves. Communities select the most appropriate strategies for their contexts and adapt them to respond to local needs and interests.

Box 9.4. **Lake Village: Reusing a historic building to support downtown**

In 2010, the community of Lake Village, Arkansas, population 2 823, received funding to rehabilitate a historic structure in its town centre in an effort to consolidate public service providers into one location and channel future development into the Main Street area of an economically distressed community. The USDA – Rural Development Community Facilities Program provided USD 840 000 and the Arkansas Energy Efficiency Conservation Block Grant Program provided USD 750 000.

Like many small communities whose main streets have declined, Lake Village had seen public and private investments migrate to the outskirts of town over the years. In an effort to reverse that trend, Lake Village leaders explored ways to revitalise their community and decided that reusing an existing building, one listed on the National Register of Historic Places, would be a good way to provide a boost to the community. The mayor, police, and court clerk all used spaces in separate buildings; the town hoped that combining those departments into one centrally located building would help provide services to the community more efficiently while also bringing people and economic activity back to Main Street. Once complete, the historic John Tushek Building would be one of the first LEED-certified buildings in Arkansas, home to all the town's public service providers, and a place that could attract other offices and businesses to Main Street.

Lake Village is one example of a rural community that worked with federal agencies to attain their quality of life, environmental, and economic goals. By consolidating public services into one building, Lake Village sought to create a critical mass of employment downtown, helping attract other businesses to the area and renewing its vitality. The decision to use an existing building was a much more efficient use of scarce resources than constructing a new facility. Combining USDA-Rural Development and state funds enabled the city to rehabilitate the Tushek Building using LEED development standards, reducing energy costs and advancing the community's goal of revitalising its Main Street. Finally, rehabilitation and reuse of the Tushek Building as a civic space is a testimony to the community's appreciation for this historic asset, as well as for their distinctive Main Street and the surrounding neighbourhoods.

Local Food, Local Places

Local Food, Local Places (LFLP) helps communities increase economic opportunities for local farmers and related businesses, create vibrant places, and promote childhood wellness by improving access to healthy local food. It features a strong inter-agency component with funding from USDA, EPA, the Centers for Disease Control and

Prevention (CDC), the Department of Transportation (DOT), the Appalachian Regional Commission (ARC), and the Delta Regional Authority (DRA), as well as support from the White House Rural Council. In communities working with LFLP, federal experts work side-by-side with residents and local leaders to create customised solutions; bolster co-ordination across agencies to improve interaction with communities and a "one Government" partner; and rely on valuable data to help inform solutions and evaluate what is working and what is not.

Launched in 2014, LFLP has already helped more than 50 communities make a difference in people's lives. With technical assistance through LFLP, participants are taking innovative approaches to common challenges, like launching business incubators to support food entrepreneurs and starting co-operative grocery stores to help revitalise main streets. For example, Clarksdale, Mississippi, (population 17 011) is working with an inter-agency team to develop a vegetable farming-based job training programme and a series of community gardens that will supply food for a new farmers market and café.

Box 9.5. **USDA and local and regional food systems**

Rural Development's efforts to support rural producers, rural communities, and the food enterprises, like food hubs, that reside in and support these communities are part of USDA's Know Your Farmer, Know Your Food Initiative[1] (KYF), which co-ordinates the Department's work to develop strong local and regional food systems. Starting in 2009, USDA began embedding local and regional food systems into policy making and programming, and by 2012, Secretary Vilsack named it one of the four pillars supporting a new rural American economy[2] – along with bio-based manufacturing, conservation markets, and agricultural production. Since then, USDA has been working to incorporate local and regional food systems across the department's sizeable footprint by investing in projects that recruit and train farmers, expand economic opportunities for small businesses, and increase access to healthy foods.

Between 2009 and 2015, USDA has invested over USD 1 billion in more than 40 000 local and regional food businesses and infrastructure projects, from the smallest on-farm projects like high tunnels, to large-scale investments like food processing facilities. Today, more than 160 000 farmers and ranchers nationwide are selling into local markets, from farmers markets and CSAs to local restaurants, grocery stores, and institutions, generating huge returns for local communities. Industry estimates show US local food sales totalled at least USD 12 billion in 2014, up from USD 5 billion in 2008, and experts anticipate that value to hit USD 20 billion by 2019. This segment of agriculture is a vibrant growth area that is drawing young people back to rural communities, generating jobs and entrepreneurship, improving quality of life in rural communities, and expanding healthy food access and choice.

> "Over the last four years, I've seen a shift. People who have never been on a farm are becoming interested in where their food comes from. Towns and neighborhoods that didn't have regular access to fresh fruits and vegetables are getting them. Farmers and ranchers are tapping into new markets and keeping more money in their pockets by selling locally. And all across the country, innovative local food businesses are starting up and staffing up. Local food systems work for America: when we create opportunities for farmers and ranchers, our entire nation reaps the benefit." (President Barack Obama)

Notes:

1. See *http://www.usda.gov/wps/portal/usda/knowyourfarmer?navid=kyf-kyf*.
2. See *http://www.usda.gov/wps/portal/usda/usdahome?contentid=2015/05/0142.xml*.

Community Economic Development

Working with high-poverty communities requires planning, targeted technical assistance, partnerships, leveraging, and active oversight. Recognising the importance of this approach, USDA Rural Development is supporting a cross-cutting effort around Community Economic Development (CED). The programme encourages and supports regional rural economic development by building capacity and providing technical assistance in high-poverty rural communities to help residents get access to financial, social, and environmental capital. All Rural Development State Offices have a CED staff lead to help:

- Engage with local leaders and community members, support community-based and tribal efforts to form regional strategies, set benchmarks, and measure progress.
- Collaborate with strategic partners to create greater impact by combining USDA Rural Development funding programmes with other funding sources. Partners include other federal agencies, co-operatives, non-profits, philanthropic organisations, and local institutions.
- Spearhead poverty strategies, such as the StrikeForce for Rural Growth and Opportunity and Promise Zones initiatives, along with Rural Development programmes like Stronger Economies Together.

Box 9.6. **CED accomplishments**

Rural Development has exceeded its goal of training and mentoring 50% of staff on CED approaches, tools, and programmes. By the close of FY 2015, more than 4 000 employees – out of around 5 000 – were trained through a variety of CED-related courses. Employees receiving training included state directors, agency administrators, and programme and field staff.

In FY 2015, Rural Development met its goal of identifying 100 target communities to provide intensive community economic development activities. The majority of these target CED communities are in persistent-poverty counties with low capacity and minimal infrastructure. State CED and programme field staff created work plans for intensive capacity building, matched their needs with the appropriate financing solutions, and successfully invested a total of USD 2.13 billion in these areas.

Strategic Economic and Community Development

Strategic Economic and Community Development (SECD) was authorised by the 2014 Farm Bill to prioritise projects that are part of multi-jurisdictional plans. Under this provision, up to 10% of each programme's annual appropriations can be set aside and made available to eligible SECD applicants. SECD is jump-starting community planning by providing an incentive for communities to work together and create regional plans, capitalise on a region's unique strengths, and creatively use resources for multiple purposes. It enables high-poverty rural communities to have greater access to certain competitive programmes and encourages organisations and communities to think more holistically when proposing a project to ensure that the outcomes benefit the broader region.

Box 9.7. **Strategic Economic and Community Development – Big Lake Area Sanitary District**

In 2015, 47 SECD applications were submitted from 15 states. Of these, 25 received SECD awards, for a combined total of USD 13.2 million in loans and grants. The funding increased to USD 300 million in 2016. For example, the Big Lake Area Sanitary District in Minnesota, will receive a USD 2.9 million loan and a USD 4.5 million grant to build a wastewater treatment plant serving Perch Lake and Sawyer townships and the Fond du Lac Indian Reservation in 2016. This collaborative effort will convert the treatment plant into a pressure sewer collection system. The project supports the Fond du Lac Community Economic Development Plan, which highlights the importance of providing adequate wastewater treatment services and protecting the health and welfare of people who live or work on the reservation. Improving water quality will also increase the fish population, which will boost local tourism revenue.

Investing in Manufacturing Communities Partnerships

Technological innovation, increasing labour productivity, and new global markets have created new rural business opportunities. The Investing Manufacturing Communities Partnerships (IMCP) is an initiative designed to revolutionise the way federal agencies leverage economic development funds. It encourages communities to develop comprehensive economic development strategies that will strengthen their competitive edge for attracting global manufacturer and supply chain investments. Through IMCP, the federal government is rewarding best practices – co-ordinating federal aid to support communities' strong development plans and synchronising grant programmes across multiple departments and agencies. Led by the Department of Commerce, IMCP features many agencies that have programmes to support the manufacturing infrastructure and supply chain. For example, USDA has been making targeted investments to help manufacturers in rural areas increase production and capacity.

Table 9.1. **Snapshot of USDA-RD investments in manufacturing, FY 2009-15**

State	Rural manufacturing jobs supported	USDA-RD investment to help rural manufacturers increase production and capacity (USD, million)
Alabama	90 527	28.8
California	18 075	85.9
Georgia	95 732	274.9
Illinois	83 938	49
Iowa	116 806	112.8
Kentucky	90 258	62.4
Louisiana	22 667	58.5
Michigan	93 864	85.2
Mississippi	94 160	33
Missouri	73 048	36.8
New York	65 151	61.7
North Carolina	112 695	169.5
Oregon	27 521	277.8
Pennsylvania	89 095	78.8

Source: USDA (2016).

Climate Action Plan and rural America

From day one, President Obama and his Administration have transformed the US economy into a global leader in renewable energy and an aggressive champion of using practical, science-based solutions to reduce greenhouse gas (GHG) emissions.

Central to the President's Climate Action Plan are agriculture, forestry, and land stewardship. To meet the national goal of reducing GHG emissions by 26-28% below 2005 levels by 2025, the plan calls for US food and forestry producers to embrace innovation and conservation like never before.

For over 150 years, American farmers, ranchers, forest landowners, and rural communities have adapted in the face of weather challenges. But climate change posed unknown threats. Last year marked the 19th consecutive year that our annual average temperature was above the 20th century average. One region of the United States now experiences historic droughts while another is hit by stronger and more frequent storms. Invasive species and pests lay siege to forests in the Mountain West while increasingly intense wildfires rip through landscapes from the Southwest to the Pacific Northwest up to Alaska.

In this new reality, farmers, ranchers, and landowners have begun to seek out tools, technologies, and new partnerships to manage their investments against these risks. Agencies across the federal government have been called on to address this monumental challenge. For example, working with rural communities, farmers, and landowners since 2009, USDA has:

- enrolled record acres in conservation programmes through a new model of stewardship that brings together local, national, public, and private partners
- set the nation's first measurable benchmarks in food and forestry to reduce net emissions and enhance CO_2 sequestration by 120 million metric tonnes per year
- implemented the nation's first comprehensive planning rule in a generation to ensure the health and sustainability of our national forests and grasslands
- set the first-ever national food waste reduction goal of 50% by 2030
- established seven regional climate hubs and three sub-hubs to give producers and landowners data and guidance for decision making
- invested unprecedented resources in climate research and developed science-based tools to help landowners evaluate management options
- helped rural businesses save enough energy to power 959 000 homes annually
- co-founded an alliance of 120 nations and partners to enhance agricultural productivity and incomes, reduce GHG emissions, and increase CO_2 sequestration.

The evolution happening today in US food and forestry to mitigate and adapt to climate impacts is historic, and it all began with a commitment to renewable energy.

Box 9.8. **The lightbulb moment in renewable energy**

Helping thousands of rural small businesses, farmers, and ranchers shift away from fossil fuel based energy by installing renewable energy systems and energy efficiency solutions has been one of the most important components of USDA's climate mitigation investments. Thanks to USDA investments in renewable energy projects of all sizes, rural Americans are saving more than 10.4 billion kWh each year – enough energy to power more than 959 000 American homes annually. USDA has invested USD 38 billion in electric loans and more than USD 1 billion for smart grid technologies since 2009, helping build more than 185 000 miles of transmission and distribution lines serving approximately 5 million rural customers annually. Today, more than 2 200 USDA wind and solar renewable electricity generation projects power more than 130 000 homes annually.

USDA's Rural Energy for America Program (REAP) provided over USD 365 million in grants and over USD 430 million in loan guarantees to agricultural producers and rural small business owners, financing over 11 000 projects. All told, REAP projects are generating and saving power equivalent to removing more than 1 million cars from the road. In the forestry sector, USDA invested nearly USD 1 billion through grants, loans, and loan guarantees to support over 230 wood energy projects across the country, thereby reducing reliance on costly fossil fuels, supporting rural economic growth, and advancing forest restoration.

Conclusion

The United States, through the White House Rural Council and the leadership of USDA, has transformed the way it serves and interacts with rural communities. This approach was echoed in the proceedings of the 10th OECD Rural Development Conference in Memphis, Tennessee. The United States has answered the call from that conference with national policies that support a new rural approach – one that recognises the importance of rural areas to the national economy, strives to ensure that all citizens have an opportunity to succeed, and seeks to create flexible approaches that match the diverse assets of rural regions.

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PART III

Chapter 10

Global dimensions of malnutrition: Territorial perspectives on food security and nutrition policies

by
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Despite impressive progress in reducing hunger and poverty, about 800 million people worldwide continue to suffer from undernourishment. Food insecurity and malnutrition are problems affecting rural areas in particular, as part of a pattern of deep-rooted spatial inequalities. Conventional sectoral agriculture and food policies often overlook such territorial disparities and, consequently, are unlikely to suffice to meet the sustainable development goal of ending hunger and achieving food security for all by 2030. This chapter argues that food security and nutrition policies would greatly benefit from a territorial approach. A territorial approach to food security and nutrition goes beyond a simple rural-urban dichotomy. The development of strong and mutually reinforcing rural-urban linkages is important for the development of agriculture and food systems at large, but will not be effective if it does not consider competing uses for land, water and other natural resources and plans infrastructure and basic services within and between different territorial contexts.

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Introduction

Much progress has been made in reducing hunger and improving food security worldwide. In the developing countries, the prevalence of undernourishment declined from 23% around 1990 to an estimated 13% by 2015, virtually reaching one of the targets of the millennium development goal of halving hunger during that time span (FAO, 2015). Yet, the Food and Agriculture Organization of the United Nations (FAO) estimates that 780 million people continue to suffer hunger, despite the fact that enough food is produced to feed everyone.

These trends and conditions differ markedly across countries and regions. Most of the reduction in undernourishment has taken place in Asia, influenced by changes in highly populous countries such as the People's Republic of China and India. The prevalence of undernourishment fell at a much slower pace in Africa. It is also the only region where the absolute number of people suffering from hunger increased (by nearly a quarter of a billion between 1990 and 2015). Despite slow progress for the region as a whole, 18 sub-Saharan countries managed to halve the prevalence of hunger.

Spatial divergence is also found at subnational levels. About three-quarters of the world's poor and food insecure live in rural areas. Many of them depend on agriculture and, more in general, they are mostly found in areas that are disadvantaged more generally with inadequate infrastructure and poor access to markets and services.

Such spatial inequalities should be taken into account in order to effectively address challenges of food security and nutrition (FSN). In practice, however, policies remain heavily reliant on sectoral approaches, using predominantly agricultural trade, price and subsidy policies to influence food production and availability, while social policies and social protection schemes support the poor in accessing food.

Neither sectoral policy nor market forces are sufficient to account for the heterogeneity of challenges faced by rural and other disadvantaged areas and to optimise the development potential of territories. As argued in this chapter, a territorial approach to food security and nutrition goes beyond a simple rural-urban dichotomy. The development of strong and mutually reinforcing rural-urban linkages is important for the development of agriculture and food systems at large, but will not be effective if it does not consider competing uses for land, water and other natural resources as well as plans for infrastructure and basic services within, and between, different territorial contexts. This would require broader territorial planning, not just for remote, sparsely populated rural areas on the one hand, and high-density big cities on the other, but across the whole spectrum from remote rural areas, rural townships, intermediate cities and metropoles. Ideally, such territorial planning would surmount political-administrative boundaries.

From this perspective, the concept of "functional" territories developed by OECD (2002) and defined as "the functional space resulting from the organisation of social and economic relations in that its boundaries do not reflect geographical particularities or historical events" provides a more suitable framework to address food security and

nutrition issues. This definition implies that FSN should be seen as the result of social and economic exchanges of food and related services taking place between actors (producers, traders, service providers, including environmental services, and consumers) who are located in different geographic areas that do not necessarily match with administrative boundaries or rural-urban divides. Operationally, the FSN functional area can thus be obtained by mapping the dynamics of food systems.[1]

Looked at this way, territorial approaches facilitate policy design that considers all four dimensions of FSN in an integral way. These four dimensions refer to food availability, access, utilisation, and stability.[2]

In September 2015, the governments of all UN member states endorsed the 2030 Agenda for Sustainable Development, which includes 17 Sustainable Development Goals (SDGs). Eradication of poverty and hunger feature at the top of this agenda (UN, 2015). The agenda further calls, among other things, for reducing inequalities between and within countries, inclusive economic growth and making agriculture and food systems sustainable. The goals are part of a universal agenda and are considered indivisible, that is, coherence of interventions should be sought in pursuing them. The pervasive spatial inequalities in FSN in themselves justify that territorial dimensions are given due consideration in policies and interventions aiming at the eradication of poverty and hunger and all other related SDGs. This chapter will argue that the case is much stronger than that and show that territorial approaches facilitate policy coherence across multiple domains of policy making and governance, as required by the 2030 Agenda for Sustainable Development.

Based on the existing evidence and on the evidence generated by five case studies prepared within the framework of a FAO, OECD and UNCDF initiative (OECD, FAO and UNCDF, 2016), the following sections explain how a territorial approach can contribute to achieving the policy coherence needed for guaranteeing FSN in the context of inclusive and sustainable development. Drawing from the literature and the case-study findings, the next section provides some evidence of the spatial dimension of FSN and shows that within-country disparities in FSN levels are a concern that cuts across countries, both for developed or developing countries. The following section reviews trends and structural transformations that will affect food security and nutrition conditions and their spatial distribution over the coming decades. It identifies key challenges and opportunities and how policies should respond to these. Based on an assessment conducted in five countries, the extent to which countries are engaged in policy processes that include a territorial approach is then discussed. It concludes that policy makers are showing increased awareness of the importance of integrated policy frameworks that consider spatial and context-specific situations, but that instruments and governance mechanisms to implement territorial approaches are lacking or have been poorly developed. The final section proposes a number of further directions of change to strengthen national capacities in adopting territorial approaches to food and nutrition security.

Spatial inequalities in food security

While spatial diversity of food security levels have often been looked at either through a global North-South or urban-rural divide, data analysed in Cistulli et al. (2014) and OECD, FAO and UNCDF (2016) show a trend of growing within-country inequalities, especially among developing countries that tend to be at most risk of food insecurity. These studies also find that food security needs and issues are context specific. Rural food security issues are not the same as for urban areas and food security issues in remote rural areas are not

the same as in the peri-urban areas. Capital endowments, including infrastructure, human capital, social capital, and natural resources, influence household decisions regarding food security and nutrition. Being less endowed in infrastructure, other physical, human and social capital, rural areas tend to show significantly higher poverty and food insecurity rates than urbanised territories, most notably in remote areas with difficult access to infrastructure and basic services. Spatial inequalities within countries are found in many nations, whether low-income developing countries or high-income industrialised countries. The so-called food deserts in the United States are one manifestation of this (Ver Ploeg et al., 2009), while wide disparities in levels of food security across provinces and municipalities in South Africa is an example from a middle-income country (Cistulli et al., 2014). The studies conducted by FAO, OECD and UNCDF in five countries covering Latin America, Africa and Asia confirm the important food-place nexus. The table below summarises some of the evidence found of within-country disparities in the countries studied.

Table 10.1. **Spatial inequalities in terms of poverty and food security in selected developing countries**

	FAO-OECD-UNCDF case study findings
Colombia	Data for 16 out of 32 departments show that the gap between the national average rate of food insecurity and malnutrition is over 20 percentage points: from 40.8% (national average) to over 60% in the top 6 departments (Nariño, Chocó, Sucre, Bolívar, Magdalena and Córdoba). Extreme poverty varies between 9.4% in the Atlántico department to 37.6% in La Guajira.
Peru	Across departments, the share of children under age 5 suffering from chronic malnutrition ranges from 3.7% (Tacna) to 35% (Huancavelica), while the food insecurity vulnerability index varies from 0.0138 (Callao) to 0.716 (Huancavelica) between the least to the most exposed department. The most vulnerable and food insecure departments are found in mountainous areas.
Cambodia	Malnutrition rates appear to be persistently higher in the remote areas of the Northeast, and lower around the capital city. An aggregate picture of territorial inequalities with regards to FSN generated by small area estimates shows that levels of stunting for children under age 5 range from 31% in the capital province of Phnom Penh to 50% in the Northeastern province of Ratanakiri, while the share underweight varies from around 18% (Phnom Penh) to 36%.
Morocco	Morocco has undergone a rapid urbanisation process and most of the urban population is concentrated in the fertile plains and coastal areas of the Northwest region, where economic activities are mainly located. 70% of Morocco's poor people live in rural areas, and are concentrated in its drylands and the remote mountainous areas. Small, poorly connected fishing villages along the coast also show high poverty levels. Regions that are significantly above the national average poverty rate (9%) are: Gharb-Chrarda-Béni Hssen (19.0%), Souss-Massa-Darâa (18.3%), Doukkala-Abda (17.4%), Guelmim-Es-Semara (17.3%), Fès-Boulemane (16.8%) and Meknès-Tafilalet (16.8%).
Côte d'Ivoire	Poverty, food insecurity and malnutrition are especially pronounced in rural areas of Côte d'Ivoire, especially in the Northern regions. In 2008, the Nord region had a poverty rate close to 80%. Poverty rates in the Ouest and Centre-Ouest regions were close to 63% in the same year, while the Sud-Ouest and Sud-sans-Abidjan showed poverty rates of less than 45%. In 2012, 35% of children under age 5 living in rural areas suffered from chronic malnutrition compared to 21% in urban areas. Chronic undernourishment among children was the highest in the regions Nord (39%) and Nord-Est (34%).

Source: OECD, FAO and UNCDF (2016), *Adopting a Territorial Approach to Food Security and Nutrition Policy*, *http://dx.doi.org/10.1787/9789264257108-9-en*.

In summary, evidence suggests that territorial related factors play an important role in determining levels of poverty and food security and nutrition and vulnerability, and that coherent and integrated policies are necessary to create the enabling and conducive environment for inclusive and sustainable development. As demonstrated by the case studies conducted in the framework of the joint FAO, OECD and UNCDF report, awareness and engagement of countries towards a stronger territorial focus and integrated policies to eradicating hunger and poverty is increasing. This understanding was also expressed by the King of Morocco in a speech to the nation on the occasion of the launch of the Human Development Initiative in 2005 (referenced in OECD, FAO and UNCDF, 2016). He pointed out

that fragmented and ad hoc interventions based on social assistance or on sectoral approaches are not sufficient to sustainably improve people's livelihoods. Integrated policies and coherent strategies are needed, which consider all relevant political, social, economic, educational, cultural and environmental dimensions.

Agriculture and rural transformations and territorial development

Five important trends are of particular importance for understanding the relevance of territorial approaches for future food security and nutrition: i) agricultural transformation and economic diversification; ii) urbanisation and demographic growth; iii) dietary transition; iv) climate change; and v) technological transition. All of these trends contribute to the transformation and food system processes.

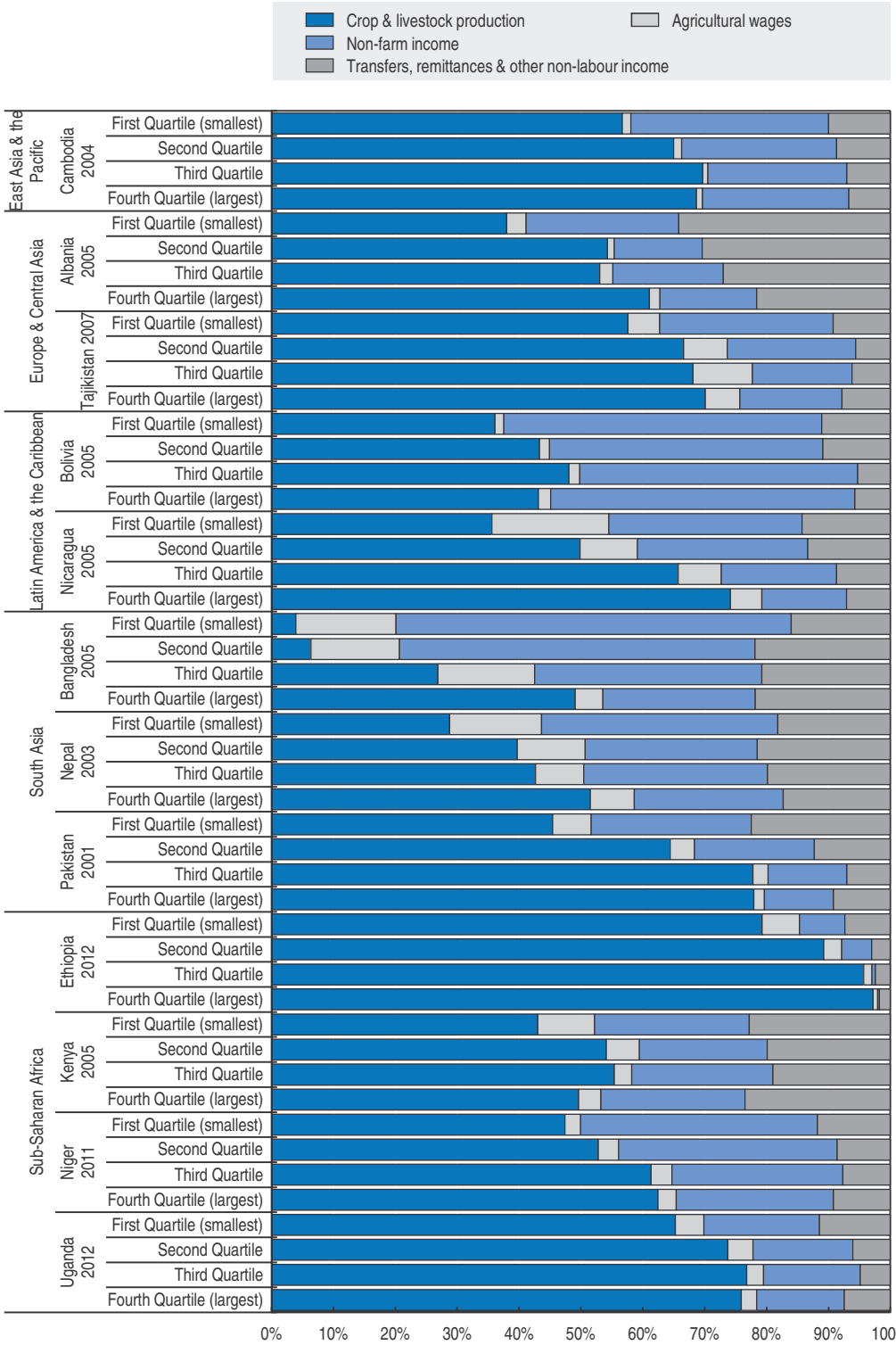
Agricultural transformations and economic diversification

Historically, economic development has been associated with declining shares of agriculture in total output. This is the result of the gradual diversification of employment and income sources. Evidence across regions and through history indicates that in initial stages of development, agricultural labour productivity is low and farm households residing in rural areas are poorer. Increasing labour productivity in agriculture is necessary in order to increase incomes, reduce poverty and hunger, and make farmers more competitive. Increased agricultural labour productivity also means that, over time, fewer jobs will be created in agriculture and demand for non-farm employment will rise. In many developing countries, especially in Africa and South Asia, agriculture remains a main source of income and employment and the described process of structural change is still in its initial stages or has stagnated. Incomes in agriculture are on average (much) lower than in urban areas and more volatile. Income diversification also takes place in these contexts, but often more as a strategy for survival than part of dynamic economic growth processes. Poor farm households adopt income diversification strategies to smooth consumption in the face of high vulnerability to agricultural income shocks. Diversification can be on-farm (e.g. planting a crop or variety mix, or combining crop and livestock operations) or off-farm (e.g. differentiating income sources through wage employment on others' farms or in other sectors, starting own business or migration of a household member).

Figure 10.1 illustrates the diversity in income diversification patterns for different farm sizes in developing countries in selected countries in Africa and Asia. These cases have in common that non-farm income shares are larger amongst households with the smallest farm holdings, a reflection of the situation described above as "immiserising diversification", i.e. diversification for survival rather than as part of dynamic structural transformation.

Economic diversification has important spatial dimensions. Both push and pull factors are relevant. Poverty pushes rural workers to seek alternative options through migration (seasonal or permanent; rural-rural or rural-urban), shifting population balances across territories. Such push factors are linked with imperfect and incomplete credit and insurance markets, stagnation in the agricultural sector, high transaction costs, and a lack of capacity to cope with adverse shocks, such as droughts or floods. Diversification merely driven by push factors does not necessarily lift average incomes and may lead to a transfer of poverty problems from one rural area to the next or from rural to urban areas. Pull factors, on the other hand, are associated with a thriving farm sector, able to free resources (financial and human) that will be employed in other sectors, including but not limited to,

Figure 10.1. **Average shares of household income, by source and farm size, in selected developing countries**



Source: FAO (2014a), *The State of Food and Agriculture 2014: Innovation in family farming*, http://www.fao.org/3/a-i4040e.pdf.

StatLink http://dx.doi.org/10.1787/888933412176

agricultural related sectors, and improve income levels and food security as well as their stability over time. Dynamic economic diversification into non-farm activity is typically associated with improving access to markets, adequate infrastructure (roads, electricity, etc.) and basic services.

The challenge for countries and communities is to turn push factors into pull factors, requiring both lifting constraints to agricultural productivity growth and the creation of farm to non-farm linkages to trigger a more dynamic economic diversification process. Both elements have strong territorial dimensions linked to natural resource endowments and their distribution among the population and the location of dwellings, markets, infrastructure and services. Multi-sector territorial approaches require an assessment of the development potential of areas considering such territory-specific conditions.

Urbanisation and population growth

More than 50% of the world's population, or around 3.9 billion people, now live in cities and large towns classified as urban, and this figure is expected to rise to 66% by 2050. Only in Africa are rural populations expected to grow in absolute terms until 2030, after which these will also decline. Urbanisation will take place in a context of continued overall population growth, with the world population expected to increase to 9.7 billion by 2050 (UN-DESA, 2015). More than half of the projected world population increase will take place in Africa, whose population is expected to double to over 2 billion.

Urbanisation rates are currently lower in Africa and Asia as compared with other regions of the world. Based on current trends, however, these regions will also become predominantly urban, as the share of the urban population is expected to increase between 2010 and 2050 from 40% to 56% in Africa, and from 48% to 64% in Asia. Forty percent of global urban growth is expected to add to the size of secondary cities (less than 1 million habitants), while megacities are expected to grow to a lesser degree.

These population trends will pose enormous challenges to the future of food systems and competition for natural resource use. The proportion of the global population not producing food will continue to grow, while with expected income growth and increasing importance of urban food habits and dietary preferences will shift to greater consumption of higher protein and animal products (see also below).

Combined with the growing world population, changing dietary patterns imply that food production needs to increase from present levels by an estimated 60% over the coming decades, according to FAO estimates (Alexandratos and Bruinsma, 2012). Given that the agricultural land frontier has been (nearly) reached in most regions of the world, this increase in global food production will have to be achieved mostly through yield increases, but given expansion of urban areas and other non-agricultural land use, competition for land, water and other natural resources crucial to food production should also be expected to increase.

These challenges have led to increasing concerns about future urban food security. This is reflected, among other things, in the Milan Urban Food Policy Pact, signed by more than 100 mayors of small and large cities all over the world at EXPO 2015, and which proposes a framework for action for integrated rural-urban sustainable food systems. Such examples point to the importance of looking beyond the urban-rural dichotomy, and towards functional territories as defined at the outset of this chapter.

The dietary transition

Linked to the demographic trends and urbanisation, but also to economic growth, culture and technical progress, the shift from traditional staples to "Western style" processed products is characterised by an increase in the consumption of animal fats, as well as sugar, salt and vegetable oils (Pingali, 2007; Godfray, et al. 2010). Based on current trends, world meat consumption will double by 2050, which in turn will require access to grains and oil seeds that could otherwise feed 4 billion people directly (Carolan, 2011).

While the transition may have been faster in urban areas, evidence suggests that it is also taking place in the rural areas of developing world, especially among better off rural dwellers (Stage, Stage and McGranahan, 2010). Changing diets and the underpinning factors have an upside and downside: they have been a factor in reducing average rates of prevalence of undernourishment, but they have also been an important factor in pushing up rates of over-nutrition (obesity), which in turn is associated with negative health impacts. This dietary transition will push up natural resource use in agriculture, as existing livestock production technologies tend to be more intensive in the use of land, water, energy, and greenhouse gas (GHG) emissions than most crop production; hence, compounding the challenges mentioned above.

A related challenge of the nutrition transition is the "disconnect" between nutrition and agriculture that has characterised, and still is common, in many country policies. Lartey (2015) notes that today agricultural investments focus mainly on cereal production and processing as opposed to non-staples, such as fruit and vegetables, with the result that the cost of a healthy diet is high.

Climate change and the environment

Modern agriculture currently contributes about 11.6% of GHG emissions and the land use and water management related thereto are not sustainable in many parts of the world (Tubiello et al. 2015, based on FAOSTAT data). Deforestation is contributing an estimated 11% of global emissions, while causing the loss of habitat, species and biodiversity in general. Livestock contributes to nearly two thirds of agricultural GHG emissions and 78% of agricultural methane emissions.

The incidence of natural disasters has increased fivefold since the 1970s. With a fair degree of certainty, this increase can be attributed, in part, to climate change induced by human activity. Deforestation, degradation of natural coastal protection and poor infrastructure have increased the likelihood that weather shocks will turn into human disasters, especially in the least developed countries. These trends, in turn, threaten the sustainability of food systems and undermine the world's capacity to secure adequate availability of food. These effects of climate change, as well as its adverse consequences for livelihoods, public health, food security, and water availability will have a major impact on human mobility, likely leading to a substantial rise in its scale (Houghton, Jenkins and Ephraums, 1990: 103; Edenhofer et al., 2014).

The precise impacts of climate change are still highly uncertain and are likely to vary significantly across countries and within countries. Rural populations and agricultural production tend to be more vulnerable to these risks, especially in vulnerable regions in sub-Saharan Africa, which are already challenged by severe land degradation, lack of fertile soils, limited water availability, and other biophysical limits.

Technology transition

Isolation and fragmentation are among the most constraining spatial related factors of smallholder production and productivity in developing countries. Distance from consumers, input markets, services and information requires generally high transaction costs due to lack of or poor physical infrastructure in rural areas. Fragmentation of landholdings and their dispersed location are compounding factors to diseconomies of scale and low levels of private investments in disadvantaged segments of rural economies. These factors also cause high transaction costs in moving agricultural products from farm gates to consumers.

Technological innovation can contribute to reducing such transaction costs and in bridging information gaps associated with diseconomies of scale. Digital information and communication technologies (ICT) made accessible to smallholder farmers in disadvantaged regions are a good example. Applications of digital technology have helped reduce the distance between the food production points and the consumer points and achieve greater economies of scale (World Bank, 2009).

In Ethiopia, for example, the Agricultural Transformation Agency launched an agricultural hotline, which has already logged almost 6.5 million calls. It also sends text messages and automated calls containing up-to-date agronomic information to 500 000 users. The agency is also developing the Ethiopian Soil Information System, or EthioSIS, a digital soil map analysing the country's soils down to a resolution of ten kilometres by ten kilometres (Foreign Affairs, 2015). In India, a woman's trade union developed an application sending verbal messages regarding agricultural practices and other village community information to illiterate members. Extension services using digital apps with videos of farmers providing training on good agricultural practices are now used in an increasing number of developing countries.

Such ICT innovations can contribute to the creation of economies of scale, for instance, through the promotion of farmer associations and facilitate improved information about inputs and reduced costs when purchasing collectively. By using ICT, farmers have been able to obtain better information about markets and prices. This, in turn, has helped them negotiate better prices with middlemen or to directly access urban markets. Physical distance can be reduced with the support of digital technology and the functional territory in which farmers operate can be expanded beyond the traditional local markets, thus allowing for a stronger market integration of formerly isolated producers.

Diffusion of digital ICT will require pro-active government policies in order to overcome present inequalities and gaps in the access to, and affordability of, digital services and infrastructure.

Territorial approaches in practice

A territorial approach to FSN suggests that national policies and strategies should give greater prominence to local institutions in addressing food security problems, since local actors are closer both to the needs and opportunities found in a given territory. They also suggest that food security is best addressed when considering the multiple dimensions of food security in an integral way, adapted to the geographic-specific conditions of local ecosystems.

Yet, in practice, spatial aspects often tend to be overlooked in agriculture and food policies. Likewise, local stakeholders are hardly engaged in decision-making processes. Information systems related to food security and nutrition typically lack the detail required to identify and, hence, address territorial disparities and opportunities. Instead, countries mostly

rely on sectoral and supply-side approaches when promoting food production, on the one hand, and subsidies and social protection policies to improve access to food for the poor and food safety measures to protect consumers, on the other. Moreover, such supply and demand side policies are often conducted as distinct, and not necessarily, co-ordinated policy domains.

Recently, some promising developments, including of the concept of food systems[3] and a new rural paradigm (OECD, 2006) and its adaptation to developing countries (OECD, 2016), show that more emphasis is being placed on co-ordinated implementation of measures promoting holistic solutions to sustainable food consumption and production, as well as to rural development at large. The multidimensional nature of food systems has led FAO to point out that at least 6 goals and 18 targets of the 2030 Agenda for Sustainable Development relate to food security and nutrition. Achieving these goals requires enhanced intersectoral policy coherence and integrated governance systems in line with the commitment of the signatories to the 2030 Agenda to pursue policy coherence and an enabling environment for sustainable development at all levels and by all actors, and with the notion of a territorial approach.

The case studies conducted by FAO, OECD and UNCDF provide useful examples of shifts towards intersectoral, multi-actor, and multi-level co-ordination and governance mechanisms for FSN. At the same time, they identify possible discrepancies existing between the commitment towards integrated and territorial approaches to FSN and the practice of implementation.

Cross-sector co-ordination mechanisms, for instance, have taken the form of interministerial councils, intersectoral committees or commissions – in some cases – led by the prime minister or president's office. The mechanisms typically involve not only government agencies at the central and local level, but also other stakeholders from civil society and the private sector. In Cambodia, for example, the Council of Ministries for Agriculture and Rural Development (CARD) co-ordinates the work of relevant development partners and manages social protection programmes. Nevertheless, while powerful to co-ordinate FSN policies at national level, lack of financial resources and weak technical capacity has weakened the ability to promote such co-ordination at the subnational level.

Another example is Peru's Commission for Food Security in charge of the implementation of the FSN strategy 2015-21. It provides a forum for policy dialogue and involves several ministries and key stakeholders including at the subnational level, however, it lacks the political power to effectively co-ordinate different ministries and influence policy decisions. The Intersectoral Commission on FSN in Colombia has more or less the same functions as that of Peru, but implementation is hampered by a complex delivery structure, especially at the local level. While some promising examples can be found of programmes that promote agricultural productivity and entrepreneurship through local peer learning networks, the challenge is to bring such local "success stories" to scale.

While Morocco and Côte d'Ivoire do not have such intersectoral bodies, and thus the various dimensions of FSN are addressed separately by the concerned ministries, Morocco has taken many steps to "territorialise" policy making through its advanced regionalisation agenda. Consequently, local actors have obtained greater influence over FSN policies. Yet, different aspects of these policies remain sector-specific domains and, as yet, integrated approaches have not taken full effect. To date, Côte d'Ivoire's agricultural policies remain strongly rooted in a value chain approach and integrated approaches for the development of disadvantaged regions have not yet taken shape.

The way forward

The 2030 Agenda has defined the new contours for sustainable development policies. The next move is for countries to lead the process of putting in place adequate means of implementation to achieve the SDGs in accordance with their needs and potential.

Territorial approaches inherently take an integrated approach to development, as the focus is on the development of territories in all dimensions. Its application can help: i) establish public investment priorities and discipline, taking into account the economic, social, cultural and physical assets of a particular territory, as well as establishing a conducive environment for private investment; ii) promote multisectorial collaboration; iii) strengthen trust between citizens and the public administration; and iv) provide the basis for ownership, more effective decision making and greater institutional accountability at central and local levels of decision making. As argued in this chapter, these aspects are of the utmost importance in pursuing effective food security and nutrition policies.

The case studies conducted by FAO, OECD and UNCDF suggest that awareness has grown that such an approach is relevant and governments of the selected countries have made considerable efforts to put mechanisms in place to pursue intersectoral territorial approaches to FSN. Thus far, however, making these mechanisms work in practice has been difficult. Implementation of a territorial approach is a complex task that requires a fundamental shift in policy practice and institutional cultures. It entails a shift from the conventional linear, central government-led market-based policy approach of promoting production and efficiency in food value chains, to an approach requiring the involvement of government and non-government actors at various levels. These actors must consider interdependencies across different parts of food systems, and give primacy to the inclusiveness and environmental sustainability of food systems across different territories. The added complexity and perceived uncertainty about the outcomes are posing challenges to the adoption of territorial approaches in practice (Karlsen and Larrea, 2016). In addition, the lengthy consultation processes and long-term timeframe embedded in territorial approaches are posing hurdles given that political cycles tend to lead governments and development partners to take much more short-term perspectives.

The aphorism attributed to Einstein that "everything should be made as simple as possible, but not simpler", is a good description of this dilemma. On the one hand, underestimating the spatial, multidimensional, multi-actor and multi-level nature of FSN is a recipe for ineffective targeting of interventions and investments. On the other hand, too complex decision-making processes and systems to develop solutions may become unmanageable.

Based on the findings of the case studies conducted by FAO, OECD and UNCDF, the key condition for the shift of paradigm to happen is a strong political leadership in setting the right policies and governance systems and investments able to bridge local needs and priorities with those at national, regional and global levels. The case studies led to a number of recommended directions for action (OECD, FAO and UNCDF, 2016):

- **Promoting a multisectoral approach to rural development.** Agriculture productivity growth is not sufficient by itself to improve food security and nutrition. Progress in reducing hunger and improving food security has been fastest where dynamic economic diversification processes emerged providing better income and employment opportunities for a broad range of rural workers.

- **Developing integrated information and decision support systems for spatial analysis of food systems and territorial development.** To capture both the spatial and the multidimensional aspects of food insecurity and food systems, information systems need to allow for adequate disaggregation of FSN indicators to identify spatial inequalities. This will help tailor policy responses to local needs and potential, from remote rural areas through to overcrowded urban slums.
- **Increasing the effectiveness of multi-level governance and inclusiveness operational mechanisms.** Intended as a situation where "experts from several tiers of government share the task of making regulations and forming policy, usually in conjunction with relevant interest groups", multi-level governance has vertical (multiple territorial levels) and horizontal dimensions (intersectoral and inter-actor at the same level) (Hague and Harrop, 2007: 282). In all the countries studied, governments have engaged, to varying degrees, in decentralisation reforms (vertical dimension). In addition, interministerial and intersectoral committees have been put in place to better co-ordinate food security actions (horizontal dimension). Results have been mixed in practice, however. In most cases, food security interventions retain a strong sectoral focus. While much effort has gone into reforming governmental structures, little progress has been made in engaging non-government actors (private sector, farmer organisations, and other civil society organisations).
- **Promoting and building on innovation, including local innovation processes.** A lot remains to be done to allow marginalised areas to reap the benefits of technological advances, including through digital ICT. Studies have shown that technology adoption among poor farmers tends to be slow (FAO, 2014a), pointing to the need for adapting technologies and innovations to local conditions and incorporating local knowledge. Rural development policies should combine these types of "soft innovation" with more traditional forms of "hard innovation" (i.e. infrastructure, such as telecommunications links, transport systems, and electricity).
- **Linking the social agenda with the growth agenda.** Social policies, including social protection programmes, too often remain a domain of mere safety nets disconnected from productive and employment policies. The Transfer Project co-ordinated by FAO in 13 African countries, for example, shows that cash transfers have a positive impact on human capital, including better dietary diversity, education and health care. Cash transfers not only help smooth consumption, but also provide a stimulus to households to invest in agricultural and other assets and to local economies through income multiplier effects (FAO, 2015; FAO, 2014b). Territorial approaches can help integrate social and production-oriented policies building on such locally observed realities.
- **Improving environmental preservation and natural resource management.** Ensuring food security in the future cannot be disjointed from the commitment of all countries to contribute to the reduction of GHG emissions and conform to COP21 commitments. How countries and the international community address climate change today will determine how well future generations will be fed and whether food security will be a reality for everyone in the future. Space-sensitive interventions to be taken into account to make food systems more sustainable and environmentally friendly in the short and longer term include: i) the development of knowledge and information on the impact of climate change on agriculture, fisheries and forestry; ii) strengthening capacities in the management of scarce resources through, for instance, agricultural diversification

towards drought resistant crops; iii) agricultural climate-smart practices and agro-forestry; iv) reduction of emissions from deforestation and forest degradation; v) strengthening of research and development (R&D) on the diversity of genetic resources, with a focus on drought resistant crops and varieties; vi) reduction of food loss and waste; and vii) assessment of the environmental footprint of food systems along the whole value chain.

Notes

1. Food systems encompass the entire range of activities involved in the production, processing, marketing, retail, consumption, and disposal of goods that originate from agriculture, including food and non-food products, livestock, pastoralism, fisheries including aquaculture, forestry, and the inputs and outputs generated at each of these steps. Food systems also encompass a wide range of stakeholders, people and institutions, as well as the socio-political, economic, technological and natural environment in which these activities take place.
2. The Committee on World Food Security (CFS) and the FAO define food security as a situation that "exists when all people at all times have physical, social and economic access to food, which is safe and consumed in sufficient quantity and quality to meet their dietary needs and food preferences, and is supported by an environment of adequate sanitation, health services and care, allowing for a healthy and active life" (CFS, 2012).
3. As defined by the High Level Panel of Experts on Food Security and Nutrition (HLPE) "a sustainable food system (SFS) is a food system that delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised" (HLPE, 2014).

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PART III

Chapter 11

Response to the Paris Climate Accord: Scaling up green projects from a bottom-up perspective

by
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The Paris Accord and the 2030 Sustainable Development Goals (SDGs) call for a massive scaling up of green projects. However, such infrastructure investments are not achievable without private financing. Over the last few years, R20 Regions of Climate Action has been working to address this gap by collaborating with the regional and local decision makers, technology companies and investors to develop bankable projects in different areas of the green economy from energy generation to waste management. This chapter highlights several programmes and financial instruments, including novel pre-investment facilities (PIF), being used to implement projects worldwide in support of these new global targets.

The Paris Accord and the 2030 Sustainable Development Goals: What will change?

International political commitment at COP21 is the first all-encompassing global response to the climate change threat. In its aftermath, national and local decision makers will be urged to implement pro-green policies favouring clean technologies, greater energy security, the creation of green jobs, and the improvement of both human and environmental health. Implementing the Paris Accord and the 2030 SDGs will involve massive infrastructure transformations worldwide. The clean energy transition will require scaling up the adoption of low-carbon solutions: over the coming decades this process should dramatically alter local and global economic landscapes.

Challenges and opportunities of the green economy

Paradoxically, in many instances where the clean energy transition is high on the political agenda, government officials lack relevant information to make the best decisions, or their administrations are short of technical and financial knowledge, often struggling with implementation and internal processes.

In parallel, economic actors are competing for markets, continually innovating and developing new green products and services. Decision makers have a vast choice of technologies: yet, informed decisions demand a good understanding of the solutions on offer. There is a need for state-of-the-art feasibility studies, which are prerequisite tools for decision makers and set out the project's financial outlook to attract investors.

The world of finance is taking an increasing interest in shifting capitals from the carbon economy to the green economy. However, de-risking factors such as political backing, sound technical solutions and financial structuring (feasibility studies) are missing, causing investors to claim that "profitable green projects" are scarce or non-existent.

Therefore there exists an important opportunity to develop bankable projects, in partnership with technology companies and supported by policy makers so as to minimise risks and unleash massive investments in the green economy.

R20's track record and vision

During its first implementation phase (2011-15), R20 has demonstrated that by working with decision makers, technology companies and investors, it can identify, design, finance and implement bankable projects. Examples include waste management in Algeria, production of solar photovoltaics (PV) electricity in Mali (50 megawatts) and LED public lighting in Brazil, with an overall cumulative capital expenditure of USD 1 billion (Figure 11.1).

Scaling Up – Local to Global Climate Action

In parallel, throughout the year 2015, R20 collaborated with Yale University, the Stanley Foundation and the USC Schwarzenegger Institute on a report entitled "Scaling Up – Local to Global Climate Action" which provides examples of states, regions and cities that

Figure 11.1. **The first project in Kita, Mali by Akuo Energy with R20**

Regions 20 of Climate Action with developer Akuo Energy, have demonstrated that it is possible to free this potential

Installed capacity: 50 MWc

Technology:	Monocristalline PV
Type of project:	Grid injected
Life of concession:	30 years
Construction:	2 years
Operation:	28 years
Initial price/Kwh:	EUR 0.13
Annual indexation:	2.5%
1st year of production:	70 742 MWh
Average production:	67 707 MWh per annum
Estimated total production:	2 031.2 GWh over life of the project
Type of contract:	BOOT
Type:	Take or pay

PPA prime	95 CFA/Kwh
CAPEX:	EUR 89 million
Equity:	EUR 27 million
Senior debt:	EUR 62 million
Project IRR:	10.6%
Equity IRR:	12%
Interest, senior debt:	7%
Period:	12 years

Concession authority:	State of Mali
Signatories of protocol agreement:	State of Mali/R20
Developer:	Akuo Energy
Offtake:	EDM sa
Sovereign guarantee:	State of Mali

Financial structuring (subject to change)

Equity:	Akuo, Proparco, other
Senior debt:	BOAD, BIDC, Proparco, other
Statements of interest:	Ecobank, Attijiari Waffa Bank, BNDA (Mali)

Source: Own elaboration.

have taken measures to cut greenhouse gas (GHG) emissions and show that when scaled up nationwide, such actions can achieve ambitious national reduction targets. The report demonstrates the potential for subnational action to contribute towards, and raise, the ambition of national efforts.

To illustrate the importance of subnational action, the Yale University research team selected five to ten case studies of subnational climate action in priority countries, including major emerging economies like the People's Republic of China and India, as well as developed countries, such as the United States and representatives from the European Union, to clearly show that if an entire country adopted a particular subnational policy it would achieve greater emissions reductions and could meet target goals. The report[1] was launched at COP21 in Paris, at the "Cities Day" and is available at to share and use as a tool to highlight the impact of subnational action and inspire.

Climate Finance: A Status Report and Action Plan

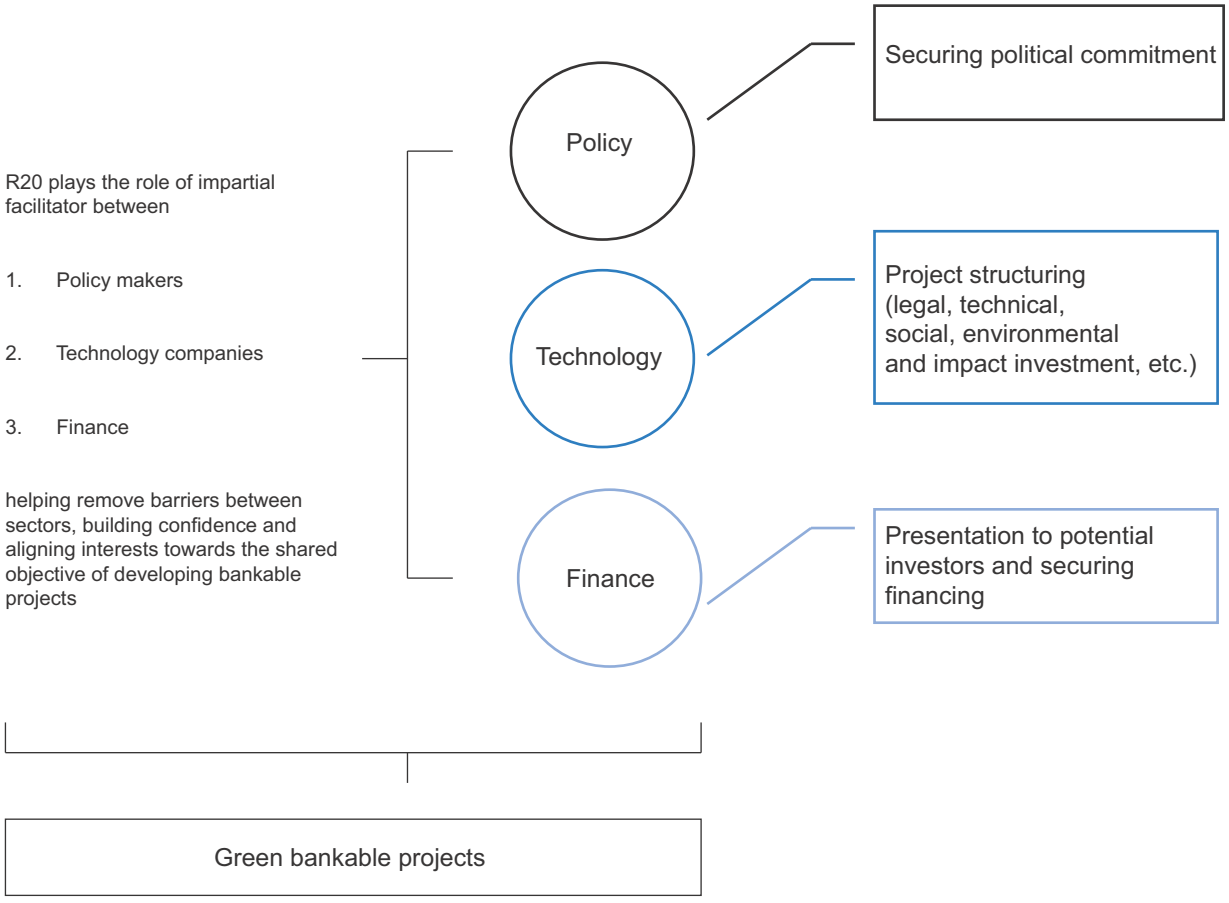
At the request of French President François Hollande and Minister Laurent Fabius, Chair of COP21, the "Climate Finance: A Status Report and Action Plan" was launched at the COP21 in Paris by Arnold Schwarzenegger, R20 and the USC Schwarzenegger Institute. The Climate Finance report offers a comprehensive roadmap to effectively tackle the climate finance challenge. It provides examples of supportive governments in various regions around the world (at the subnational and national level), who have mature low-carbon technologies and substantial amounts of capital, but also points out that intermediaries are needed to align interests and develop projects. The report concludes by proposing concrete solutions moving forward and will also serve as the basis for the implementation of climate finance solutions post COP21.[2] The report was chosen by Big Path Capital as one of the "top 10 smartest reports on the intersection of climate change and finance". It was featured in "The Smarter Money Review: Winter issue", a special edition featuring articles by well-known leaders within the impact investing community.

R20 Action Plan 2016-20

Capitalising on its Phase I achievements, in order to meet international commitments under the Paris Accord, R20 launched its Phase II Strategy (2016-20) aimed at stepping up the transition to the green economy on a global scale. In terms of methodology, R20 relies on its project development model that proved successful during Phase I (Figure 11.2).

Phase I (2011-15): Demonstration projects and project development model

Figure 11.2. **Project development model**



Source: Own elaboration.

Phase II (2016-20): Scaling up phase – Training and accelerated finance

Based on the success of its demonstration projects, R20 wants to contribute to unlocking the potential for green infrastructure projects globally. To do so, two key enablers must be put in place: i) an ecosystem of blended finance from philanthropies, bilateral and multilateral funds, private equities, pension and sovereign funds, debts; and ii) a training and capacity-building programme for national and subnational leaders, designed to provide them with the knowledge, tools and skills necessary to catalyse the transition to the green economy.

R20 financial instruments

As a first step, R20 has materialised the concept of pre-investment facility (PIF), to provide investors with a portfolio of bankable projects from different regions and different sectors: currently renewable energy, energy efficiency and waste management. The PIFs are structured as revolving loan funds with seed capital for pre-feasibility studies. Dedicated PIFs are under development for large-scale initiatives: solar PV in sub-Saharan Africa, waste management, "faithful cities", etc. Each PIF ranges from USD 3-10 million.

To provide a dedicated source of capital for the projects developed under a PIF, in parallel R20 is proposing the concept of the Green Investment Accelerator Fund (GIAF). The GIAF provides seed capital that can align project developers with intermediaries that can de-risk transactions and ensure the bankability of projects. The GIAF acts as an accelerator, helping to jump-start transactions and unlock access to important sources of capital. The GIAF proposes a target fund size of USD 1 billion.

R20 training and capacity building

Based on its project development model, R20 is also designing a training initiative for national and local decision makers to develop their skills as project managers. The aim is to help them become "facilitators/co-ordinators" in the transition to the green economy, and build a large-scale platform of bankable projects.

- There is an absolute need for working in partnerships and with networks, rather than in silos. This requires facilitation that brings together stakeholders from different backgrounds to provide policy advice and to address project development bottlenecks.
- Trained facilitators must be able to accompany project development processes, including by identifying opportunities, selecting appropriate technologies and utilising financial mechanisms to deliver pre-feasibility studies (PIFs).
- Trained facilitators must understand the financing world and make projects "investment-ready": the challenge is to ensure that bankable projects proposed to investors actually receive the projected financing and become implemented on a global scale.

Summary of R20 Action Plan for 2016-20

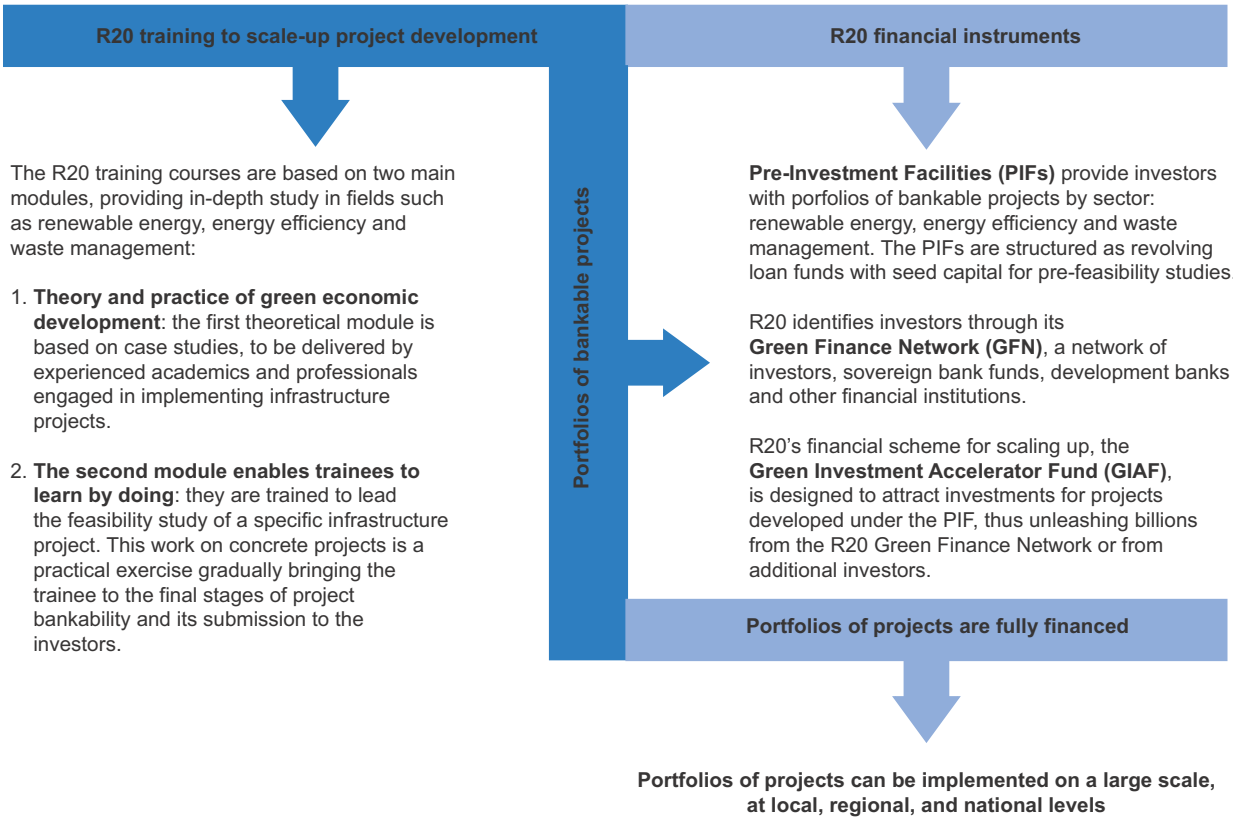
In order to contribute to the Paris Accord commitments, the R20 Action Plan for 2016-20 aims at stepping up the green economy transition through R20's financial instruments to enable effective project design and implementation on a large scale (Figure 11.3). Upstream, R20 relies on its project development model (Phase I: 2011-15) to deliver theoretic and practical training, and build new skills for green economy managers.

The Cities Climate Finance Leadership Alliance

Addressing the climate finance gap will require the co-ordinated action of multiple stakeholders, complementing each other and understanding how the impacts of their respective efforts can accelerate the flow of climate finance globally.

In late 2014, the United Nations Secretary-General, Ban Ki Moon, created the Cities Climate Finance Leadership Alliance (CCFLA), in order to promote co-ordinated action across sectors and demonstrate the importance of investors in accelerating the flow of climate finance for the delivery of concrete results. Today the CCFLA is an alliance of some 46 organisations from the financial and business sectors, NGOs and networks of subnational governments.

Figure 11.3. **Summary of R20 Action Plan for 2016-20**



Source: Own elaboration.

In 2016, R20 Regions of Climate Action was selected to co-ordinate the CCFLA Secretariat, next to three partner organisations: the Global Fund for Cities Development (FMDV), the United Nations Development Programme (UNDP) and the United Nations Environmental Programme (UNEP). The CCFLA members are cities and regions, NGOs, financial institutions, development banks, etc.

Table 11.1. **CCFLA members**

- African Development Bank
- Bank of America Merrill Lynch
- Bloomberg Philanthropies
- Carbon Disclosure Project (CDP)
- C40 – Cities for Climate Action
- Citibank
- Cities Development Initiative for Asia (CDIA)
- Development Bank of Latin America (CAF)
- European Investment Bank (EIB)
- French Agency for Development (AFD)
- German Development Bank (KfW)
- Global Infrastructure Basel (GIB)
- Global Environment Facility (GEF)
- Johns Hopkins University School of Advanced International Studies (SAIS)
- Gold Standard Foundation
- Standard & Poor's Ratings Services
- ICLEI – Local Governments for Sustainability
- UCLG – United Cities and Local Governments
- Japan Investment Cooperation Agency (JICA)
- The Inter-American Development Bank (IADB)
- Government of the United States of America
- Le Fonds Français pour l'Environnement Mondial (FFEM)
- Meridiam
- UN-Habitat
- West African Development Bank (BOAD)
- World Bank Group
- World Resources Institute (WRI)
- Worldwide Fund for Nature (WWF)

Scaling up in practice: The Planet Pledge Fund

As a first step of R20's Phase II Action Plan (2016-20), R20 has teamed up with the Leonardo DiCaprio Foundation[3] to establish the Planet Pledge Fund (PPF), which is a practical, sustainable financial solution enabling a massive scale up of both green infrastructure projects and nature conservation initiatives. Developed by the Leonardo DiCaprio Foundation, the PPF brings together a coalition of philanthropists willing to pool their resources in a global fund amounting to up to USD 1 billion over the next 10 years.

This fund will be invested worldwide in clean economic projects worth USD 10 billion, and with high potential to mitigate climate change. Being highly profitable, these projects are expected to generate USD 1 billion of profits, which will be used for the conservation of endangered habitats and species. The PPF will be governed by the contributing philanthropies and managed by world-leading experts in science, policy, finance, and community development from UN agencies, NGOs, and foundations, to identify and implement the most viable and "quick win" projects worldwide.

In May 2016, R20 and the Leonardo DiCaprio Foundation signed a partnership agreement to secure an ambitious pipeline of green infrastructure projects. R20 immediately launched a worldwide campaign among its own network, other networks of cities and regions, as well as the CCFLA, inviting local and regional authorities to submit their environmental projects related to renewable energies, energy efficiency and waste management.

After proper due diligence and a screening process, the best projects will be submitted to the PPF for funding. By September 2016, R20 and its networks of cities and regions aim to secure 100 projects[4] of an expected cumulative capital expenditure of USD 4 billion, with a targeted return on investment of a minimum of 10%.

Notes

1. See *http://regions20.org/images/ScalingUp.pdf*.
2. See *http://regions20.org/images/ClimateFinance.pdf*.
3. See *http://leonardodicaprio.org/*.
4. See *http://100projectssite.wordpress.com* (Log-in code to download documents: 100projects).

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