

PUBLIC GOVERNANCE AND TERRITORIAL DEVELOPMENT DIRECTORATE  
TERRITORIAL DEVELOPMENT POLICY COMMITTEE

Working Party on Territorial Indicators

How's life in your region? Measuring regional and local well-being for policy making

Draft Interim Report

26th WPTI meeting  
9-10 April 2014  
OECD Conference Centre, room CC2

*This document presents the interim results of the project "Measuring regional and local well-being for policy making" (final report to be released in October 2014). Bringing together the framework of the Better Life initiative at national level and the extensive work on regional inequalities carried out by the Working Party on Territorial Indicators, the report: i) develops an analytical framework for measuring well-being in regions and cities; ii) presents a set of internationally comparable measures of well-being and a critical assessment of the statistical agenda ahead; and iii) provides guidance to policy makers to use well-being metrics for improving policy results. Policy lessons are derived from seven case study regions that are developing well-being metrics to support policy making at local and regional level.*

*This document is submitted to WPTI Delegates for DISCUSSION and APPROVAL.*

*This document has also been brought to the attention of Delegates of the Committee on Statistics and Statistical Policy during the CSSP meeting on 7 April 2014 (STD/CSSP(2014)12).*

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## HOW'S LIFE IN YOUR REGION? MEASURING REGIONAL AND LOCAL WELL-BEING FOR POLICY MAKING

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## QUESTIONS FOR DISCUSSION

This document presents the interim results of the OECD report *How's Life in Your Region? Measuring Local and Regional Well-being for Policy Making*.

It takes into account comments received from WPTI Delegates and experts who participated in the workshop on 23 January 2014, as well as comments from local and regional stakeholders met during the missions conducted in the seven case study regions.

Supporting documents for the discussion:

- “Measures of income inequality and poverty at the regional level in OECD countries”, prepared by the OECD Statistics Directorate ([GOV/TDPC/TI\(2014\)1](#))
- “Accessibility to services and regional well-being: A framework to build indicators“, ([GOV/TDPC/TI\(2014\)2](#))
- “Access to public transport: Comparing a selection of medium-sized and large cities“, ([GOV/TDPC/TI/RD\(2014\)1](#))

The final report is scheduled to be released in September/October 2014.

### **Delegates are invited to:**

- Comment on the framework put forward in Chapter I;
- Indicate whether additional relevant well-being indicators in TL2 regions or metropolitan areas can be included in the framework of Chapter II;
- Suggest national / regional initiatives in measuring and using well-being indicators that should be documented in the final report, together with some lessons learned from each of them;
- Discuss possible methods to bridge geo-coded information with household surveys to increase the available range of well-being indicators in the coming years.



## FOREWORD

Where people live matters for their well-being. Quality of life is shaped by a multitude of material and non-material dimensions, ranging from income and jobs to health and environment, among others. The level of each dimension varies greatly not only from one country to another, but also within countries. The mix between different well-being dimensions is unique to each community where people live, study, work and connect. Improving people's lives requires making where they live a better place.

Understanding people's level of well-being and its determinants is crucial to gear public policies towards better achieving society's objectives. Moreover, as many of the policies that most directly bear on people's lives are local or regional, more fine-grained measures of well-being will help policymakers to enhance the design and targeting of policies. They can also empower citizens to demand actions that respond to their specific expectations and in turns to restore people's trust.

However, better measures of well-being at regional level need to be developed, by encompassing the different dimensions of inclusive and sustainable growth and reflecting how different communities value different dimensions of well-being.

Bringing together the *Better Life* initiative on well-being at national level and the extensive work carried out on regional inequalities through *Regions at a Glance*, this report provides: i) an analytical framework for measuring well-being in regions and cities; ii) a set of internationally comparable measures of well-being and a critical assessment of the statistical agenda ahead; and iii) guidance to policy makers at all levels on the use of well-being metrics for improving policy results.

The report also draws from the experiences of countries and regions that have developed well-being metrics to support policy making at local and regional level. A critical assessment of the challenges and solutions adopted helps to discuss the conditions to ensure that the selected well-being indicators capture the intended objectives of policy, represent people's preferences and engage policy makers to implement a well-being agenda. A wide range of stakeholders from national and regional governments, academia, statistical offices and international organisations, were engaged and provided invaluable inputs to identify common lessons.

Developing better metrics of well-beings is a means to enhance the delivery of better outcomes. However, the design and consistency of policies aimed at improving people's lives requires a policy framework that enhances co-ordination across levels of government to align policy objectives and raises the dialogue with and engagement of citizens to support change.

A comprehensive approach to measure what people consider important in the places where they live faces various methodological constraints that are discussed in the report. The two most important ones are recalled here:

- First, it can be difficult to understand the impacts of local choices on national prosperity and broader social challenges, and thus to identify the correct framework for policy action at the local level.
- Second, data and information at sub-national level are not always available as extensively as at national level. Sound evidence needs to be developed at different geographical scales, be that the administrative and statistical regions or more "functional" places such as a metropolitan areas, cross-border regions, etc., by integrating different sources of data.



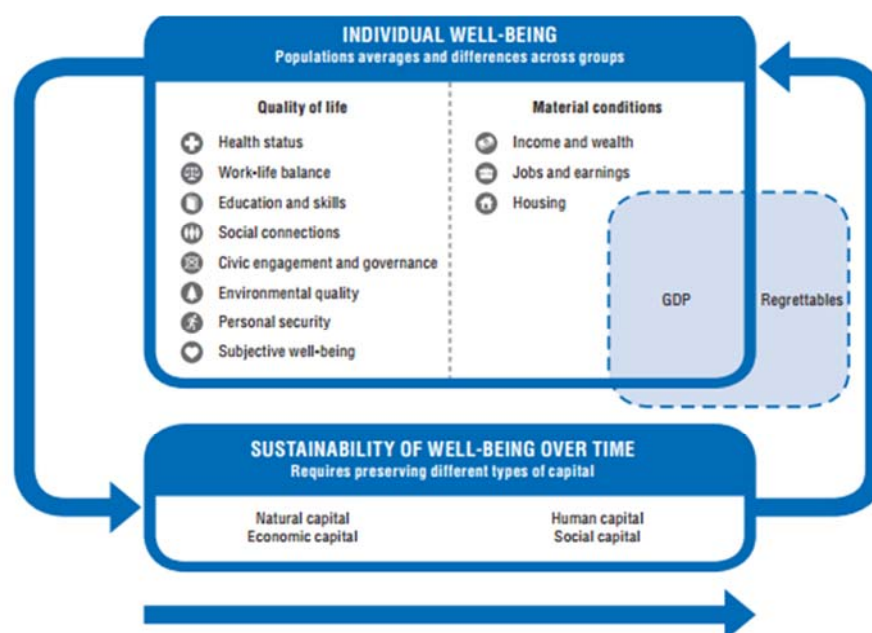
## CHAPTER I. A FRAMEWORK TO MEASURE REGIONAL AND LOCAL WELL-BEING

### Introduction

1. Motivation for the OECD work on measuring well-being in regions and cities comes from a variety of policy objectives. The goal of pursuing economic growth that distributes benefits more equitably across society has become more prominent at the national and supra-national level (EU2020 Strategy; OECD Inclusive Growth Initiative). Achieving inclusive growth objectives requires sharing benefits across all regions, which, in turn, requires a comprehensive set of indicators at regional level. Focusing on results through the use of comprehensive sets of well-being metrics is also one of the innovations in the European Cohesion Policy (European Commission, 2011).
2. Policies to promote growth, jobs, equity and environmental sustainability have greater impact when they take into account the different economic and social realities where people live and work. National governments are thus challenged to rethink how to harness the potential of different types of cities and regions to prepare for the future and promote individual well-being (OECD, 2013d).
3. Place-based approaches to policy are needed because many of the important interactions among sectoral policies are location-specific. The determinants of school drop-out rates, for example, can vary between rural and urban locations, between cities and even between neighbourhoods in the same city. As OECD (2011b) argues, the complementarities among different strands of policy are likely to be most evident – and the trade-offs among them most readily manageable – where they occur, in specific places. An approach that takes account of specific assets that are by definition located in a particular place and seeks to co-ordinate the various sectoral policies affecting that place is more likely to achieve coherent, multi-sector outcomes.
4. The conceptual framework to measure regional and local well-being builds on two strands of OECD work. First, the *Better Life Initiative* has provided a framework to measure well-being through a multi-dimensional approach expanding on the work done by the Commission on the measurement of economic performance and social progress (Stiglitz et al., 2009) and the OECD-hosted Global Project on Measuring the progress of society. The framework distinguishes between the current and future well-being. The former is measured in terms of outcomes achieved in the two broad domains of material conditions and quality of life. Future well-being is assessed by looking at different types of “capital” (Figure 1.1). This framework has four distinctive features: it focuses on people (rather than on the economy); it concentrates on well-being outcomes; it considers the distribution of well-being in the population alongside the average outcomes; and lastly it looks at both objective and subjective aspects (personal assessments of life circumstances) of well-being (OECD 2013b). The publications *How's Life?* (OECD 2011a; OECD 2013b) identify eleven dimensions for the individual well-being and provides a set of indicators to measure them, allowing cross-countries comparison.



Figure 1.1. The OECD Better Life Initiative conceptual framework

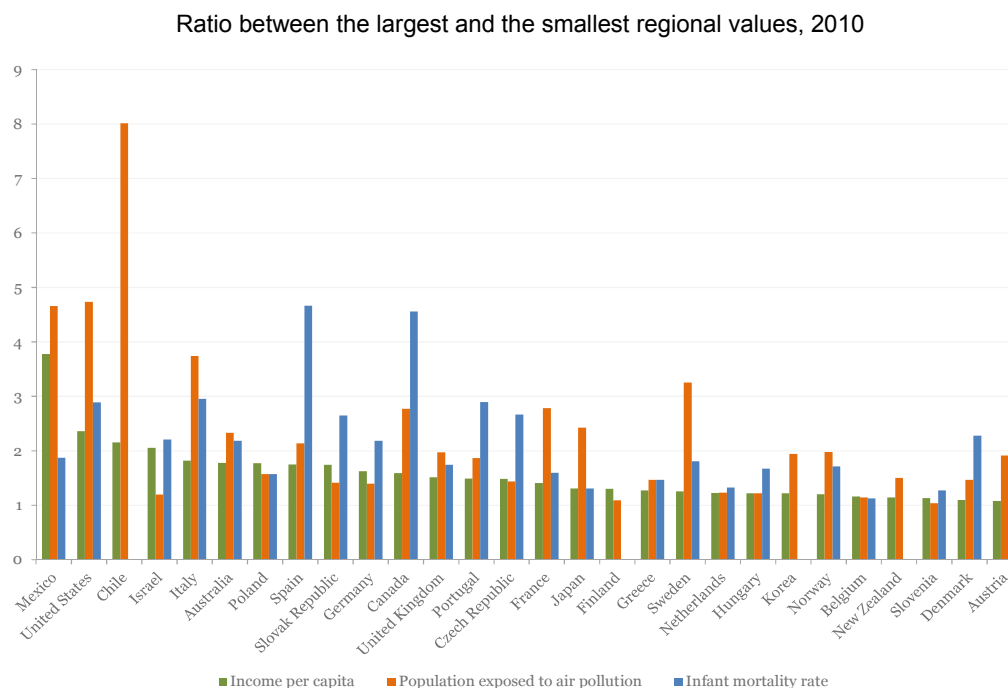


Source: OECD (2011), *How's Life? Measuring Well-being*, OECD Publishing, Paris.

5. Second, the *OECD Regions at a Glance* series has shown that disparities within and among regions in jobs, income, quality of life and sustainability still characterise most OECD countries (OECD, 2013a). More importantly, no country seems to have regions simultaneously enjoying high or low levels in all well-being dimensions. Instead, the geography of well-being in OECD countries is characterised by spatial disparities and complex interactions among the dimensions (Figure 1.2). Significant differences in the access to basic and advanced services such as transport, water and sanitation, education, health, and ICT affect the opportunities available to people. Equality of opportunity requires that socio-economic prospects of each individual are not affected by factors beyond their control, such as their place of birth (Roemer, 1998). People-centred policies should thus reflect the interplay of locational and individual level determinants of well-being (for example on the issues of crime and personal security). Sub-national data on well-being would offer a clearer picture of what people experience and recognise than national averages.

6. Data on disparities among and within regions might also capture the well-being of groups of people more accurately than national data do, especially when these groups are not distributed evenly across space (for example, job opportunities for immigrants are likely to be influenced by the interplay between location choices and characteristics of places). Spatial analysis may also help to shed light on the impact of perceived distribution inequalities on subjective well-being. Evidence shows that individuals assign greater importance to the inequalities they experience in their local living context when assessing their own well-being and forming expectations about returns of education and skills, and fairness and efficiency of service delivery.



**Figure 1.2. Small regional differences in income coexist with large differences in other dimensions**

Source: OECD Regional Database, 2010.

Note: Data regarding population exposed to air pollution refers to 2006. No data for Ireland, Iceland, Turkey, and Switzerland due to missing data in more than one dimension.

7. Many regions and cities have started developing metrics to monitor progress towards shared objectives of *sustainable and resilient communities*. That is to say, they seek economically viable places that ensure the well-being of current and future generations. The novelty in these initiatives is twofold. First, efforts are made to develop a multi-dimensional system of indicators that reflects the complementarities between the different dimensions, such as income, jobs, education, and access to services, among others. For example, complementarities between transportation choices, environmental policies and housing policy are being examined in US cities, with the objectives of providing more choices to citizens for a better mobility and quality of life (U.S. Department of Housing and Urban Development, 2010). Second, these initiatives look at how regional and urban policies can create conditions conducive to enhancing economic and social resilience, by measuring the adaptability (or capacity to reform) of different regions.

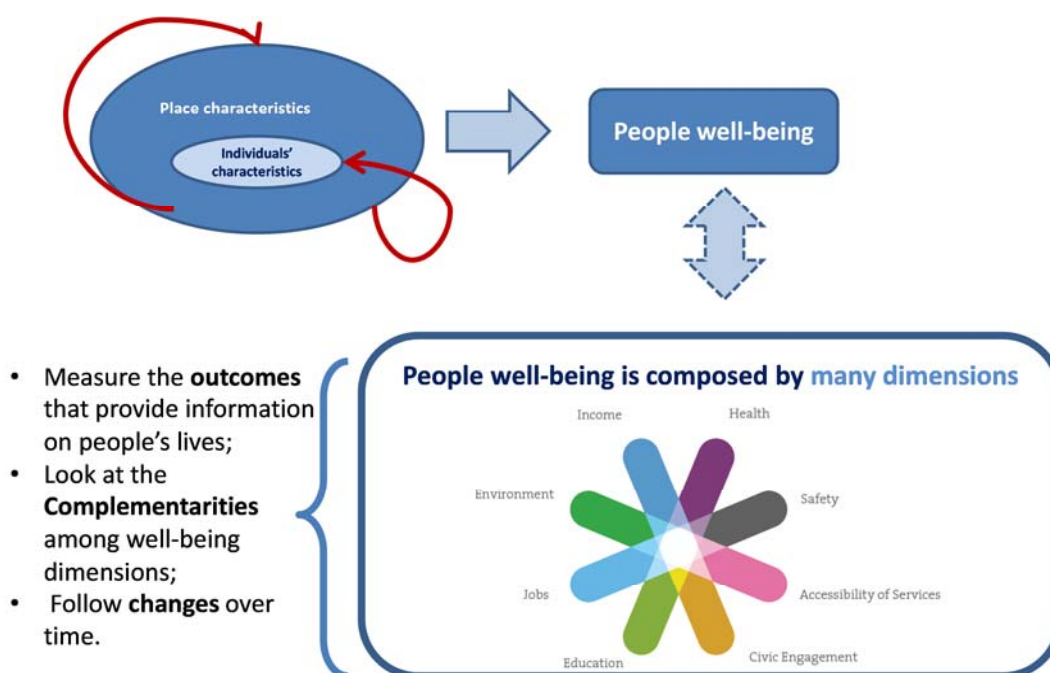
8. The OECD conceptual framework to measure well-being in regions and cities proposes the following features (Figure 1.3):

- Well-being should be measured **where it matters**. It focuses on individuals but also on **places' characteristics**.
- It is influenced by institutions, governance and **citizenship**.
- It is **multi-dimensional** and includes material and non-material dimensions. It looks at **complementarities** among the different dimensions.



- It concentrates on **results** that provide direct information on people's lives rather than inputs or outputs; it looks at the **dynamics** to follow progress over time and better understand the resilience of different regions.
- It considers the **distribution** in the population and in the places alongside the average outcomes.

Figure 1.3 Regional well-being conceptual framework



### I.1 Measuring well-being where it matters

9. Making better policies for better lives starts with understanding what matters to people. What people perceive and value about their local conditions, how they behave when they are not satisfied with one aspect or more of their life, whether local inequalities in the accessibility to services matter in shaping citizens' choices, are questions that have been only partially addressed in the life satisfaction and economics of happiness literature (Clark, 2009; Lora and Powell, 2011; Faggian and al., 2012).

10. **Individuals' well-being is shaped by a combination of individual traits and "place-based" characteristics.** This holds true for material living conditions dimensions as well as for quality of life dimensions, whether objective or subjective (Table 1.1). The interaction of municipal characteristics and individual, both objective and subjective, characteristics is at the core of the well-being metrics developed in Southern Denmark (Box 1.1). Recent research showed that most vulnerable communities in the United States have borne the brunt of the economic crisis with relatively higher increases of unemployment, poverty and vacancy rates potentially leading to further negative impact on the individual well-being (Owens and Sampson, 2012).



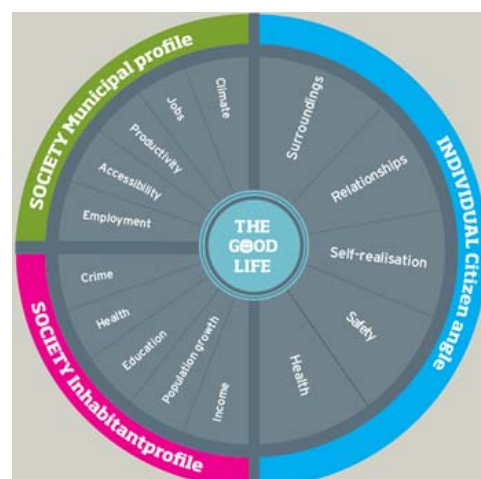
**Table 1.1 People in places: Place-based well-being**

	Place-based factors	+ Individual characteristics	= Individual outcomes
<i>Material living conditions</i>			
Income and jobs	Dynamism of regional economic context, regional labour pool, access to training, transports, information networks, education opportunities	Family, education, skills, motivation	Employment, income, earnings
<i>Quality of life (objective)</i>			
Health	Social conditions (housing, heating, relative and absolute inequality, etc.); environmental conditions (pollution, amenities, etc.),	Biological and genetic factors, life style, risky behaviours, income	Life expectancy at birth
<i>Quality of life (subjective)</i>			
Happiness	Access to amenities, noise, pollution, community life and support, economic conditions, security	Mental health/psychological resilience, family and personal life, character	Life satisfaction

11. The territorial lens is important not only to underline spatial differences, but because territories are institutions that can hinder or facilitate the well-being of people through certain policies. Territories, in the language of A. Sen, can be multiplier or divider of people's capabilities and functionings (Laurent, 2013). Therefore, measuring well-being in regions and cities can help understand how to make the best use of regional opportunities to contribute to national prosperity and reduce inequalities.

**Box 1.1. Integrating individual and place characteristics: the example of Southern Denmark**

The region of Southern Denmark has developed a metrics of "Good Life" to monitor the well-being in the region and municipalities according to a set of dimensions. The 40 indicators are organized in two categories: community conditions (encompassing a municipality profile and a citizen profile), and individuals' own perception of their life. The socioeconomic indicators are measured using existing registry data, while the individual indicators are measured using panel survey data, collected by a private consulting firm annually. Additional citizen surveys are carried out by the Region three to four times per year.



Source: Region of Southern Denmark



12. Although for the sake of simplicity, the terms “regions”, “territories” and “sub-national areas” are used interchangeably throughout this report, they may indicate different geographies of analysis. Traditionally, regional policy analysis has used data collected for *administrative* regions, i.e. the regional boundaries as determined by governments. These data can provide sound evidence on the persistence of disparities within a country, as well as on the role of sub-national governments in public service delivery. At the same time, the places where people live, work and socialise may have little formal relationship to the administrative boundaries around them: a person may reside in one city or region but go to work in another and, on the weekends, practice sport in a third, for example. Regions interact with each other through a broad set of linkages related to job mobility, use of amenities, collaboration among firms, among others. These linkages often cross local and regional administrative boundaries. *Functional* regions are geographic areas defined by such economic and social integration rather than by traditional administrative boundaries. Functional regions can trigger change in the way policies for infrastructure, transportation, housing, schools, and space for culture and recreation are planned and implemented, better integrating them and adapting them to the local needs.

13. Measures of well-being dimensions at sub-national level that are comparable across countries are available mostly for the 300 OECD large regions and to a much lesser extent for the (functional) metropolitan areas (Box 1.2). Therefore, these two geographies are the ones considered in this framework, even though it could be extended to other types of regions. While the two geographies of large regions and metropolitan areas are policy relevant in most of the OECD countries, countries wanting to adopt well-being metrics may choose other geographies more useful for the policy objectives at stake.

#### Box 1.2. What is a region?

**Regions** are classified by the OECD on two territorial levels reflecting the administrative organisation of countries. **OECD large (TL2) regions** represent the first administrative tier of subnational government. For example, the Ontario region in Canada. **OECD small (TL3)** are contained in a TL2 region. For example, the TL2 region of Aquitaine in France encompasses five TL3 regions: Dordogne, Gironde, Landes, Lot-et-Garonne and Pyrénées-Atlantiques. In most cases, TL3 regions correspond to administrative regions, with the exception of Australia (Statistical division), Canada (Census divisions), Germany (Spatial planning regions) and the United States (Economic areas).

**Functional urban areas** are defined as densely populated municipalities (urban cores) and adjacent municipalities with high levels of commuting towards the densely populated urban cores (hinterland), according to the OECD – EU definition. Functional urban areas can extend across administrative boundaries. **Metropolitan areas** are defined as functional urban areas with a population above 500 000 people. There are 275 metropolitan areas in the 29 OECD countries examined; of these, 77 have a population greater than 1.5 million.

**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, etc.).

Source: OECD (2013), *OECD Regions at a Glance 2013*, OECD Publishing, Paris.

## 1.2 Institutions, governance and citizenship

14. **Institutional conditions and governance matter for individual well-being.** Given that many of the policies that bear most directly on people’s lives are enacted at local level, a conceptualisation of well-being taking into account the area where people live can provide valuable indications to policy making. Recent work has investigated the effect of fiscal and political



decentralisation in European countries on life satisfaction and considered how decentralization affects the perception of institutions, in general, and satisfaction with democracy, government and the economic situation, in particular (Diaz-Serrano and Rodríguez-Pose, 2012). The results highlight that, on the whole, decentralisation matters positively for the satisfaction of individuals with political institutions. More importantly, these results signal that citizens' satisfaction is positively linked with the trust on the fact that institutions have the capacity to implement policies efficiently.

15. While much of the needed information to implement policies efficiently is to be found locally, national institutions, including statistical offices, can help sharing knowledge also on the indicators and the appropriate evaluation techniques to assess whether policy actions have an impact on people's well-being. Different initiatives aim at helping sub-national institutions or citizens to build their capacity to create their own well-being metrics (e.g., the Knowledge Platform of the US Partnership for Sustainable Communities and the WARM metrics put forward by the Young Foundation).

16. Defining new indicators of well-being is about improving the way our democracies work by focusing on what really matters in people's lives and better understanding the key drivers of collective success. Democracy is both an outcome (living better lives) and a process (deciding the kind of lives we want to live). Regional well-being must therefore also be an outcome and a process: it is essential to involve citizens at every stage of what should be a democratic process rather than a technocratic procedure.

17. Many of the sub-national experiences in using well-being metrics underline a tension between choosing the well-being dimensions following the criteria of policy relevance and identifying a set of "normative" indicators to monitor outcomes. The engagement of citizens through public consultation, public monitoring of results and active contribution to guide political choices, is often seen as a way to overcome such tension and build a development strategy for a territory.

### **I.3 Multidimensionality of well-being**

18. The *multidimensionality* of quality of life is widely accepted in the literature and it has been a defining feature of the OECD's work on well-being (Stiglitz, Sen and Fitoussi, 2009; OECD, 2011a). The *OECD Better Life* initiative identifies health and education outcomes, social connections, personal security, work-life balance, civic engagement and governance, environmental quality of life and subjective well-being as important dimensions of individual well-being together with the material conditions of income, jobs and housing (Figure 1.1).

19. All the dimensions included in the *OECD Better Life* initiative are relevant to be included in the framework at regional level, even though internationally comparable measures of social connections, work-life balance and subjective well-being (life satisfaction) are lacking at sub-national level and rather limited measures exist for housing conditions (Table 2.1).

20. Accessibility to services is a dimension of well-being with a particularly strong spatial character and has thus been added in the regional framework. People in different regions not only have access to different bundles of goods and services, but they are also subject to different externalities. This affects how people obtain what is necessary to satisfy their needs and wants. It includes provision of basic services (e.g. public utilities and health services) that ensure a decent standard of living in terms of material conditions. It also refers to activities and services that increase quality of life like education, cultural and natural amenities, information and communication technologies, transport, etc. Better access to transport and a wide choice of transportation modes, for example, allow individuals to reach places of employment and leisure, to reduce their commuting time and certainly affect well-



being. Moreover, reduction in commuting time may affect the spatial organisation of cities (people and production). The accessibility to services in the well-being framework is conceptualised along the *physical*, *economic* and *institutional* dimensions, which have an impact on reducing inequalities (see Chapter II).

21. Metrics to monitor human development and quality of life can either be based exclusively on objective data or include opinions and subjective assessment of life circumstances. In the OECD Better Life framework, subjective well-being is considered as one separate dimension (measured through life satisfaction) and subjective measures are also included in the dimensions of health, social connections and security. Partially due to data unavailability, because opinion surveys are rarely comparable below the national values, subjective measures are often not used in regional and local well-being metrics.

22. Many regional well-being metrics also tend to exclude subjective measures because these are considered difficult to interpret in the logic of policy intervention. However, others argue that subjective indicators provide insightful and unique information to assess policy success and select policy goals. The feedback of the population in several dimensions such as utility, relevance, success or satisfaction with certain policies are crucial to assess their future sustainability and to plan future policies that correspond to what the population perceives as important (Veenhoven, 2002). The way people perceive their quality of life and well-being may be different from the objective assessment of their material conditions. People's perception takes into account different expectations, ambitions and prospects of life and of living that are embedded in the different national and regional contexts in which people live in (Walter-Bush, 1983).

23. Methods developed by National Statistical Offices to combine objective and subjective measures (e.g. the Mexican Victimisation Survey, INEGI, 2012), to develop official subjective statistics for policy implementation (Mexican Oportunidades Program), or statistical techniques employed to derive the impact of different characteristics from subjective well-being data (e.g., the results of the OECD Household survey – EPIC- on greening household behaviour; or the impact of various housing and neighbourhood characteristics across cities in Latin America carried out by the Inter-American Development Bank, 2011) can provide guidance on the feasibility to add subjective evaluation of quality of local services and well-being conditions in our framework.

#### **1.4 Complementarities across policies**

24. Despite the general agreement that well-being is multidimensional, there has been little research on the relation among the dimensions of well-being. More specifically, well-being is usually thought to increase with beneficial changes in any of its dimensions. In other words, well-being is assumed to exhibit a certain degree of *substitutability* among its dimensions (bad health status, for example, could be compensated by good values in other dimensions). This assumption is explicit when well-being is aggregated into a single value through a composite index. However, it could be argued that, as an individual's situation in one dimension of well-being deteriorates relative to the others, the shortcoming in this dimension may become more salient. If this is the case, the dimensions of well-being could be characterised as complements rather than substitutes. *Complementarities* occur when “having more than one factor increases the marginal return to having more of the other” (Amir, 2013).

25. Both the academic literature and recent OECD work highlight the degree to which the factors underlying greater inequality disproportionately affect particular groups, and tend, when cumulated, to make it harder for those groups to improve their life conditions. Addressing their needs requires a multi-dimensional approach, capable of tackling different sources of disadvantage in a coherent way. For example, successful integration of immigrants may require not only language



training and access to existing labour-market programmes, but also policies targeting discrimination, providing mentors and augmenting networks and connections both among migrants and with native workers. Similarly, reducing school drop-out rates may require addressing not only the quality of schools but also such diverse issues as inadequate transport infrastructure, lack of knowledge of labour market opportunities, crime or inadequate housing.

26. Identifying and promoting links among the different policy goals through place-based approaches are needed, because many of the important interactions among sectoral policies are location-specific. The determinants of school drop-out rates, for example, can vary between rural and urban locations, between cities and even between neighbourhoods in the same city.

27. To take account of the complementarities among the dimensions in the well-being framework would imply that people prefer, *ceteris paribus*, a more balanced distribution of well-being across the various dimensions; thus the overall subjective well-being (life satisfaction) would be maximised when the differences among the dimensions are small. An empirical investigation was carried out to test the effect of complementarities on subjective well-being at national level in European countries. The exercise adapts the literature on policy complementarities that focuses on the positive returns on economic performance of carrying out a reform while other reforms are in place, rather than implementing reforms one-by-one (Braga de Macedo and Oliveira Martins, 2008; Coricelli and Maurel, 2011). The results find a negative correlation between the degree of dispersion across the well-being dimensions and life satisfaction, supporting the hypothesis that the relative situation across well-being dimensions, and not only the average level of the individual dimensions, also matters on the overall well-being (Prenzel, 2014).

28. The presence of complementarity means that the effect on well-being of each of the three dimensions (economic, social and environmental) is enhanced by the presence of any of the other two dimensions (Figure 1.4).

**Figure 1.4 A policy complementarity matrix**

	<b>E</b> fficiency	<b>E</b> quity	<b>E</b> nvironmental Sustainability
<b>E</b> conomic Policies	<b>Sustained growth</b>	Economic reforms may increase equity	Green growth may improve sustainability
<b>S</b> ocial policies	Social policies may increase efficiency (knowledge, trust)	<b>Social cohesion</b>	Environmentally sustainable social policies
<b>E</b> nvironmental policies	Green economy may boost innovation	Social policies can enhance inclusiveness; poor people are the most hurt by environmental degradation	<b>Sustainable Environment</b>

Source: OECD (2011) Regional Outlook; OECD Publishing, Paris.

29. The results suggesting that a more balanced distribution seems to be preferable in terms of overall well-being should be reflected in the framework to measure regional well-being. As an illustration, we looked at the spatial distribution of well-being in OECD regions by using a composite



index of well-being, that includes measures of economic, social and environmental outcomes in regions, and the same composite index adjusted to take into account the negative effect of dispersion among the dimensions considered in a region.<sup>1</sup> Results show that the spatial distribution of well-being changes quite distinctively whether an adjusted or non-adjusted composite index is used, although the two measures are correlated. In particular, adjusting for the negative impact of intra-regional disparities, the relative ranking of regions in Central Europe – France, North Italy and Southern Germany – improve. In Australia, the adjusted index shifts the relative position of most regions downwards, except for the Australian Capital Territory and Tasmania which both exhibit relatively little dispersion across the well-being dimensions. The adjusted composite index emphasizes geographical clusters of regions in Canada and United States (Prenzel, 2014).

30. Territorial well-being policy aims at integrating economic, social and environmental aspects so as to overcome trade-offs between them and avoid crowding-out effects whereby an improvement in one dimension translates into a degradation of another. The implication from the previous analysis requires identifying “complementarity” indicators that measure how public policies address simultaneously two of the different policy objectives. For example, indicators on the energy intensity of growth measure policies aimed at decoupling economic objectives from environmental degradation. A list of possible regional *complementarity indicators* is discussed in Chapter 2.

## 1.5 Focus on results and dynamics

31. The well-being framework suggests focusing on results and outcomes rather than drivers and inputs. Identifying expected results, and selecting outcome indicators to measure them, has two distinct purposes. First, it allows focusing the attention of policy-makers and citizens on the features of people’s well-being which are expected to be improved by the policy at stake. It can improve the effectiveness of policies by ensuring they stay focused on achieving their goals. Second, it can raise awareness, increase accountability and citizens’ engagement to assess the results of policies aiming to increase people’s well-being.

32. However, it may be challenging to use metrics based solely on outcomes as economic and social planning instruments. For example, the weakness on policy thinking of the *UN Millennium Development Goals* and their success in influencing the debates on development can be explained by the fact that they were thought as normative instruments and not as a policy strategy (Fukuda-Parr, 2013). In our framework, a common set of well-being dimensions and outcome indicators are identified as common reference, but regions are encouraged to choose the outcome indicators specific to their strategic priorities and to explicit the actions that will have an impact on the expected outcomes.

33. Well-being is essentially a static trait to understand the drivers of human development beyond income. We are also interested in the dynamic evolution of well-being, that is to say to understand how the resources that drive well-being over time are affected by today’s actions (e.g. health is determined by the stock of human capital, environmental conditions are determined by the stock of natural capital, etc.), what is called *sustainability*.

34. In the OECD *How’s life* initiative, the sustainability of well-being over time is conceptualised through the capital approach that looks at the economic, natural, human and social capital. However, two other approaches to sustainability have been developed and their operationalization can be useful for the regional well-being framework (Box 1.3). In the *three-pillar*

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<sup>1</sup> Two specifications were used in the composite indices: in the first income, unemployment and CO2 emissions per capita were used, while in the second income, life expectancy and CO2 emissions per capita.



*approach*, sustainable development results from the reconciliation of three main imperatives economy, environment and society (Robinson and Tinker, 1998). While this approach has been considered difficult, the complementarity indicators introduced in Chapter I.4 can help operationalize it. Finally, the *ecological approach* to sustainability refers to the ecosystems dynamic capacity to adaptively respond to disturbances and changes, i.e., their resilience.

### Box 1.3. Sustainability of well-being: three approaches

The debate on sustainability has been focusing on how the current level of well-being can be experienced for the foreseeable future. The idea of sustainable development was broadly defined by the so-called Brundtland Commission as “to ensure that the needs of the present do not compromise the ability of future generation to meet their own needs” (UN, 1987).

This definition did not provide (on purpose) any specification of what type of needs are important to ensure for the future, thus, providing no clear input on a way to measure sustainable development. As a consequence, different approaches have been attempting to operationalize the concept, emphasizing in some points divergent views. However, three have emerged as more relevant (UN, 2003; Bleys, 2012): the three pillar approach, the ecological approach and the capital approach.

In the **three-pillar approach** sustainable development results from the reconciliation of three main imperatives economy, environment and society. Each imperative is independently crucial and urgent and connected to one another. Therefore, in this perspective, addressing any of these pillars in isolation, without considering their interactive effects, can result in inadequate policies, or undercut initial policies, and, for instance, increase social disparities that can, ultimately, reflect a decrease in well-being. Although, this approach has been labelled as complex (Bleys, 2012), as it requires a model capable of encompassing all the possible interactions between the three pillars, at least a set of indicators to monitor the interactions among the couple of policy objectives could be developed.

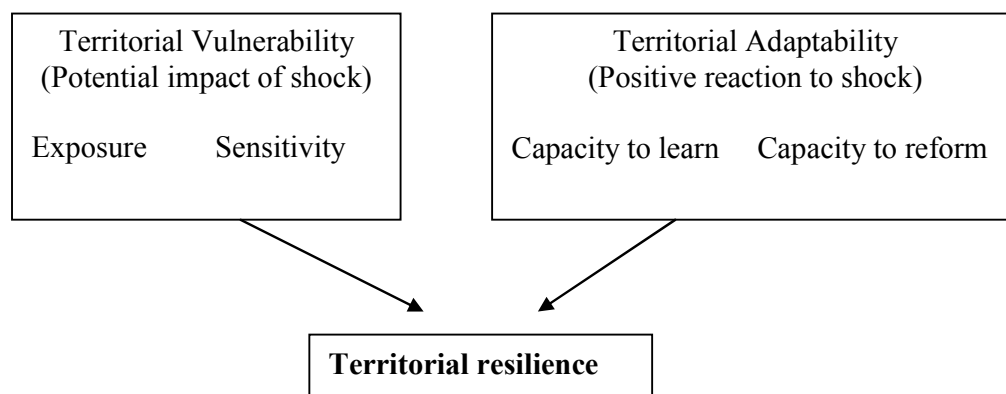
The **ecological approach** refers to the ecosystems dynamic capacity to adaptively respond to disturbances and changes, i.e., their resilience. Two main categories of measures are proposed within the context of this approach: measures of pressures placed on ecosystems by human activities and measures of the ecosystems' responses to external pressures. The main limitation of this approach is that it fails to integrate the economic and social dimensions as the approach focuses more on ecosystems. A proposal to integrate these two dimensions through the territorial resilience is advanced in Table 1.2.

The **capital approach** has been associated with the thinking of economists in this subject. Although, first confined to the understanding of economic development, the capital approach was later extended to sustainable development (UN, 2008). This approach distinguishes between four types of capital: economic (financial and real assets), natural (non-renewable and renewable resources), human (providing skills and knowledge) and social (links, connections and networks between individuals and institutions (e.g., Putnam, 2000)).

35. Since well-being in place is determined by the interaction between individual and place characteristics, we are also interested in understand the *territorial resilience*; that is to say the capacity of communities to absorb the effects of shocks and learn from them in order to move forward.

36. The concept of resilience, defined originally in physics and psychology, has been successively applied to environmental sciences and social-ecological systems (Perrings, 1998; Adger, 2006; Folke 2006), to economics (Duval and Vogel, 2008) and natural disasters (UNEP, 2007; OECD, 2013e). From the territorial perspective, the resilience of a region refers to its *vulnerability* that result from the exposure to shock and sensitivity to it, these two elements constituting the potential impact of the disaster on an individual or a community. It also has to do with the *adaptability* of a territory that comprises the capacity of individuals and firms to deal with ups and downs and of institutions to adapt and reform (OECD, 2013e; Laurent, 2014).



**Figure 1.5 Territorial resilience framework**

37. Using this analytical framework, different indicators can be used to determine the resilience of a given region. Because of the role of institutions and governance arrangements on the capacity to adapt after a shock, measures of quality of regional governments should be considered (Charron, N., Dijkstra, L. and V. Lapuente, 2013) as well as measures of open government and community engagement (Brezzi, M. and P. McCann, 2014). Table 1.2 provides some examples of existing measures.

**Table 1.2 Indicators of territorial resilience**

	Type of indicator	Example of indicator
<b>Vulnerability</b>		
Exposure	Population concentration Economic wealth concentration Geographic exposure (climate, location, etc.) Economic exposure (openness etc.) Diversification of production systems	- Trade and financial openness - Industry specialization index - Land converted to built-up area
Sensitivity	Quality of urbanisation Human development Social inequality Quality of infrastructure (energy networks, transport, telecommunication, etc.) Quality of territorial preparedness (existence of emergency plans, evacuation routes, conformity with national regulations, etc.) Quality of first response services Quality of insurance Balance of territorial public finances	- Gini index of inequality - Education and health indicators
<b>Adaptability</b>		
Capacity to learn	Human capital Research Quality of information systems Innovation	- Qualification of labour force - Open data indicators
Capacity to reform	Social capital Quality of governance Citizens engagement	- Quality of government indicators - Administrative fragmentation

Source: E. Laurent, 2014



## **1.6 Inequalities and well-being: the spatial dimension**

38. The well-being of people can be dramatically unequal across space. Depending on the well-being dimension under consideration, inequalities in living standards can be particularly evident at the scale of regions, cities or even neighbourhood. Looking at national averages does not allow the major sources of inequalities to be identified and hence rightly tackled by public policy. For certain well-being dimensions and in specific context, even the regional level does not give enough detail on where the major inequalities are located. When data are available, focusing on cities and on the spatial extent of their labour market is an effective way to assess inequalities in people's living standards.

39. The spatial dimension in the assessment of well-being is crucial to help design more effective policy to improve living conditions at the most appropriate scale. Addressing living standards inequalities also requires a multi-dimensional approach, capable of tackling different sources of disadvantage in a coherent way. Both the academic literature and recent OECD work highlight the degree to which the factors underlying greater inequality disproportionately affect particular groups (which often cluster in space), and tend, when cumulated, to make it harder for those groups to improve their life conditions. For example, reducing school drop-out rates may require addressing not only the quality of schools but also such diverse issues as inadequate transport infrastructure, lack of knowledge of labour market opportunities, crime or inadequate housing. Such integrated policy responses imply a need for better co-ordination of policies across both sectors and levels of government, and also across space. In many cases, they may require strengthening the capacities of sub-national governments to plan and deliver both key services and more efficient use of public investment resources.

40. Much of the information required to address these issues effectively is to be found locally. Central governments lack the knowledge of specific places, but they can help sharing practices and knowledge across places. As OECD (2011) argues, the complementarities among different strands of policy are likely to be most evident – and the trade-offs among them most readily manageable – where they occur, in specific places. An approach that takes account of specific assets that are by definition located in a particular place and seeks to co-ordinate the various sectoral policies affecting that place is more likely to achieve coherent, multi-sector outcomes. A policy agenda based directly on well-being objectives can support co-ordination among different sectoral policies and levels of government, since it helps a more direct focus on people's living standards rather than on policy output and to take into account the trade-off and complementarities among different policy domains.



## CHAPTER II. HOW TO MEASURE WELL-BEING WHERE PEOPLE LIVE?

### Introduction

41. Everybody wants to enjoy a good level of well-being in the place where they live. Both citizens and policy makers need to have the possibility to assess the quality of life and material conditions of their places and to compare them with those in regions and cities of the same countries or across the world. In order to carry out such an assessment, it is necessary to build a common set of measures adapted to a sub-national spatial scale, consisting of regions and cities. This chapter provides a method to measure well-being where people live. It builds on the background set by the OECD through the *How's life* initiative and on the specific framework provided in Chapter 1 of this report for the application of the well-being concept at regional and urban level.

42. This chapter first offers a set of selected regional indicators that allows OECD regions to be compared in terms of eight different well-being dimensions. Possible measures to account for the interactions among well-being dimension are also discussed. Second, the chapter presents empirical evidence on the different well-being dimensions, providing a narrative of regional disparities in quality of life and material conditions, highlighting their policy relevance. Finally, this chapter discusses future work to be done to improve the measurement of well-being in cities and regions. In doing that, it identifies and discusses a set of priorities for the statistical agenda ahead.

### II.1 A common set of well-being indicators for regions

43. A set of indicators to measure the different dimensions of well-being described in Chapter I has been developed for the 300 OECD large regions. These indicators are comparable across OECD countries, come from official sources in most of the cases and are available over different years. They are publicly available in the OECD Regional Database. At present, regional measures are available for OECD countries in eight well-being dimensions (income, jobs, education, health, environment, personal security, civic engagement and accessibility to services). Regional measures, comparable across countries, are however not available on three other well-being dimensions: social connections, subjective assessment of life circumstances, and housing (although information on dwellings and rooms are generally available from population censuses) (Table 2.1).

44. Well-being indicators can assess the various dimensions separately or provide global assessment through composite measures. This report assesses regional well-being by looking at the different dimensions separately. In contrast, the *OECD How's Life* uses the *Better Life Index* to communicate the relative value of each well-being dimension in a country. Although the Better Life Index is a composite index, the aggregation of the 11 chosen dimensions in one “value of well-being” is made by users according to their system of preference among the dimensions. Table 2.1 illustrates the indicators that are included in the Better Life Index and the corresponding regional availability.



Table 2.1: Well-being dimensions and regional indicators

	Dimensi ons	Regional indicators	Country indicators in OECD How's life report and Better Life Index
Material conditions	<b>Income</b>	<ul style="list-style-type: none"> <li>Household disposable income (mean and median)</li> <li>Income distribution in a region:               <ul style="list-style-type: none"> <li>Gini index for household disposable and market income</li> <li>Quintile share ratio (S80/S20) for household disposable and market income</li> </ul> </li> <li>Regional relative poverty (headcount ratios for disposable and market income, with poverty line set at 40, 50 and 60% of the national median income)</li> </ul>	<ul style="list-style-type: none"> <li>Household net adjusted disposable income</li> <li>Household net financial wealth</li> </ul>
	<b>Jobs</b>	<ul style="list-style-type: none"> <li>Employment rate</li> <li>Long-term unemployment rate</li> <li>Youth unemployment</li> <li>Part-time employment</li> <li>Women participation rate</li> </ul>	<ul style="list-style-type: none"> <li>Employment rate</li> <li>Long-term unemployment rate</li> <li>Average annual earnings per employees</li> <li>Job tenure</li> </ul>
	<b>Housing</b>		<ul style="list-style-type: none"> <li>Number of rooms per person</li> <li>Housing cost overburden rate</li> <li>Dwellings without basic facilities</li> </ul>
Quality of life	<b>Health status</b>	<ul style="list-style-type: none"> <li>Life expectancy at birth</li> <li>Age adjusted mortality rate</li> </ul>	<ul style="list-style-type: none"> <li>Life expectancy at birth</li> <li>Self-reported health status</li> </ul>
	<b>Educatio n and skills</b>	<ul style="list-style-type: none"> <li>Educational attainment</li> <li>Students cognitive skills (PISA) [only few countries]</li> </ul>	<ul style="list-style-type: none"> <li>Educational attainment</li> <li>Students cognitive skills (PISA)</li> <li>Educational Expectancy</li> <li>Competences in the adult population (PIAC)</li> </ul>
	<b>Environ mental quality</b>	<ul style="list-style-type: none"> <li>Air quality (PM10)</li> <li>CO2 emissions</li> <li>Loss of forest and vegetation</li> <li>Municipal waste</li> <li>Municipal waste recycled [only few countries]</li> </ul>	<ul style="list-style-type: none"> <li>Air quality</li> <li>Satisfaction with water quality</li> </ul>
	<b>Personal security</b>	<ul style="list-style-type: none"> <li>Homicide rate</li> <li>Car theft rate</li> <li>Mortality due to transport accidents</li> </ul>	<ul style="list-style-type: none"> <li>Homicide rate</li> <li>Self-reported victimization (GALLUP)</li> </ul>
	<b>Civic engagem ent and govern ance</b>	<ul style="list-style-type: none"> <li>Voter turnout</li> </ul>	<ul style="list-style-type: none"> <li>Voter turnout</li> <li>Consultation on rule making</li> </ul>
	<b>Accessibi lity to services</b>	<ul style="list-style-type: none"> <li>Broadband connection</li> <li>Access to green space</li> <li>Average distance to the closest hospital [only few countries]</li> <li>Share of population with access to public transportation [only for a set of cities]</li> </ul>	
	<b>Work- life balance</b>		<ul style="list-style-type: none"> <li>Employees working very long hours</li> <li>Time non worked</li> </ul>
	<b>Social connecti ons</b>		<ul style="list-style-type: none"> <li>Social network support (GALLUP)</li> </ul>
	<b>Subjecti ve well- being</b>		<ul style="list-style-type: none"> <li>Life satisfaction</li> </ul>

45. This set of indicators can serve as a common reference for regions that aim to develop their own metrics of well-being. The availability of socio-economic measures comparable across regions and countries and common baselines not only is useful for benchmarking the relative position of a place, but it has also proved to act as catalyst for policy-makers, spur public support for action and create a mechanism for prioritizing resources. Section II.2 provides an overview of the geography of well-being in OECD regions based on the dimensions and indicators introduced above. How regions fare on the different well-being dimensions can be further explored through the interactive web-tool (forthcoming, May 2014). Section II.3 provides a critical assessment of the dimensions where additional measurement improvements at sub-national level are needed for different geographical scales.



46. Regional and local initiatives to measure well-being usually address explicitly the complementarities among the different policy objectives; for example, more public transportation choices in metropolitan areas can improve economic competitiveness, through an increased access to jobs, and at the same time pursue environmental objectives (Box 2.1). On the measurement side, it implies to build synthetic indicators that take into account more than one dimension of well-being, in addition to the ones referred to just one dimension. A set of possible interaction indicators to be developed for international comparison is presented in Table 2.2.

**Table 2.2 Interaction indicators**

	Income	Jobs	Housing	Health	Education	Environment	Personal security	Civic engagement	Accessibility to services
Income					Share of students in primary education with no access to food	Share of households whose 30% of income is devoted to energy consumption			
Jobs									
Housing	Percent of households with housing costs greater than 30% of income								
Health	Life expectancy for high-income earners					Diseases of children due to pollution			
Education				Share of obese people with no more than primary education					
Environment									
Personal security									
Civic engagement									
Accessibility to services	Share of transport expenses by classes of household income								



**Box 2.1. Complementarities among well-being dimensions: Examples from OECD regional initiatives**

**Morelos:** The most important dimension that is currently shaping the debate is the concern about personal security. This concern is due to the human cost to lives and family well-being but it also due to the economic cost to productivity and business of the high level of crime and insecurity in the State. There seems to be a remarkable consensus across different sectors that root causes of this insecurity in Morelos stem largely from deficits in the educational and employment opportunities of Morelos' young people and thus that a preventive approach to insecurity that focuses on education, health and social cohesion is going to be important in addition to a response that focuses on the police and criminal justice system.

**US Partnership for Sustainable Communities:** This Federal initiative aims at developing more sustainable communities by integrating transportation, housing and energy policies. By recognizing that housing and transportation costs take up almost half of the average household's budget, the initiative has developed the Location Affordability Index (LAI) that provides estimates of the percentage of a family's income dedicated to the combined cost of housing and transportation in a given location. Because what is "affordable" is different for everyone, users can choose among eight different family profiles-defined by household income, size, and number of commuters-and see the affordability landscape for each one in a neighborhood, city, or region.

**II.2 The geography of well-being in OECD regions and cities*****Material conditions: Income and jobs***

47. Income and unemployment are widely accepted as key drivers of individual well-being, not only for their relevance on the living standards but as being associated to life satisfaction, perceived status and social connections. In European countries, personal income seems to matters more in poor than in rich regions and living in high unemployment regions does not alleviate the unhappiness of being out of work (Pittau, Zelli, and Gelman, 2009). Following a similar line of research, Aslam and Corrado (2011), using the micro-data on life satisfaction from the European Social Survey (ESS), conclude that individual well-being is strongly dependent on the non-economic characteristics of an individual's position relative to his regional average.

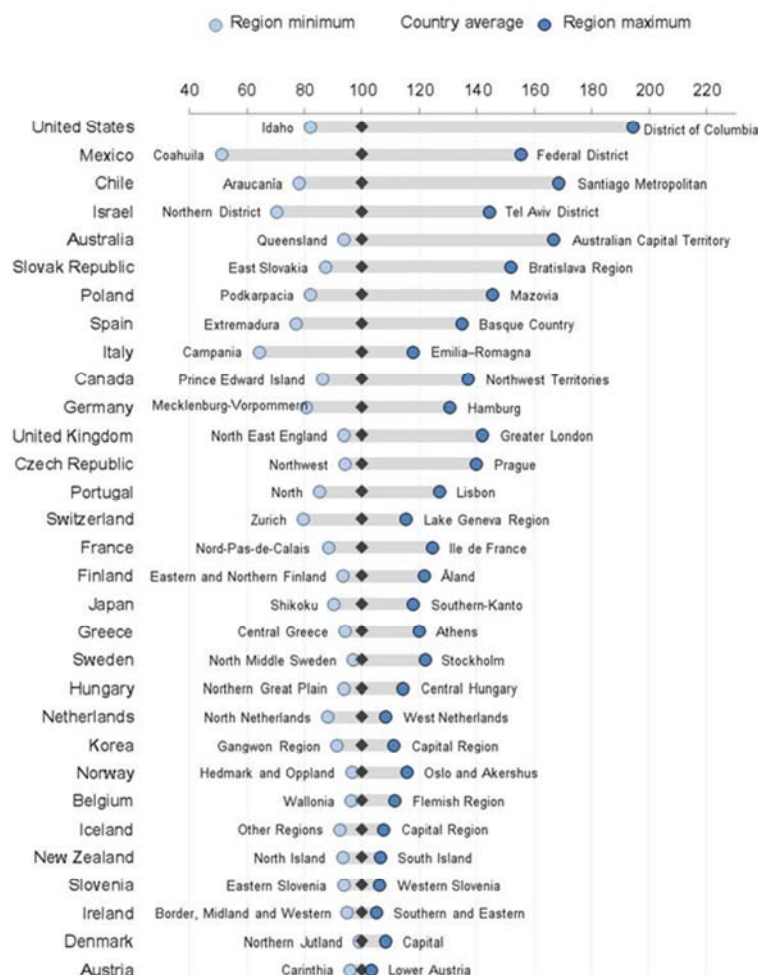
48. The most widely used measure of regional disparities in material living standard is the variability in regional GDP (OECD, 2013). However, GDP is best understood as a measure of the economic production taking place in each region, rather than of the income enjoyed by the residents of each region, and the differences between production and household income are likely to be especially large when a significant number of residents of one region work in another, or when they transfer a part of their income to family members living elsewhere. In terms of GDP per capita, regional differences within countries are often larger than cross-countries differences. Inter-regional inequality has increased in a number of OECD countries since 1995, especially in Eastern European countries. It is particularly high in emerging market-economies, Indonesia displaying the highest level (OECD, 2013a).

49. **Inter-regional disparities in household income are large in many OECD countries.** In the United States, Chile, the Slovak Republic, Israel, Australia, Poland, Spain and the United Kingdom, people in the top income region were more than 30% richer than the median citizen in 2010 (Figure 2.1). While the income gap has narrowed between urban and rural areas in most OECD countries, it remains a major concern in emerging economies and developing countries.



**Figure 2. In one-third of countries, the top income region is more than 30% richer than the country**

Regional average household disposable income, top and bottom values as a % of income in the country's median region, 2010



Note: The graph refers to the household disposable income of the OECD TL2 regions.

Source: OECD Regional database.

**50. Differences in income can be relevant not only between regions but also *within* regions.** In general, income inequalities within regions in OECD countries tend to be bigger than inequalities between regions (GOV/TDPC/TI(2014)1; Rodriguez-Pose and Tselios, 2009). Evidence at country level also show that the lower the territorial level analysed, the higher the magnitude of regional income disparities and income inequality appears to be higher within urban areas than elsewhere. For example, in 2009, 17 of the top 25 US metropolitan areas had estimated Gini coefficients above the US national average (American Community Survey, 2010). In the Aix-Marseille metropolitan region the median household income of the top 10% is 8.4 times higher than the 10% poorest, making the region one of the most unequal in France (OECD, 2013a).

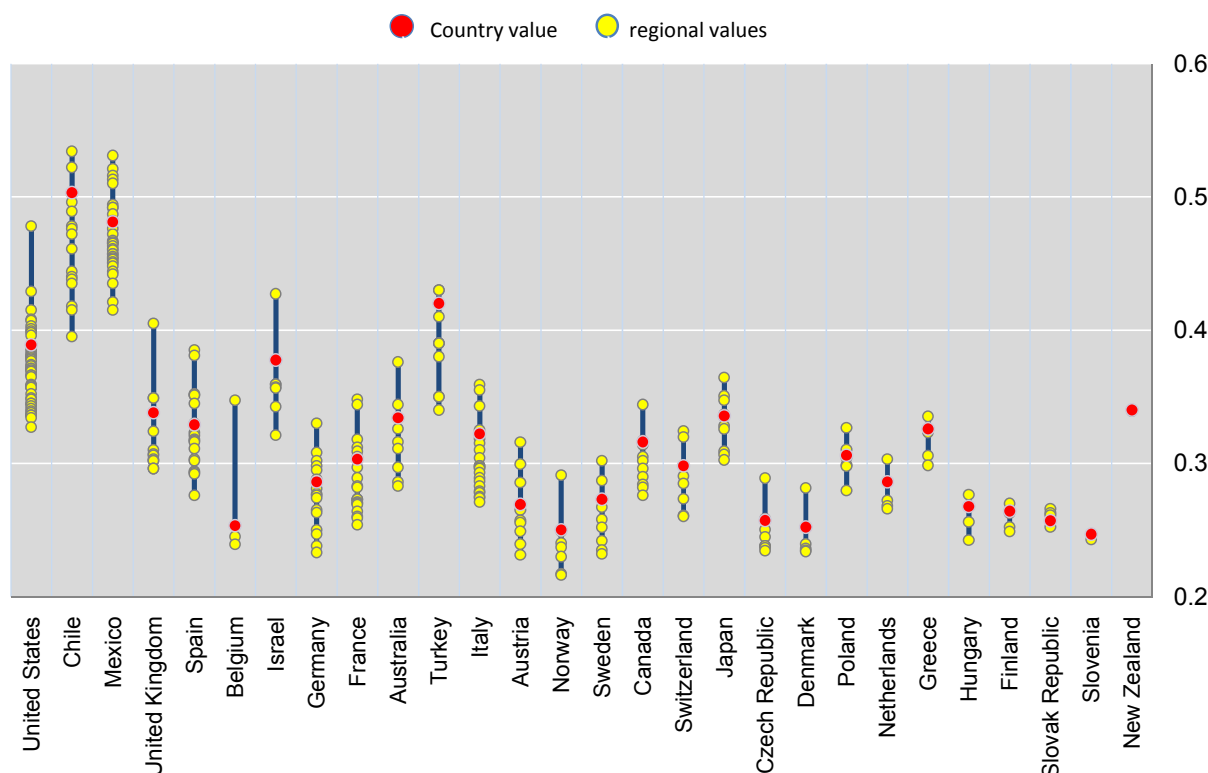
**51.** Accurate information on the distribution of income and the incidence of poverty in a region is valuable both to pursue national goals of inclusive growth and to implement social policies in regions and cities. Recent work to produce comparable data on sub-national differences in distribution for OECD



countries<sup>2</sup> shows that regional differences in income inequalities are high in all large OECD countries and in some small countries with a dominant urban centre (e.g. Belgium). Chile and Mexico, the two OECD countries with the highest income inequality, also display large regional differences in income distribution across regions. For example, the range between the Gini coefficients of the states of Chiapas and Tlaxcala in Mexico (around 0.15) is of the same magnitude as the difference in Gini coefficient between Mexico and the OECD average (Figure 2.2).<sup>3</sup> Data on market income<sup>4</sup> distribution highlight the impact of taxes and transfers not only to reduce the differences in average household income in different regions, but also to bring down the inequality of household incomes within each region, particularly in Belgium, Finland, Germany, Italy and the United Kingdom ([GOV/TDPC/TI\(2014\)1](#), 2014).

**Figure 2.2 Income inequalities in regions are very different in many OECD countries**

Regional values of the Gini index of household disposable income, 2010



*Note:* Countries are ordered by the difference between maximum and minimum value of the Gini coefficient for regional disposable income. Each point represents a region.

Source: Elaborations on OECD Income Distribution Data at regional level ([GOV/TDPC/TI\(2014\)1](#)).

<sup>2</sup> This work extends the *OECD Income Distribution Database* to produce estimates of income inequality and poverty to the OECD TL2 regions for 28 countries for the year 2010. The indicators are produced through a new household-level data collection based on internationally harmonised income definitions undertaken as part of the OECD project “Measuring regional and local well-being for policymaking”. Results and details on the quality of the estimates can be found in “Measures of income inequality and poverty at the regional level in OECD countries” [GOV/TDPC/TI\(2014\)1](#).

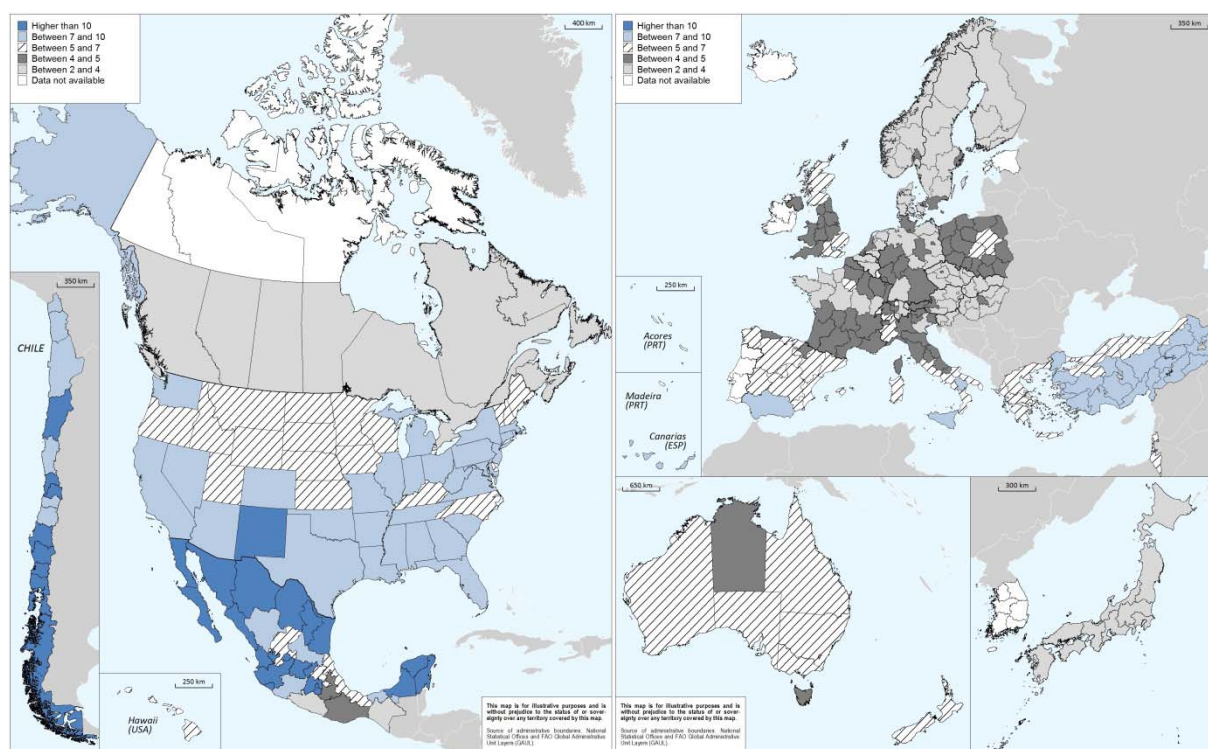
<sup>3</sup> The Gini index is a measure of income concentration that ranges from zero, representing perfect equality to 1 where all income flows to a single person.

<sup>4</sup> Market income is the household income before the cash transfers from the general government, taxes and social security contributions paid by the households.



52. While the Gini index provides a synthetic measure of the level of inequalities in the region, the income distribution by quintile (that is to say the income accrued by each fifth of the regional population when ranked by increasing level of income), can inform on whether inequality in a region is mostly driven by disparities in the upper part of the income distribution (richer population) or in the bottom part (poorer population). It appears that in many regions in Italy, Japan, Norway, Slovenia, Spain, Sweden and the United States, the gap between the low earners and the median earners is higher than the gap between the top earners and the median earners. While in Japan and most of the regions in the Scandinavian countries the income of the top 20% richest population is between two and four times higher than that of the bottom 20% poorest, in most of the regions of Mexico and Chile the income of the richest is at least ten times larger. The gap between top and bottom earners is much higher than in the other regions of the country in Sicily and Basilicata (Italy), Central Poland, Ile de France, Andalucía (Spain), District of Columbia and New Mexico (United States), and Jerusalem District (Israel) (Figure 2.3).

**Figure 2.3 How much richer are the richest 20% in each region than the poorest 20% in 2010?**



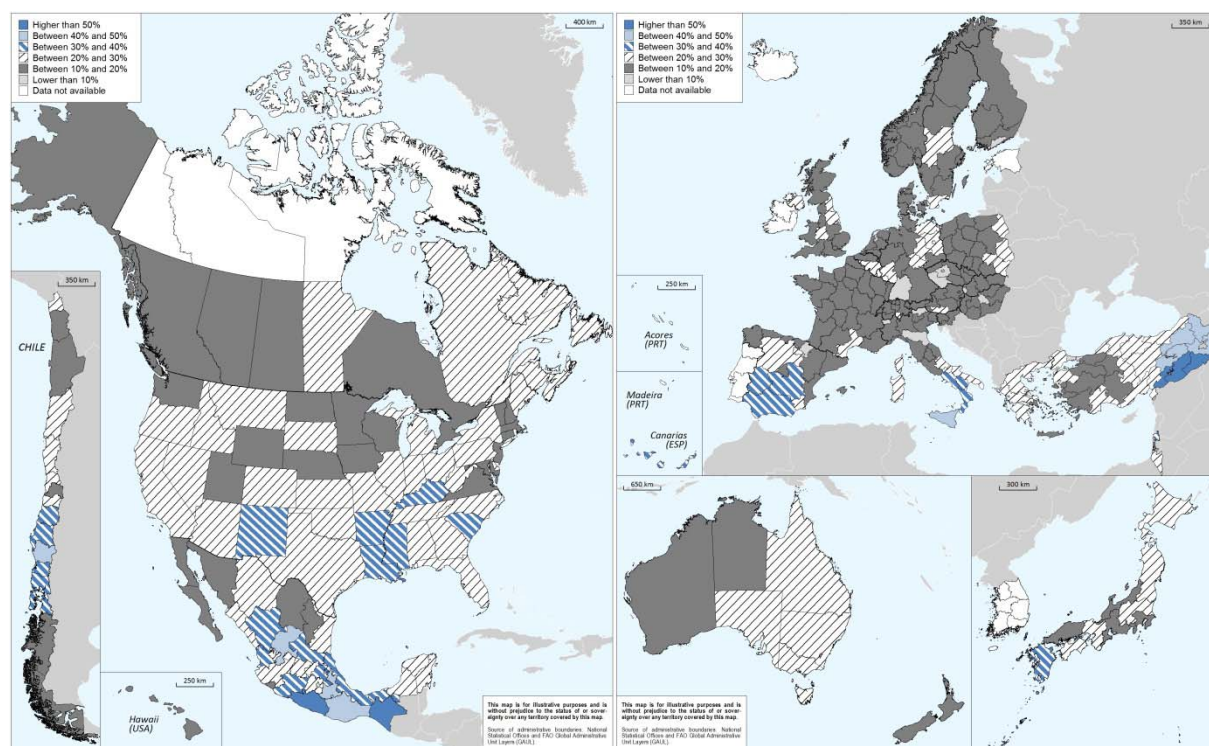
*Note:* The values represent the ratio between the household disposable income accrued by the top 20% of population with the highest income and that of the bottom 20%.

Source: Authors elaborations on OECD Income Distribution Data at regional level.

53. **Relative poverty rates of regions provide a picture often masked by country averages.** In Mexico, Turkey, Israel and Italy, poverty rates can vary from 57% (above 45% in Israel and Italy) to around 10% with respect to a 60% national threshold. It means that in some regions in these countries the incidence of poverty is twice as high or less than one-third the country value (Figure 2.4).



Figure 2.4 Regional relative poverty rates, 2010



Note: Poverty headcounts with poverty line defined at 60% of the national median income.

Source: Authors elaborations on OECD Income Distribution Data at regional level.

### Box 2.2. Incidence of poverty within regions: national and regional poverty lines

The common practice in the analysis of OECD countries is to use a **relative definition of poverty**. Individuals or households are considered poor if their income falls below a certain proportion of the median income of the national population. The OECD uses multiple relative poverty lines set at 40%, 50% and 60% of median national income as a benchmark for international comparisons. Relative poverty lines do not require estimating the cost of purchasing a “market basket” of goods, like absolute poverty lines, and thus they are usually preferred for international comparisons.

When measuring poverty within a region, the choice of the reference population, whether the national or the regional median earner, is still debated. Supporters of national thresholds point out the fact that many social policies are aimed to provide services uniformly across the country, while others underline that cost of living can be very different across regions and people are interested in comparing their living standards with those living in the same area.

Regional poverty lines can complement the poverty measures based on national poverty lines, by providing a within-region perspective to the measurement of poverty. For example a person considered as income poor with respect to a national threshold might not be classified as poor with a regional poverty line if he lives in a relatively low-income region. Preliminary estimates using a poverty line set at 60% of the regional median income show that while poverty rankings across regions are in general not much affected with respect to the results in Figure 2.4, poverty rates are reduced in the poorest region for most of the countries; for example, they are halved in Sicily (Italy), Chiapas (Mexico) and South-Eastern Anatolia (Turkey).

Source: OECD: [GOV/TDPC/TI\(2014\)1](#)

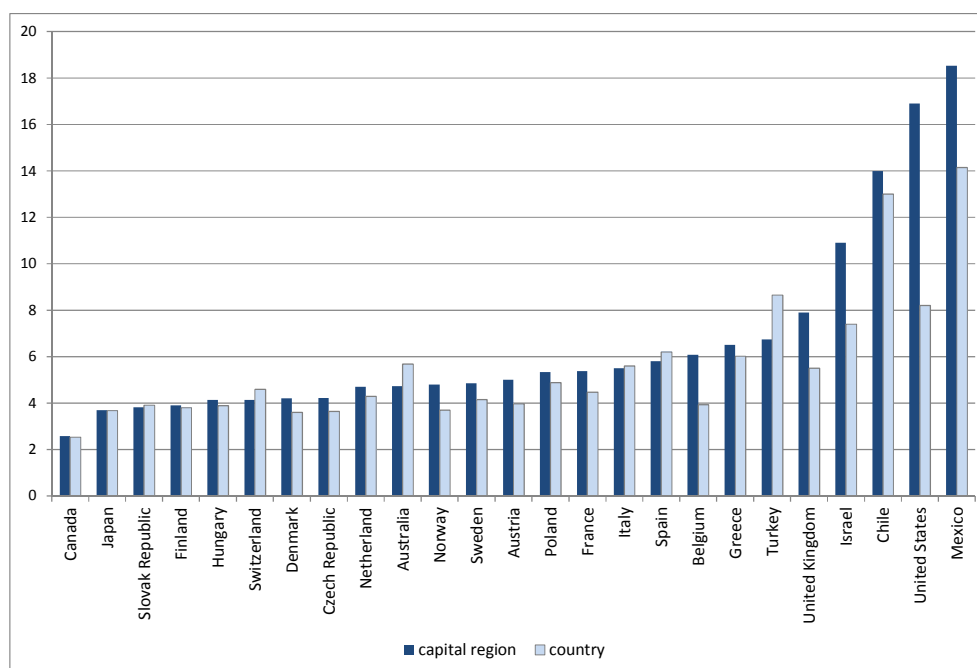


54. Within a country, income disparities are influenced by the distribution of wages and salaries, which account for 75% of household income among working-age adults (OECD, 2011c). On the determinants of inequalities within regions, empirical studies have looked at the characteristics of local labour markets such as employment density (Ciccone, 2002) and the proximity to high populated centres (Rice et al., 2006), which further translates into a premium for inhabitants of urbanised areas (Glaeser and Mare, 1994). Different results underline the impact of education and skills, with high skilled workers concentrating in larger urban areas (Combes et al., 2008; Bishop et al., 1992; Perugini and Martino, 2008; Regev and Wilson, 2007).

55. Existing evidence, mostly on developing countries, points to a positive link between urbanization and inequality (Kanbur and Zhuang, 2013; Castells-Quintana and Royuela, 2014). Figure 2.5 compares the ratio of income received by the top 20% richest people to that received by the bottom 20%, for capital regions and national averages. Based on this measure, income differences in capital regions tends to be higher than the national level in all but six countries, suggesting that more urbanized areas have a more skewed income distribution, particularly in the United States, Mexico and Belgium. These estimates, however, refer to the region containing the national capital, so the result depends on how closely the capital region boundaries correspond to the ones of the capital city. Internationally comparable measures of income levels and distribution based on the actual boundaries of urban areas are not yet available (Box 2.4).

**Figure 2.5 Income inequalities: Capital regions and national averages**

Ratio between the disposable income received by the 20 % of the population with the highest income and that received by the 20 % of the population with the lowest income; 2010



Source: OECD Income Distribution Data at regional level.



### Box 2.3. Measuring income distribution in regions: results and future developments

Substantial research has compared levels of income inequality and poverty across OECD countries (OECD, 2011c). Because of lack of data, the inter- and intraregional income disparities have been largely overlooked, even though the available evidence show significant within-country differences (Rodriguez-Pose and Tselios 2009).

Data constraints loom large in studies of income inequality, poverty and social exclusion at the sub-national level. However, through the extension of the OECD Income Distribution Database to sub-national values it was possible not only to produce regional indicators for 28 OECD countries but also to document quality issues related to these estimates. The indicators refer to the “equivalised” household disposable income, are produced either from administrative data or household surveys according to internationally agreed definitions, and refer to the year 2010. The indicators produced refer to: a) income levels at regional level (mean and median disposable and market income), b) income distribution within a region (Gini index for disposable and market income, Quintile share ratio for disposable and market income) and c) relative poverty in a region (headcounts ratio for disposable and market income, with poverty line set at 40, 50 and 60% of the national or of the regional median incomes. Sub-national estimates are published together with confidence intervals for their correct interpretation. In fact for those countries whose estimates are drawn from nationally-representative surveys, confidence intervals can highlight whether differences across regions are “real” or due to sampling errors. Future work in this field would benefit by making available regional identifiers and complete information on the sampling design in public-use survey micro-data, so as to allow better estimates of standard errors.

The results confirm the relevance to look at the sub-national income distribution and the possibility to repeat these estimates regularly (for example every three years) to monitor changes in inequalities should be considered, as well as to develop methods to estimate income distribution in metropolitan areas.

Source: Measures of income inequality and poverty at the regional level in OECD countries [GOV/TDPC/TI\(2014\)1](#)

56. Unequal access to **employment** contributes to inter-regional inequalities. In the past decade, employment growth in many OECD countries was highly concentrated in specific regions (OECD, 2013a). On average, 40% of overall employment creation in OECD economies during 1999-2012 was generated in just 10% of their regions. The industrial mix and a solid base of human capital make some regions attractive to employers and competitive. Evidence shows that the divergence in educational levels in US cities is causing an equally large divergence in labour productivity and salaries for most of the workers in a city, in particular for the highly-skilled but also for the low-skills jobs (Moretti, 2012). With the economic crisis, employment losses have become even more regionally dispersed. In fact, in Ireland, New Zealand, France, Estonia, the Netherlands, Canada, and the Slovak Republic, half or more of the employment gap could be filled if just one region returned its employment rate to its pre-crisis level (OECD 2013a).

57. In many countries, regional disparities in **youth unemployment** have grown wider since the crisis. Southern European countries and Mexico are of particular concern, because in some regions the youth unemployment rate now exceeds 40% (Figure 2.6). These regions also have higher than average early leavers from education and training. Furthermore, while large cities drive national employment in many countries, the economic crisis has affected urban labour market conditions. The unemployment rate in metropolitan areas rose more in the period 2008-2012 than it did in the previous 8 years in 26 of the 28 OECD countries. In 2012, 45% of OECD metropolitan areas had an unemployment rate above the national rate (OECD 2013a).



58. Local labour markets adjust slowly due to the demographic and productive structure of the regions, cost to mobility, market rigidity and institutional constraints. In 2011, in almost 50% of the regions considered, one out of three unemployed was long-term unemployed (i.e. out of the labour market for more than 12 months) (OECD, 2013a).

**Figure 2.6 Regional variation in the youth unemployment rate, 2012**



*Note:* Youth unemployment rate is the ratio between unemployed persons aged 15-24 and the labour force in the same age class. Each point represents a TL2 region.

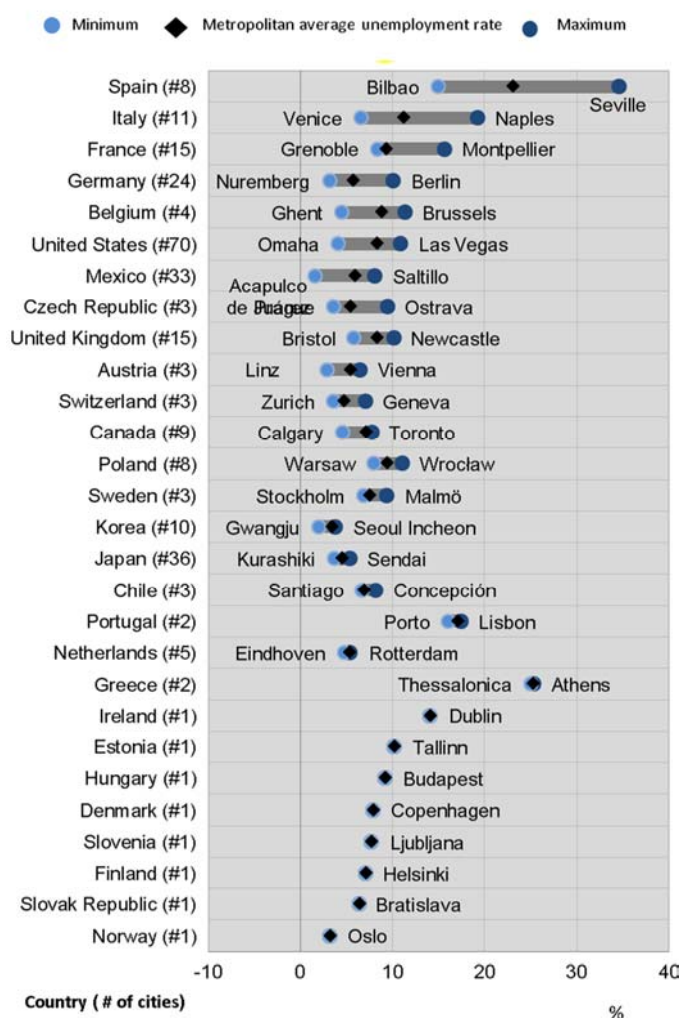
Source: OECD (2013), OECD Regions at a Glance 2013, OECD Publishing, Paris.

59. **Inequalities in living standards and employment within cities are often associated with spatial segregation.** In developing countries, migration into poor cities from an even poorer rural



hinterland has led to the formation of slums. Intra urban inequality is also prominent in many cities in advanced economies, especially within metropolitan areas and post-industrial cities (OECD 2006). Inequality does not, of course, take the same form or intensity in every city. The precise patterns vary from country to country and from city to city, partly depending upon national economic trajectory, labour market policies, welfare state policies. People can live in cities with very different unemployment rates even within the same country. Larger differences are found in the Southern European countries, such as Spain, France and Italy (Figure 2.7).

**Figure 2. Differences in metropolitan unemployment rate, 2012**



Source: OECD Regions at a Glance 2013

**60. Adapting the well-being framework to cities requires additional measurement improvements.** While the OECD metropolitan database, which includes indicators on the 275 functional urban areas with 500 000 people or more, offers the basis to help understanding the implication of different sectorial policies on the multidimensional well-being of people living in cities, data for many of the well-being dimensions presented in Table 2.1 are not yet available for the metropolitan areas.



#### Box 2.4. Why measuring well-being and inequalities in cities?

Many socio-economic inequalities are characterised by a strong spatial dimension where cities play a major role. In terms of several well-being dimensions, the largest spatial inequalities are observed at city level, especially when population is grouped by race and ethnicity (Lewis and Burd-Sharps, 2013). Within cities and metropolitan areas, income inequality tends to rise with city size and with cities' per capita income levels, even after controlling for a wide range of factors, including industrial structure and skill endowments of the workforce (Baum-Snow and Pavan, 2013; Berube, 2014). At the urban scale, inequality is often reflected in spatial sorting of groups according to income. However, it is clear that such spatial sorting is a driver, as well as a consequence, of interpersonal inequality. This is because neighbourhoods with lower incomes typically have poorer schools and local amenities and often suffer from poorer access to transport networks and thus to services, jobs and educational opportunities. On the whole, the residents of such places also have poorer social networks, which can be crucial to employment prospects (Olli Segendorf, 2005). These factors all tend to reinforce the inequalities that led to spatial sorting in the first place. In many instances, urban policies and planning can either reinforce or mitigate such inequalities.

Measuring well-being and inequality at city-level would mean to monitor – and, in many cases, to map – the multidimensional outcomes in terms of income, jobs, health, education, transport, crime, social connections, etc, and the different opportunities or inequalities affecting particular groups or places. Such monitor would be particularly appropriate at the level of functional urban areas (OECD, 2012). The functional urban area is likely to be the appropriate level of analysis in most cases, for two reasons: first, labour markets tend to reflect functional economies rather than municipal borders, and, secondly, administrative boundaries in fragmented metropolitan areas often reflect – and reinforce – inequalities in access to public goods and services. An analysis on the functional urban areas would also highlight whether opportunities and well-being outcomes are significantly different between the urban core and the surrounding areas.

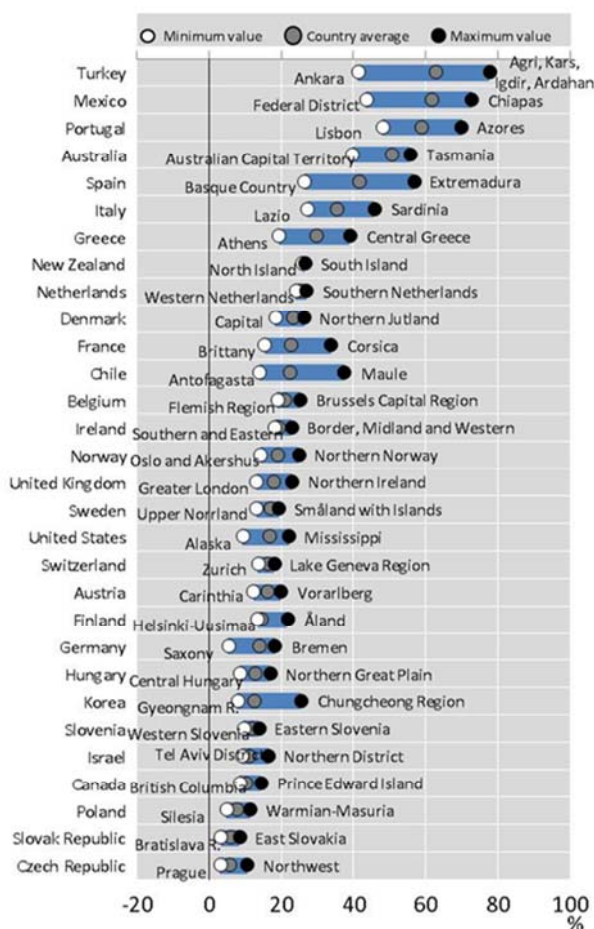
#### *Quality of life dimensions*

61. In 2012, one-fourth of the OECD population only had **basic education** (no more than lower secondary educational attainment), contributing to varied regional distributions within OECD countries. For example, in most of the regions in Turkey, Portugal and Mexico, and in some regions in Australia and Spain, the proportion of the population with only basic education was as high as 50%. Countries with a relatively high share of population with only basic education also show a higher regional variation in the same indicator (Figure 2.8).



**Figure 2.8 Regional disparities in basic education**

Regions with the lowest and highest percentage of workforce with only basic education, 2012



Note: Countries ranked by average share of population with only basic education

Source: OECD (2013), OECD Regions at a Glance 2013, OECD Publishing, Paris.

62. Regional factors strongly affect access to education and quality of learning. Even when the socio-economic backgrounds of students have been taken into account, the location of schools matters greatly in determining the quality of education. In the OECD area, 15-year-old students in urban schools outperformed those in rural areas on the OECD PISA survey by more than 20 points on average in 2009, or the equivalent of almost one year of education.<sup>5</sup> Countries that have undertaken the OECD PISA survey at the regional level show that regional disparities can be large also in unitary educational systems (OECD 2013 PISA).

63. The high differential of return to education in urban areas versus rural areas can be a major incentive for highly educated individuals to migrate to cities. In most countries, the capital region has the highest share of workforce with tertiary education. In the United States, Spain, the Czech Republic and Turkey the regional variation in tertiary educational attainment are the largest (OECD, 2013a). Yet considerable disparities can be found *within* metropolitan regions as well. In the Chicago region,

5. OECD PISA 2009 Vol. II



school districts record high school graduation rates, ranging from 57% in the city of Chicago to over 95% in suburban areas (OECD, 2012). In Aix-Marseille, the share of the working-age population without a diploma ranges from 39% in neighbourhoods in northern Marseille to 14% in Aix-en-Provence (OECD, 2013c). The reverse is true in Puebla-Tlaxcala, Mexico's fourth-largest region, where peripheral areas exhibit lower education levels than the metropolitan core; in some census tracts, more than 65% of the population has not completed secondary education, compared to incompleteness rates of less than 20% in the core.

64. There are also strong regional disparities in **health outcomes**, which are partly explained by unequal access to health services. For the year 2010 in North America, the life expectancy at birth in Texas (US) was around 75 years, which was 6 years less than in Minnesota (US), and the life expectancy in Chihuahua (Mexico) was only 68 years (OECD, 2013a). Large differences also characterise the age-adjusted mortality rate within countries. In most countries, the richest regions tend to have a higher number of doctors and a lower age-adjusted mortality rates. Therefore, regional disparities may affect the physical and financial availability of health services. Countries with the largest regional differences in doctors per people include the United States, Spain, Czech Republic, Greece and Slovak Republic.

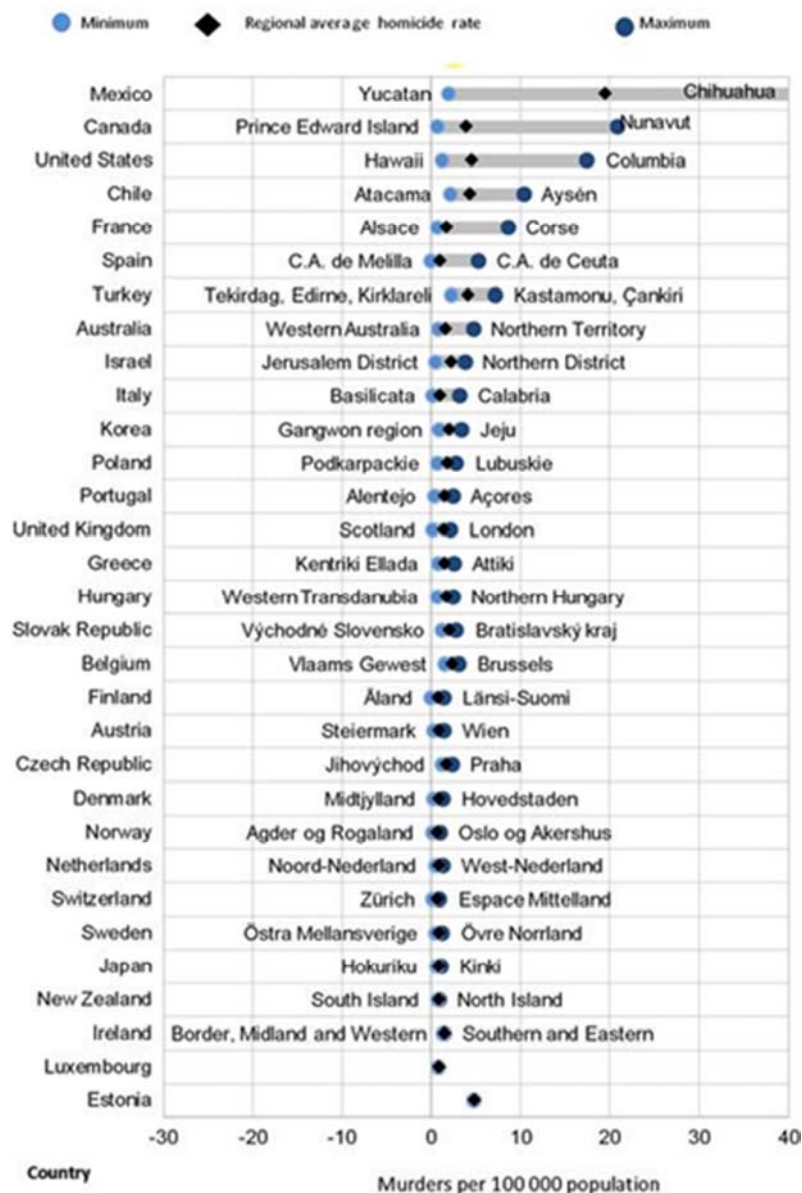
65. As for other well-being dimensions, disparities in health outcomes are particularly noticeable when a small spatial scale is adopted, such as the city level. This is even more important in countries, such as the United States, where TL2 regions are particularly large and their use may hide the actual magnitude of spatial disparities. Recent works by the Robert Wood Johnston Foundation (2013) and by Measure of America (Lewis and Burd-Sharps, 2013) show that life expectancy in the US varies dramatically at the level of city-neighbourhood. For example, the former study found that within the city of New Orleans the average life expectancy can vary by as much as 25 years across almost contiguous neighbourhoods. The latter study highlights the role of racial and ethnic component on life expectancy at the city-level, finding again strong differences among social groups.

66. Another important element that determines individual well-being is **safety**, meaning the degree of **personal security** in the place where people live. While there is an increasing use of subjective measures of safety, data availability across OECD regions imposes the use of objective indicators, among which one of the most robust one is the murder rate. As for the other outcomes of well-being, this indicator shows relatively large disparities across OECD regions, especially in Northern and Southern American countries (Figure 2.9). The variability of crime rates across space has been known since many years and it was found to be strictly related to other well-being dimensions referred to spatial contexts. These are, among others, education, access to jobs and social connections. More specifically, empirical literature found that increasing the level of schooling can lower the crime rates (Lochner and Moretti, 2004; Machin et al., 2011) and that the latter decreases in contexts with high jobs accessibility (Gaigné and Zenou, 2013). The most serious crimes in cities were also found to be associated with lower social connections (Glaeser et al., 1996). Therefore, it seems of particularly relevance to identify well-being indicators that account for two well-being dimensions at the same time, since such measures could help understand complementarities across different policy domains, increasing the effectiveness of public interventions.



**Figure 2.9 Regional disparities in homicides**

Minimum and maximum regional values of murder rate per 100 000 inhabitants,



Note: Countries are ranked by decreasing regional disparities in murder rates

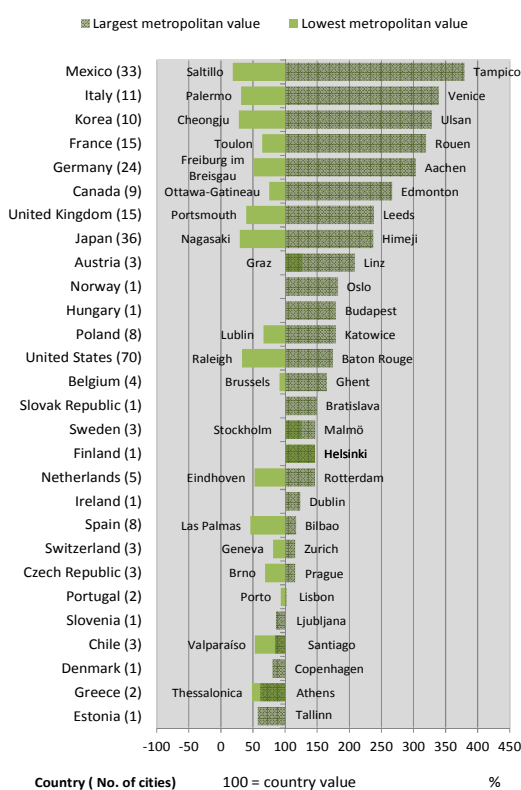
Source: OECD Regional database

67. Regional measures of **environmental outcomes** also contribute to a better understanding of location determinants of individual well-being. Despite many indicators of human well-being that are currently being used in academic and policy debates do not take account of the environmental outcomes, the assessment of well-being at regional and city level imposes their consideration. In this respect, recent literature proves that individuals have higher well-being – both in terms of subjective life satisfaction and health outcomes (lower mental distress) – when living in urban areas with more green space (White et al., 2013). The same results were found in



the literature with respect to air quality in European regions (Ferreira et al., 2013). Higher levels of environmental quality seem to have long lasting positive effect on well-being. The latter can be looked at from a dynamic approach that accounts for sustainability, hence both at a moment in time and across generations (Dasgupta, 2004). Exploratory results find that local air pollution decreases self-reported life satisfaction. The impact of decreasing average annual particulate matter concentrations by 1% is equivalent to increasing per capita income by 0.71% (Silva and Brown, 2013). In addition, the cumulative benefits of individual higher well-being in regions and cities point up to the need of policies at local level to preserve and improve environmental quality. Figure 2.10 shows that air quality – measured in terms of average CO<sub>2</sub> emissions per capita – can be very different across cities, with some showing lower levels than national averages and others much higher levels.

**Figure 2.10 CO<sub>2</sub> per capita in metropolitan areas, 2008 (country value=100)**



Source: OECD (2013a)



### Box 2.5. Measuring environmental performance of regions and cities with GIS data

In the recent years, the OECD has been using satellite datasets (global layers) at different resolutions, combined and harmonized with geographic information systems (GIS), to measure land cover and its changes, air quality and emissions with respect to small portions of territory. Examples of indicators obtained by integrating different sources of data and making use of GIS include: per capita CO<sub>2</sub> emissions in regions and metropolitan areas (total and by sector); regional population exposed to fine air particulate matter (PM10); regional range of CO<sub>2</sub> sequestration and release; percent of urban land converted from agriculture, forest and vegetation; percent of green in metropolitan areas; urban sprawl index.

Despite recent progress in earth observation, remote sensing and techniques for processing large datasets, there is not a unique global dataset recording changes over time in land cover. By harmonizing the available sources of data for Europe, Japan and the United States, it was possible to monitor the land take by urban development in these countries and whether the expansion of land for urban uses (residential and commercial buildings, major roads and railways) threatens the quality of the landscape or bio-diversity. In the past decade, for example, one-third of the OECD metropolitan areas in Europe, Japan and the United States have continued increasing their built-up areas, at a pace faster than population growth.

Similarly, in the case of emission data and air quality (concentration of particle matters), different global dataset were used to facilitate estimation for regions or metropolitan areas (for example the EDGAR global emission database developed by the Joint Research Centre of the European Commission, or the concentration of PM10 particles developed by the European Environmental Agency). The major constraints with these datasets are the lack of observations in different points in time, and the fact that emissions are collected at national level and attributed to small gridded areas; as a result, they cannot capture changes in energy use or green houses gas emissions due to local policies.

The results show that geographic information data are a key and underexploited resource for monitoring the state of local environmental assets in regions and cities of different sizes and for producing internationally comparable indicators with the largest possible coverage of OECD and non-OECD countries.

One future development would be to integrate individual level data on satisfaction on environmental quality and environmental services with environmental performance of regions and cities.

Source: OECD Regions at a Glance, 2013 and OECD (2012) Redefining urban: a new way to measure metropolitan areas.

**68. Accessibility to services** is one of the key dimensions of well-being, affecting how people obtain what is necessary to satisfy their needs and wants. The extent to which a given service is accessible to an individual must be considered with respect to three main characteristics, namely *physical*, *economic* and *institutional* accessibility. Physical accessibility is understood as the ability to reach the place where the service is provided; economic access refers to the affordability of a given service that includes the cost of the service itself as well as associated transaction costs (*e.g.* search, information and transport cost) and land prices. Finally the institutional accessibility to a service means that the access is not constrained by institutional factors such as laws, norms or values of a society; knowledge and perceptions (whether people know about the existence and how to use a certain service) also play a role because people may not be aware of the existence of a service or perceive its accessibility as being constrained. All these three dimensions are strongly linked when accessibility is tackled at a regional or city- level.

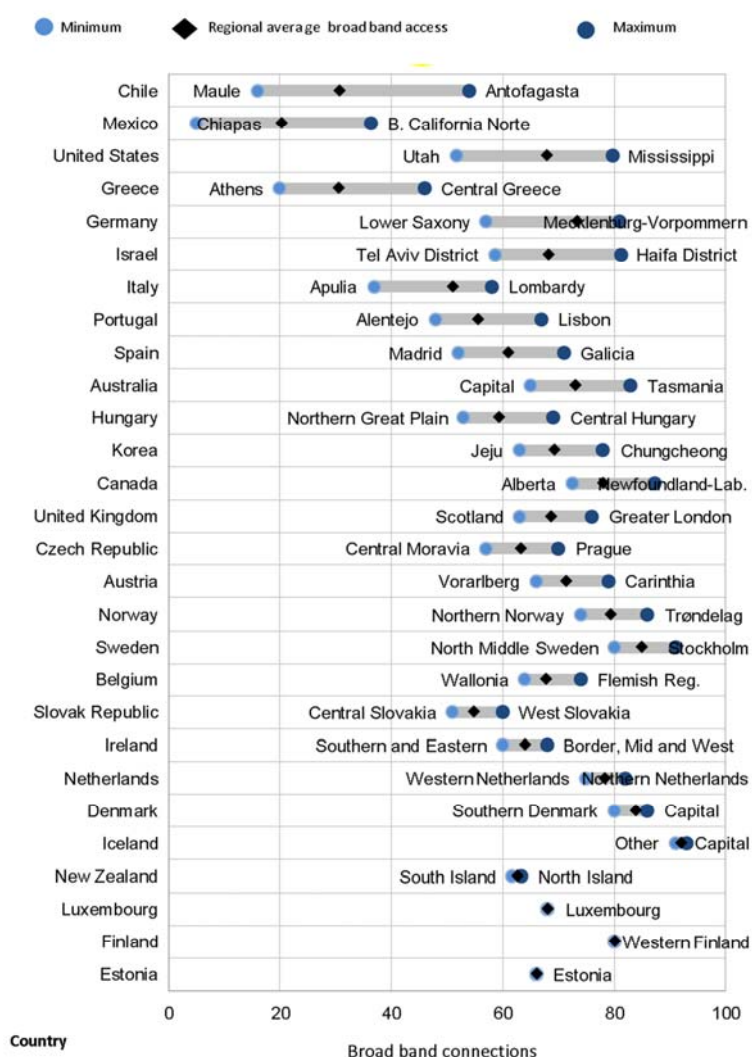
**69.** Measuring accessibility to services allows inequality in societies and places to be better understood. Especially at regional level, these inequalities might be related to issues of land-use planning. Significant disparities in the access to basic and advanced services, such as transport, water and sanitation, education, health and ICT, still persist across and within regions. Unequal access to education, for instance, may inhibit social mobility and thus perpetuate inequalities.



Figure 2.11 shows that access to broadband connection can be highly differentiated in regions. Despite with different average levels of accessibility by country, Mexico, Chile, United States and Greece show the highest regional disparities. These differences are relevant for policy because they reflect the opportunities available to people to develop their potentials according to their ambitions (Sen, 1993) and to fulfil different types of human needs, from the basic physiological ones to the self-actualisation (Maslow, 1943). Analysing access to services favours more efficient use of resources by identifying underserved areas and informing redistribution of demand.

**Figure 2.11 Regional disparities in households broadband connection**

Minimum and maximum regional values, % of households with broadband connection; 2011

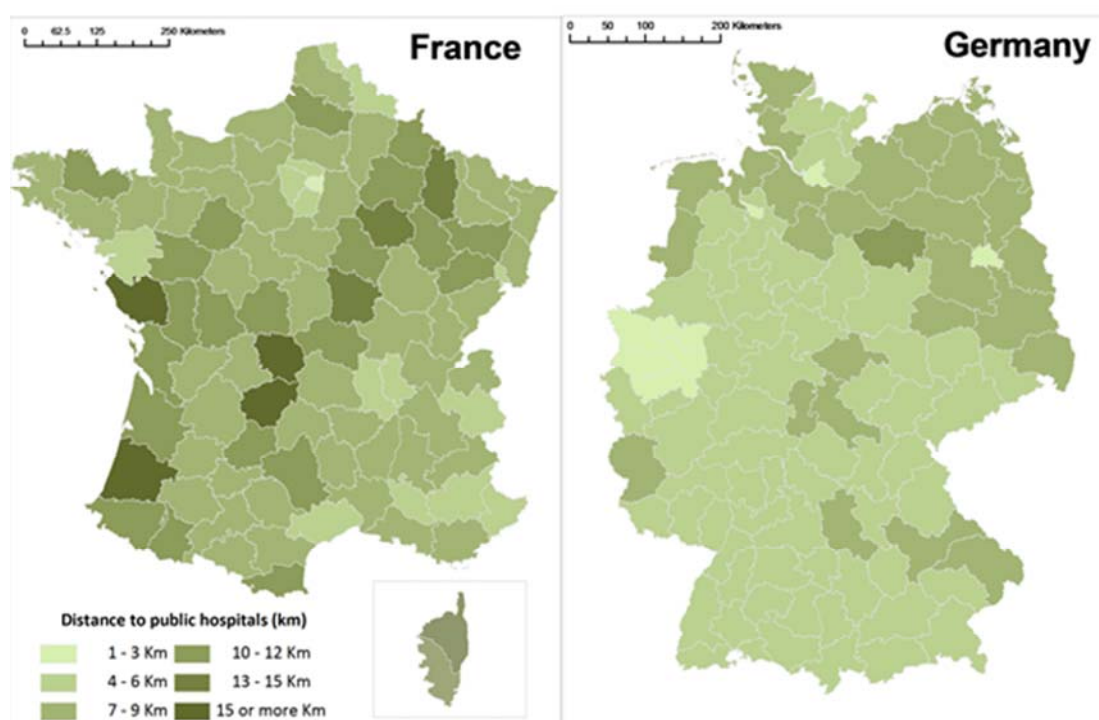


Source: OECD Regional Database



70. Access to services can depend heavily on where the closest point of access is located and how it can be reached. Regional geographic features as well as the regional transport network are determining factors. Specific indicators to measure the spatial accessibility to public services (e.g. health services) can take into account the distance – in terms of driving time or road distance – to reach the point of access. Figure 2.12 shows, for the case of France and Germany, the average distance to hospital by small region, where such distance is weighted by the localisation of people in each square kilometre. On average, regions with higher population density have a higher physical access to hospitals. While in France regions with relatively high distance values are scattered throughout the country, in the case of Germany regions having relatively high distance values are mostly located in the north-east side of the country (OECD, 2012b). These types of indicators are available for a set of countries – including France, Germany, Italy, Mexico, Portugal and US – which have provided data on the localisation of hospitals and on at least basic characteristics of the latter.

**Figure 2.12 Average distance to the closest hospital**



Note: The distance is weighted by the population.

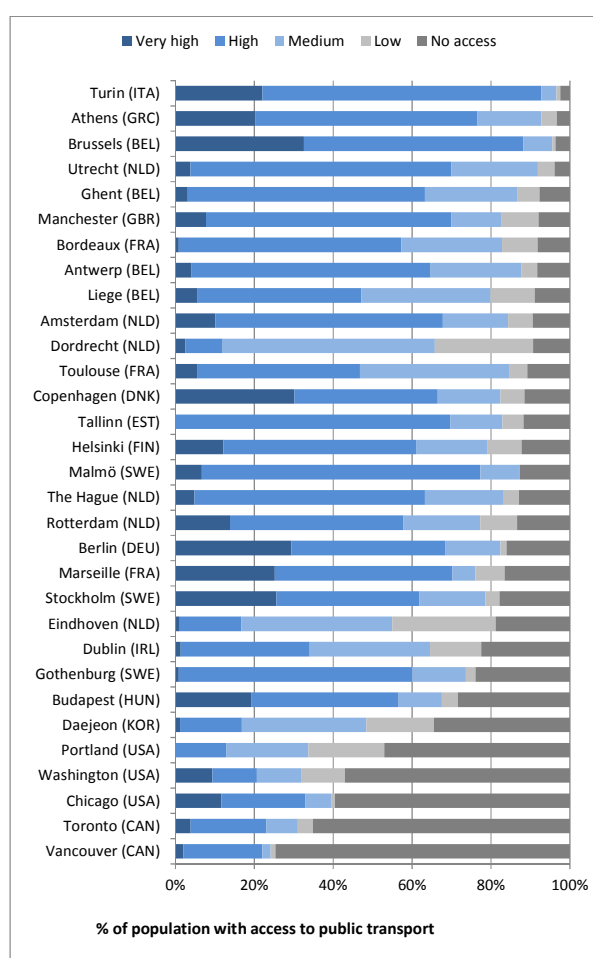
Source: OECD (2012b)

71. The availability and accessibility of public transport in cities is an important dimension of quality of life. An ongoing OECD-EU project has developed a common methodology to identify public transport catchment areas (areas within walking distances to service stops) for different typologies of transport in functional urban areas (see “Access to public transport: Comparing a selection of medium-sized and large cities” [GOV/TDPC/TI/RD\(2014\)1](#)). After combining the catchment areas with the service frequency by transport mode (bus, metro, light rail etc.), the share of population having a different degree of access to public transport is computed. Preliminary results for 34 OECD metropolitan areas show large differences in the



access to transport in cities. Not surprisingly, a larger share of population in urban core areas of European cities have access to public transport than in North American cities: in the five cities of Canada and United States more than half of the population of the urban core has no access to public transport, while in the European cities this share is never larger than 30%. Among the non-European cities Chicago, Washington and Portland have the largest shares of population with “very high” and “high” access, while among the large European cities, more than 90% of population has high and very high access to public transport in Turin (Italy) and Brussels (Belgium) and 70% in the medium-sized city of Malmö (Sweden) (Figure 2.13). The sample analysis for non-European cities reveals that publicly available data from public transport providers in metropolitan areas are rather limited and further data collection is needed.

**Figure 2.13 Access to public transport in a selection of cities**



Note: For European cities the population refers to that living in the core (high densely populated) of the city, while for the non-European cities, the population refers to both the core and the hinterland of the metropolitan areas.

Source: OECD-EC calculations based on functional urban areas ([GOV/TDPC/TI/RD\(2014\)1](#)).



### Box 2.6. Accessibility to services: statistical agenda ahead

There is an increasing demand by citizens and policy makers for indicators of accessibility to services. In order to compute these indicators it is necessary to make the spatial information on the location of services available (e.g. schools, hospitals, train stations, green spaces, etc.). By integrating these information with administrative data (e.g. the use of this service), as well as data on population and roads it is possible to assess at different territorial levels the extent to which services are (at least potentially) accessible.

The most important constraint when building indicators on accessibility to public services is the lack of adequate data. Despite the increasing use of GIS for territorial planning, data on the exact position of key services like public hospitals is scarce (or are at least not publicly available). Future developments on the geo-localisation of public services should also take into account the characteristics of service providers. In the case of public hospitals, this could further allow to identify the type of treatments offered in the different health facilities. Additional information could further allow building more robust indicators (e.g. gravity-based measures).

Making these measures comparable across countries is of particular interests, because it makes it possible to identify international benchmarks, to carry out comparative analysis of cities and regions with similar peers and hence provide learning opportunities to policy makers, people and service providers. However, international comparison imposes the use of consistent quality standards in the data. For example, when computing the access to health services the distinction between private and public ones should be consistent across countries, but institutional differences in the health system should be also considered. Since not all countries have the same data available, future work on building accessibility measures should not only take into account those indicators that better portrait the spatial access to public services, but also those indicators that allow to compare as much OECD countries (regions) as possible.

## II.3 The way forward in measuring well-being in regions and cities: Statistical agenda ahead

72. This report provides a framework and a set of measures to assess well-being in cities and regions. In doing that, it also takes stock on the statistical challenges to be confronted when comparing regions and cities within and across different countries. Since most of the surveys undertaken by NSOs to measure household conditions are designed to provide inference at the national level, statistical information at detailed geographical level is typically scarce. This calls for different methods to increase the available information, such as using existing micro-data (from surveys and censuses), integrating geographical information systems (GIS) with administrative data, estimating well-being indicators considering different geographies (administrative or functional boundaries), designing specific surveys and using innovative tools (e.g. social networks, ICT tools) to collect information. All of these methods raise challenges for the quality and comprehensiveness of statistical information.

73. The quality and the comprehensiveness of statistical information are crucial objectives to be reached in order to ensure that both policy makers and the general public can take full advantage of it. The measurement of well-being and social progress at the urban and regional scale needs to take into account three major issues:

- The *relationship between different measures* at different spatial scales, for example whether city-level trends are healthy or not may depend on how they relate to national outcomes.
- The dynamic of these measures in the *medium-to-long-term*. There is a clear need for an integrated approach to monitoring changes in both driver- and outcome-indicators, rather than considering the changes one by one.).
- There is a clear need for *an integrated approach* to monitoring indicators of the underlying drivers of inequality, as well as the outcomes: looking at individual outcomes with respect to jobs, income, access to public goods and services, or health status, for example, will often be insufficient. It is important to see how various dimensions of social exclusion reinforce – one another. Indeed, given the complexity of the relationship between spatial income differentials at different spatial scales, the spatial concentration of drivers of inclusion/exclusion (such as access to education, labour market opportunities and essential public services) may be the most relevant focus in the short-to-medium term. Again, in order to compute indicators that account for interactions across well-being dimensions, a higher availability of micro-data is crucial.



74. With these premises, the main statistical challenges ahead can be referred to: i) improving the measurement of well-being dimensions in large regions; ii) measure additional well-being dimensions currently unavailable for large regions; iii) improve measures of inequalities within regions; and iv) increase well-being measures for other geographies, *in primis* for metropolitan areas.

### ***Improving the measurement of the different well-being dimensions considered***

75. One important challenge is filling the gap between the well-being dimension considered and the outcome measures available. Priorities for future work pertain to:

- *Quality of services.* Access to services is one key dimension of regional well-being. While several indicators are already available, considering different types of services, accessibility measures need to be improved to take into account affordability and possible institutional constraints, beyond the physical access to services. New metrics need to be developed to assess the quality of the services provided, for example through surveys assessing people satisfaction with services provided in their regions or cities where they live.
- *Education outcomes.* At regional level, educational outcomes are currently measured by education attainment. Comparable PISA measures of students' competences at regional level are currently limited to a handful of countries or single regions. Given the relevance of education outcome in its own and its strong connection/complementarity with the other well-being dimensions, the assessment of people's actual skills turns out as particularly important. Build indicators on education outcomes at regional and urban level requires higher consistency in the national programs for skills assessment as well as combining information from surveys and other sources (e.g. administrative records).

### ***Measuring additional well-being dimensions***

76. Due to limited availability of data at the sub-national scale, the framework set in this report for the measurement of well-being in regions and cities considers fewer dimensions than those included in the *How's life* framework at national level. Some of the dimensions that do not appear currently in the regional framework would be indeed important elements to understand material conditions and quality of life in cities and regions. Priorities for future work should hence include advances in the measurement of the following elements:

- *Housing.* Being a crucial element for the assessment of material conditions, regional indicators of housing should take into account the characteristics of dwellings, including their quality and affordability. Less ambitious but important and potentially more easily available indicators are homeownership rates and vacancy rates. For this dimension, the potential of existing geo-coded information should be exploited.
- *Transportation.* Transport (which is part of the dimension 'accessibility to services'), remains a crucial element affecting people's quality of life. Important transport outcomes include measures of physical access to mass transit – e.g. distance from a station or a point of access – the price of transport (economic accessibility) and the time people spend travelling (e.g. commuting time). While such measures are still unavailable across all OECD countries, important step ahead can be done through the use of Geographical Information System once countries co-ordinate to provide consistent geo-coded information on the location of the services and on their characteristics.
- *Land use* is another important spatial component underlying well-being metrics. It is strongly connected to other well-being dimensions, such as transport services, housing and quality of the environment. With respect to the latter, good quality and comparable data on land use allows the access to open space, parks and other natural amenities to be assessed. Again, Geographical



Information System is a crucial tool to advance in this type of measurement, but increasingly updated and spatially detailed information are needed in this respect. An alternative and promising way to assess the quality of the environment is by focusing on the people's subjective assessment of natural amenities. An example is the *hotspot monitor* initiative carried out in the Netherlands to identify high-valued natural spot through a survey-based method (Sijtsma et al., 2012).

- *Subjective well-being.* Make use of subjective measures on evaluation of life circumstances and satisfaction with services. One option would be make use of existing surveys for European regions (European Social Survey, or EuroBarometer) to infer regional data and expand to the other OECD countries. Alternatively, the feasibility for countries to run national household survey on an agreed set of indicators at regional level should be explored.

### ***Individual-level measures of inequalities in well-being***

77. The assessment of well-being in cities and regions implies, when possible, the measurement of the extent to which different dimensions of well-being are unequally available to people. Indicators of inequality can be seen as meta-measures, which are particularly helpful for regional policy makers to better target policy. These measures are relevant since they are linked equality of opportunity for people, hence not only from a static perspective.

78. In the case of household income, this would require increasing the availability of survey data that are representative at the regional level, re-designing sampling structure and disseminate the information needed to evaluate sampling errors. It would also require repeating the sub-national estimates of income distribution at regular intervals (every three years). Individual-level inequality measures are also important for other aspects of material conditions, such as wealth.

### ***New data production methods for metropolitan areas***

79. In order to achieve a more effective measurement of well-being at the appropriate scale new data production methods should be considered. This is particularly true for statistics at city level, where currently less information is available. The OECD Metropolitan Database, which includes indicators on the 275 OECD functional urban areas with 500 000 people or more, offers a basis to help understanding the implication of different policies in cities of different sizes. However, data are still lacking for many key social and income variables at city level. The priorities for future work are:

- *Income and employment.* Currently, indicators of employment for functional urban areas are estimated through a downscaling procedure from regional values, based on the distribution of population throughout the region (OECD, 2013a). However, more robust employment and income indicators could be computed in other ways, for example using small areas estimation techniques. Small areas estimation techniques may be employed also to obtain estimates of income level and distribution in cities that are currently unavailable (see for example the Eurostat project *ESS-Net on small area estimation*, tested in ten countries).
- *Accessibility to services.* To increase measures of accessibility to services and subjective measures of the quality of the services, different sources of data could be integrated. In particular administrative data, available at small geographical level, could be integrated to geo-coded data and to national household surveys. NSO could help making available more geo-coded data on the location of infrastructure and services (hospitals, schools, cultural and recreation facilities, transportation stations, public spaces, etc.). For what regards subjective evaluations of the quality of services used by the population, the expansion of national household surveys to include a limited set of questions for lower geographical level could be discussed.



## CHAPTER III. USING WELL-BEING MEASURES TO IMPROVE POLICY RESULTS IN REGIONS AND CITIES

### Introduction

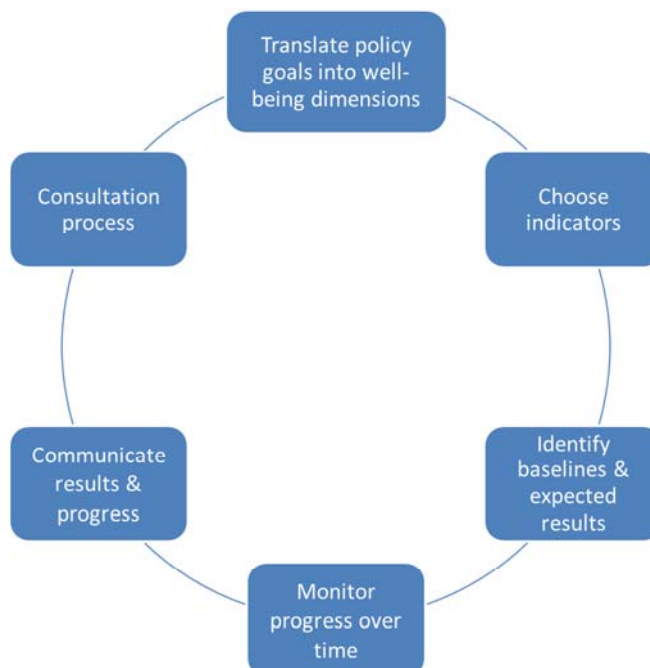
80. Many subnational authorities in OECD and non-OECD countries have set out initiatives designed to improve the economy and quality of life of their communities by measuring policy outcomes expressed in terms of people's well-being. These initiatives stem from different motivations, involve a diverse range of actors, may focus on different domains of well-being and therefore choose different indicators – but overall, they recognise a multidimensional approach to define a regional development strategy and to enhance complementarities among policies.

81. This chapter offers a preliminary diagnosis on the common challenges and solutions in the use of well-being indicators to guide policy choices, based on the experience of seven case study regions participating in the OECD *How's Life in Your Region* project (Newcastle, Rome, Sardinia, Southern Denmark, North of the Netherlands, Morelos, US Partnership on Sustainable Communities). The different regional experiences suggest that strategic choices need to be made both on the *methodological* side (how to measure and track progress towards expected outcomes, what baselines and targets to choose, how to measure inequalities across places etc.) and on the *political* side (what role indicators can play in the public debate, who should design the indicator system and be accountable, how the chosen well-being dimensions are reconciled with the objectives of national policies etc.).

### III.1 Developing and implementing regional well-being metrics

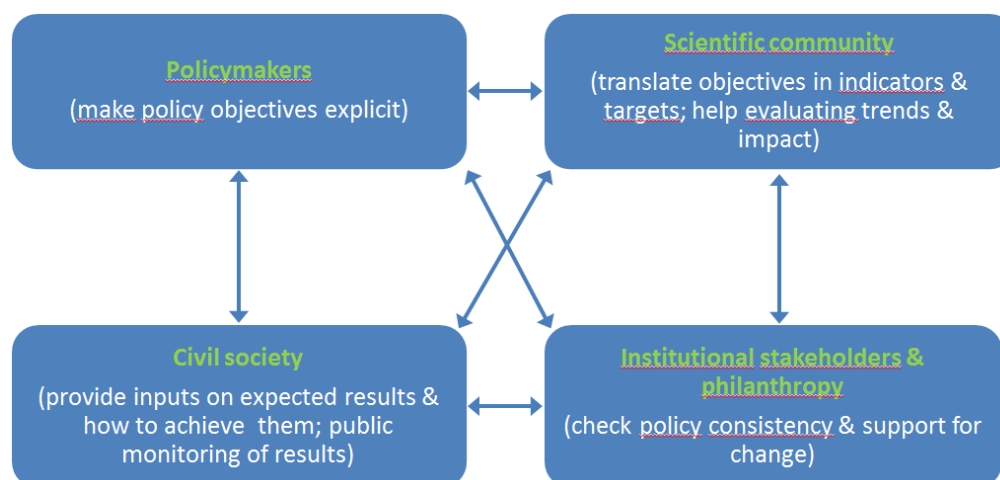
82. The main steps to be included when *developing regional metrics of well-being* are shown in Figure 3.1. The starting point of this measurement cycle can vary across regions, according to the specific objective of measuring well-being and who is leading the process. Rarely have case study regions fully implemented all the steps; some regions are more advanced in certain steps than others, sometimes skip one or more steps, and are typically seeking effective tools to launch a consultation process or to communicate the results of well-being indicators.



**Figure 3.1 Regional well-being measurement cycle: a possible sequencing of steps**

83. A key factor of success for *implementing well-being metrics* is the involvement and interaction among relevant stakeholders. Four main categories of stakeholders can be identified: policy makers, whose role is to make the objectives to be achieved with public actions explicit; the scientific community (statistical offices, academics etc.) that can help in transforming these objectives into measurable indicators and targets and in providing the evidence and analysis needed; institutional stakeholders (including labour unions and the philanthropic community, for example), and citizens, who can provide inputs on expected results, contribute to achieving them and publicly monitor progress (Figure 3.2). Box 3.1 reports some of the most recent initiatives carried out to involve the different type of stakeholders for the identification of the main priorities to set the well-being agenda and to the following choice of indicators. The quality of the regional well-being measurement process depends on how the four groups of stakeholders interact and how the governance of the system of indicators is balanced between a top-down approach – where a central body defines objectives and co-ordinates the actions and investments to help communities to meet the various goals – and a bottom-up one where subnational governments are the sole responsible for designing and meeting well-being objectives. In the regional experiences observed, the sustainability of well-being metrics over time and their link with the political cycle strongly influence their impact. The following sections explore each step of the cycle and the role played by the different categories of stakeholders.



**Figure 3.2. Different stakeholders are involved in implementing regional well-being initiatives****Box 3.1. Consultation process to define the main well-being dimensions in Morelos**

The Mexican state of Morelos has been going through a consultation to prioritise a set of well-being dimensions that fits with the objectives of the state strategy “Nueva Vision” and choose a few indicators to monitor such dimensions using statistical information already collected by INEGI. In the regional well-being measurement cycle, the priorities of the State are the consultation process and the choice of indicators. Regarding the consultation process, the state of Morelos, under the co-ordination of the state Ministry of Finance, has been carrying out different actions to shape the well-being agenda through an increasing involvement of civil society, institutional stakeholders and the scientific community. First, the participation of the State in the OECD *How's Life in Your Region* project represented an opportunity to discuss about well-being among representatives of all the different stakeholders in Morelos. Successively, the state Government carried out a separate web-based survey addressed to all the participants in the first stage of the consultation process to collect their views on the most important well-being dimensions to make progress with the measurement agenda. Results from this phase of the consultation process highlighted three main well-being dimensions: a) employment and wages; b) health; and c) personal security. The identification of the major issues opens the way to a more in-depth analysis of well-being and to a more aware design of public policy in Morelos. The next step will consist in choosing few and appropriate indicators for the various well-being dimensions and in identifying expected targets.

**III.2 Translating policy objectives into well-being dimensions**

**84. Regional initiatives to measure well-being often stem from a self-diagnosis rationale -- more rarely from a specific policy objective.** Several regions launched a well-being measurement initiative with the primary goal of getting a “real” or “better” picture of themselves in the aftermath of pressing challenges facing the attractiveness and liveability of the region, such as weak economic performances, ageing, depopulation, or poor health performances.

**85.** At the same time, most regions have formally linked their regional well-being measurement initiative and their regional policy. Regional well-being indicators are typically included in a regional development plan or strategy. For example, the region of Southern Denmark has included its “Good Life” indicators in the 2012-2016 Regional Development Plan (RUP) and has produced a wheel of indicators in order to emphasize the importance of a holistic approach to regional development. The region of Sardinia is engaged in the nationally-led



performance framework (*Obiettivi di Servizio*) and is developing well-being indicators for its 2014-2020 to be included also, in the monitoring system of the regional development plan (PRS). The state of Morelos does not have a specific strategy for well-being, but it has included well-being dimensions and indicators in its 2013-2018 State Development Plan (PED). The regional development plan is, in turn, often (but not always) tied to regional, national and/or European funding. The regional development plans in Rome and Sardinia, for example, are linked to EU Structural Funds. Conversely, the regional development plan in Southern Denmark is not directly connected to any funding stream). In the case of the US Partnership for Sustainable Communities, the programme has distributed over 760 federal grants.

**86. Regional well-being measurement initiatives are sometimes geared towards measuring problems rather than opportunities.** Although the initiative is usually called a *well-being* measurement initiative, it has been questioned whether it was measuring *ill-being* in practice. The different initiatives may use similar indicators, but bring them together under a Vitality Index as in Newcastle, or the UK Indices of Multiple Deprivation and the Multiple Deprivation Index of Sardinia (IDMS). This observation raises the issue about whether such differences simply reflect a semantic choice (*e.g.* how regions label their indicators) or actually influence policy orientations and design. In Newcastle, for example, it has been clearly stated that well-being was understood as encompassing more than the mere absence of problems.

87. To translate policy goals into well-being dimensions, regional authorities are required to make objectives and expected results explicit and to set priorities. This often implies better understanding trade-offs and complementarities of policies, which can be done only if all relevant stakeholders are involved.

**88. Strong political leadership and active intergovernmental collaboration across levels of government and among different stakeholders have been instrumental in moving the regional well-being agenda forward.** For example, in Rome, collaboration between the national and local levels helped both to collect and make optimal use of existing information. The active presence and experience of the national statistical agency (ISTAT) contributed to improving the amount and the quality of well-being indicators. In Morelos (Mexico), the well-being metrics is being developed as a monitoring tool of the state strategy “Nueva Vision”, using statistical information collected by INEGI. The integration of different sectoral policies at state level to pursue the well-being objectives is acknowledged by all stakeholders. Newcastle was open to sharing information and aligning objectives with national initiatives. The Newcastle City Council established dialogue with the Office of National Statistics (ONS) and considered potential synergies with the “Measures of National Well-being” wheel. Other regions are currently exploring ways to establish such collaboration. For example, the Region of Southern Denmark is looking to develop collaboration with the Danish Statistical Office, for example through participation in events.

89. However, several obstacles need to be alleviated in order to improve co-ordination across levels of government for well-being objectives (Table 3.1). Most commonly, clarifying the allocation of policy responsibilities appears as a priority in key components of well-being, such as housing (Morelos) and transport (Southern Denmark).



**Table 3.1 Main obstacles to effective co-ordination across levels of government for well-being in case study regions**

	Newcastle (UK)	Rome (Italy)	Sardinia (Italy)	Southern Denmark (Denmark)	Morelos (Mexico)	North of the Netherlands (Netherlands)
Overlapping, unclear, non-existent allocation of responsibilities		The principle of subsidiarity states that tasks should be carried out by the administrative level closer to people (municipalities), but all tasks can be carried out by higher levels (provincial, regional and national) if the latter work punctually and efficiently – this can create confusion	X	In some areas there is an unclear allocation of responsibilities between regions and municipalities In regional development. Public transportation is an example of this	Unclear allocation of responsibilities in housing policy  Both municipal and state levels have powers in urban development	Innovation policy and instruments (regulations, funds, etc)  Transition of responsibilities in chronic care
Competition between different ministries					X	Interreg A and B programmes (competition between national ministries)  Different provinces
Interference of lobbies	Example of alcohol pricing				Construction and transport companies	European regional branding vs. branding of the former assigned sectoral institutions (cluster organisations) Not always aligned
Lack of/not enough common frame of reference for policymakers			X (outdated frame of reference)		Lack of co-ordination in public works	
Lack of high-level political commitment and leadership			X		Transport and housing policies	
Lack of staff and time		Mismatch between staff qualifications and positions  Lack of personnel planning	X		Few and only municipal transport policies	In municipalities, lack of experienced appropriately educated staff



	Newcastle (UK)	Rome (Italy)	Sardinia (Italy)	Southern Denmark (Denmark)	Morelos (Mexico)	North of the Netherlands (Netherlands)
Lack of institutional incentives for co-operation			Or lack of consideration for existing institutional incentives	There is a lack of institutional incentives, so "metagovernance" is a keyword in achieving effective coordination		Support structure for innovation support to SMEs (i.e. national and regional support organisations crossing each other)  Competitors instead of collaborators cooperating between provinces
Lack of technical capacity		Lack of IT and infrastructure skills at local level			Lack of qualified personnel for urban development in municipalities	
Difficult implementation of central government decisions at regional and local level	Negative consequences of UK welfare reform on Newcastle (e.g. bedroom tax: specific conditions of Newcastle were not considered in the formulation of the national policy)				X	Top Sector policy, which was for years installing sectors, while regional development needs and potential lie in the cross-sectoral space
Mismatch between funding and responsibilities			X		Not enough funding for urban development	
Lack of/not enough strategic planning and sequencing of decisions			X		Change of staff every three years at municipal level, no continuity	
Lack of/not enough monitoring and evaluation of policy outcomes			Or lack of consideration for existing monitoring and evaluation reports		X	
Difficulties in implementation of/adaptation to recent reforms			X		Mismatch between the new National Urban Development Plan and the Municipal Urban Development Plans	



	Newcastle (UK)	Rome (Italy)	Sardinia (Italy)	Southern Denmark (Denmark)	Morelos (Mexico)	North of the Netherlands (Netherlands)
Contradictions between national and supranational guidelines			X			
Lack of citizens' concern on specific policy			Or lack of citizens' capacity to ask for "accountable governments"			

Source: answers provided by case study regions to OECD questionnaire.

**90. The level of government who is leading the well-being initiative is sometimes impaired by its own institutional weakness.** In Newcastle, the recent institutional reform has generated uncertainties, with the creation of a new Combined Authority responsible for transport, skills and economic development starting from April 2014. The effectiveness of new governance tools such as the City Deals and Local Enterprise Partnerships remains to be seen. In this context, the Wellbeing for Life initiative also seeks to make the City Council more “fit for purpose” and more strongly committed to working with all relevant partners to improve well-being and health. In Rome, ongoing discussions for territorial reforms including the abolishment of the provincial level are raising concerns on the impact and sustainability of the Province’s policy. In Southern Denmark, the Region is a relatively weak institutional level, particularly since the 2007 territorial reform. However, the Region has used the Regional Development Plan as a platform for the “Good Life” initiative. The Regional Development Plan integrates all the regional strategies and through meta-governance has largely succeeded in aligning the objectives of different stakeholders to the overall vision and work with well-being. The integrating approach has in many ways strengthened the legitimacy of the regional level vis-à-vis municipalities and the national government. From a different perspective, the US Partnership for Sustainable Communities aims at helping cities and regions to *build local capacity* to create their own measurement systems to meet their goals.

### III.3 Selecting indicators, baselines and targets

#### *Selecting indicators*

**91. All seven regions participating in this project have adopted a multi-dimensional approach to measuring well-being, but sometimes different indicators for the same dimensions.** The dimensions chosen by the regions broadly overlap with those covered by the OECD *How’s Life* initiative (Table 3.2). While the chosen well-being dimensions usually coincide across regions, the indicators chosen for each dimension can vary. This reflects the fact that strategies to promote well-being must be informed by data that capture specific policy objectives and provide information for addressing the particular phenomena affecting local population. For example, in the health dimension, the state of Morelos added an indicator on obesity, while Newcastle selected the number of years lived without disability. In the environmental quality dimension, both Rome and Sardinia have indicators on waste and water, and the US Sustainable Communities initiative on water and energy.



**Table 3.2 Well-being dimensions covered by the different initiatives of OECD case study regions**

OECD		Newcastle (UK)	Rome (Italy)	Sardinia (Italy)	Southern Denmark (Denmark)	Morelos (Mexico)	North of the Netherlands (Netherlands)	US Partnership for Sustainable Communities	TOTAL
Dimensions covered by the OECD "How's Life in Your Region?" project	Income and wealth	X	X	X	X	X			5
	Jobs and earnings	X	X	X	X	X	X	X	7
	Education and skills	X	X	X	X	X	X	X	7
	Environmental quality	X	X	X	X	X	X	X	7
	Health status	X	X	X	X	X	X		6
	Personal security	X			X	X			3
	Accessibility to services		X	X	X			X	4
Additional dimensions covered by the OECD "Better Life Index"	Housing	X				X		X	3
	Social connections	X	X				X	X	4
	Civic engagement and governance		X			X	X	X	4
	Subjective well-being	X			X	X	X		4
	Work-life balance					X			1

Source: OECD elaborations based on answers provided by case study regions to OECD questionnaire.

Note: Once this table has been revised by case study regions, it will include the choice of specific indicators used by each case study region for each dimension.

**92. A minority of regions includes *subjective measures* in its well-being initiative.** For example, Newcastle and Southern Denmark include perception survey data. The reasons for not including subjective measures may vary across regions (*e.g.* deliberate choice for conceptual reasons, lack of data availability at the relevant scale, etc.).

**93. All case study regions acknowledge the importance of demonstrating inequalities and differences, rather than just averages, in their indicators.** Inequalities are measured both across places (because different territories, such as cities, distribute opportunities for people) and across demographic and/or social groups (*e.g.* Southern Denmark, Morelos, U.S., Rome).

**94. The choice of outcome indicators needs to be a deliberative and participatory process.** As the Stiglitz-Sen-Fitoussi report (2009) argues: "Determining which elements should belong to [the] list of quality of life features [...] inevitably depends on value judgments about which aspects are of greater importance at a given place and time". Regions have taken different consultation channels for choosing indicators (Table 3.3).



**Table 3.3 How did case study regions select their regional well-being indicators?**

Main objectives of the consultation Channels	Gather inputs on the strategic choices for the region (dimensions of well-being)	Gather feedback on the main concerns about well-being in the region (for prioritisation and scale of intervention)	Build consensus around the strategic choices and involve citizens in their measurement or monitoring
Community survey	X (Sardinia) X (Morelos) X (Southern Denmark) X (North of the Netherlands)	X (Sardinia) X (Morelos) X (Southern Denmark – citizen panels) X (North of the Netherlands)	X (Rome)
Social networks (Twitter, Facebook etc.)	X (Morelos) X (North of the Netherlands)	X (Morelos) X (North of the Netherlands)	
Meetings organised by local or national institutions	X (Rome) X (Sardinia – to be held) X (North of the Netherlands)	X (Sardinia – to be held) X (Southern Denmark – meetings with each municipality) X (Morelos – consultation forums) X (North of the Netherlands)	X (Southern Denmark – meetings with each municipality) X (North of the Netherlands)
Meetings or participative events organised by NGOs, political parties, cultural or religious associations, etc.	X (Rome)		X (Morelos – for the monitoring & evaluation of government programmes through the Citizen Observatory of Social Development, together with the recently approved Social Development State Law) X (North of the Netherlands)
Forums, workshops organised by universities or schools	X (Rome) X (North of the Netherlands)	X (North of the Netherlands)	X (North of the Netherlands)
Others (please specify)	X (Rome) X (Southern Denmark through regional conferences)	X (Rome) X (Southern Denmark through regional conferences)	X (Southern Denmark through regional conferences)

Source: Answers provided by case study regions to OECD questionnaire.

### ***Identifying baselines and targets***

95. While an ideal measurement cycle would involve choosing a baseline as a starting point and a target within a determined time horizon, the characteristics of the policy cycle make it difficult to pinpoint a realistic baseline and to identify when results will be detectable (for example, results might appear after the specific policy cycle). This challenge in identifying baselines and targets is illustrated by the experience of the case study regions. Regional well-being indicators are almost never used to track progress towards explicit quantitative targets that have been set up on an *ex ante* basis (Table 3.4). Morelos is the only region where all indicators included in the state development plan (PED) come with a baseline and a quantitative target, corresponding to the beginning and the end of the current administration's political term (2013-2018).



**Table 3.4 How do case study regions use (or plan to use) well-being indicators?**

	Newcastle (UK)	Rome (Italy)	Sardinia (Italy)	Southern Denmark (Denmark)	Morelos (Mexico)	North of the Netherlands (Netherlands)	US Partnership for Sustainable Communities
General assessment of the region for internal purposes	X		X	X	X (for Cabinet's meetings and decision making)	X	X
Raise public awareness and advocacy	X (planned)		X	X (meetings with municipalities – plans to use communication channels such as the Region's website and regional and national media)	X (for accountability)	X	X
Track progress towards expected results or quantitative targets	Unlikely to use 'targets'		X	X (yearly monitoring – no 'targets' at regional level, but possibly at municipal level by local politicians)	X (in annual governance report and at the end of the current administration's term in 2018)	X (likely)	X
Policy evaluation (identify causality links, impact assessment, prioritisation of future decisions, financial allocation, etc.)	X planned	X (long term aim to reduce territorial disparities and monitor response of different territories to policy)	X	X (prioritisation of future decisions)	X (planned – basis for evaluation of social programmes; citizen participation in evaluation of public policy through mechanisms such as Joint Fund CONACYT)	X (likely)	X
Others (please specify)	Help provide a more integrated approach to policymaking			Strategic inputs to municipal strategies			

Source: answers provided by case study regions to OECD questionnaire.

### III.4 Monitoring progress over time and evaluating the potential of different places

**96. Regions usually focus on assessing their own intra-regional inequalities, more rarely comparing themselves with other regions.** Most initiatives are looking inward to *intra-regional inequalities*, often at municipal level (e.g. Rome, Sardinia, Southern Denmark) or neighbourhood level (e.g. Newcastle). The measurement initiative usually does not include any *comparisons with other regions* in the country or abroad. For example, in Rome, the explicit objective is to produce indicators at municipal level for helping reduce local disparities.

**97. Regional well-being measurement initiatives often offer a tool to monitor progress over time.** Indicators are designed not only to provide a snapshot of the region at a given point,



but also to illustrate trends over time to identify progress (*e.g.* Rome, Southern Denmark). This dynamic approach helps measuring internal progress towards well-being targets (*e.g.* Rome).

**98. Regions face a challenge in translating new understandings about well-being into policy actions that can make a difference.** Most of the regional well-being measurement initiatives were established in recent years. It is therefore still early to draw firm conclusions; however, there are some initial signs of how regional well-being measurement initiatives influence the quality of public action. For example, Sardinia has experienced substantial progress in urban waste management over the past few years, with excellent performances on all three indicators included in the *Obiettivi di Servizio* performance framework (*i.e.* decrease of urban waste landfilled, increase in recycled urban waste, and increase of composted waste). This was largely due to well-designed and co-ordinated investment combining different sources of funding (including EU Cohesion funds) and other actions (including regulations, rewards and fines for municipalities).

### **III.5 Citizen engagement and communication of results: building well-being communities**

**99. Citizen engagement and communication often come late in regional well-being initiatives when they are, in fact, prerequisites in improving policy effectiveness.** Citizen engagement can take different forms, from consulting the citizens on the well-being dimensions that should be monitored, to receiving inputs on their evaluation on the quality of services available (perception indicators), to asking citizens to contribute in measuring well-being and progress. Communication of results builds an indispensable bridge between providers and users of public policy.

**100. Streamlining and translating well-being information into concrete policy messages seems essential for the success of the initiative.** Some regional experiences have suggested that oversupply of information may actually kill information. The proliferation of measurement initiatives led by different bodies sometimes results in a plethora of indicators, at different spatial scales and different time lines, which increases the complexity of translating multiple sets of data into clear policy options. In Italy, for example, there have been numerous national and regional initiatives and there is a need to streamline existing information and to develop a common framework (Sardinia and Rome). Co-ordination across different initiatives could promote knowledge spillovers, reduce the cost of comparable information and pool resources for the collection of indicators not available from official sources (*e.g.* perception and life satisfaction measures).

**101. The dilemma between a composite index and headline indicators remains an open question, both in conceptual and operational terms.** Most of the case study regions currently do not have a single composite well-being index. In this regard, Sardinia is an exception with the Multiple Deprivation Index of Sardinia (IDMS). Rome has developed aggregated indices for each of the six axes prioritised by the Strategy Project of the former Council of the Province (*i.e.* clean environment; local infrastructure; smart development; social cohesion; innovation culture; citizenship, equal opportunities and participation in public life). Newcastle does produce a Vitality Index, but does not articulate its well-being strategy around it exclusively as it embraces a comprehensive set of thematic indicators instead (*e.g.* NFNA “Know Your City” report).

**102.** However, the trade-off between a composite index (which conveys a single unified, but dilutes information) and a wider range of indicators (which offers more fine-tuned information, but is more difficult to communicate) remains a thorny challenge at the regional level. The interesting example of Southern Denmark illustrates the advantages and drawbacks of both approaches: after the Region invested a sizeable amount of time and resources to developing a composite “Good Life” index, consultations with each of the 22 municipalities comprising the region pointed out that translating a composite index into concrete policy messages and actions proved a complex task in



practice. The Region abandoned the composite index and re-deployed the “Good Life” initiative into a “wheel” of indicators that contains both objective and subjective indicators (see Box 3.2). The region still constructs aggregate measures of health, security, relationships, self-fulfilment, and surroundings.

**Box 3.2. Composite index vs. headline indicators: the choice of the Region of Southern Denmark**

Southern Denmark’s vision embraces a wide spectrum of material and immaterial dimensions that are considered to contribute to a “Good Life”. The multidimensionality of well-being was measured through two approaches successively: a composite index, eventually replaced with a dashboard of indicators (see comparison between the two approaches below).

The “Good Life” was **initially measured through a composite index** encompassing five sub-indices: residents’ health, security, relationships, self-fulfilment, and surroundings. The sub-indices have been illustrated by a pyramid, which places the most basic needs at the bottom. Once this basic foundation is in place, fulfilling the needs further up in the pyramid helps enhance chances of living the “Good Life”. Each of the sub-indices is measured using five socioeconomic indicators and five indicators of perceived individual conditions. One exception is self fulfilment, which is only measured by individual indicators.

However, extensive discussions conducted by the region with each of the 22 municipalities highlighted that the composite index did not satisfy the needs of municipal policy makers. The composite index had a limited use for policymakers because it was difficult to understand (the index was expressed as standard deviations and included variables at both individual and municipal level) and did not point out the exact areas in which policy intervention was required. The composite index was **revised into a “wheel” that organises 40 indicators in two categories: community conditions (including a municipality profile and a citizen profile) and individuals’ own perception of life**. Socioeconomic indicators are measured using existing sources of data: registry data (indicators mainly available from the Danish Statistical Bureau), and model data (from a regional version of the national ADAM economic model run by the Ministry of Finance, and the region’s own GIS analysis). Individual perception indicators are measured using panel survey data, collected by a private consulting firm (Jysk Analyse) from up to 4300 respondents (out of 1.2 million inhabitants) annually. The Region carries out citizen surveys three to four times per year. Once per year citizens are asked to assess their own level of well-being, both in general and in terms of different well-being dimensions, such as health, relations etc. The remaining surveys are dedicated to different themes regarding The Good Life and regional development. There is also an extensive national health survey “How are you?” (“*Hvordan har du det?*”), which is run regionally every fourth year by the health department of the Region of Southern Denmark.

103. **Communication of results to a broader constituency and to citizens in general remains to be further developed.** Communication is a powerful tool to reduce the risk that the regional well-being measurement initiative remains a technocratic exercise with limited impact on the daily lives of citizens. In Sardinia, effective dialogue with economic actors has co-existed with a lack of high-level political engagement on achieving measurable objectives and difficulties to engage the civil society. In Southern Denmark, the Region is currently developing concrete tools for communicating and publicly debating the “Good Life” results. By building up a knowledge bank about well-being and communicating results through publications, media, conferences, and political and administrative meetings on strategy with municipalities, well-being can be put on the growth agenda and influence local policies. In particular, Southern Denmark has successfully developed a yearly municipal publication (KONTUR), which covers a range of objective and subjective indicators and is used when designing strategies and policies throughout the region. In this regard, the example of Rome offers interesting insights. Solid campaigns of consultation and communication have been conducted. A steering committee representing key stakeholders and a scientific commission to select and build the indicators were set up. There has been a public discussion of results with civil society and policymakers. Among the variety of communication tools that can be considered, case study regions have most easily chosen to run a website as well as written materials and workshops (Table 3.5). Social networks as well as open data remain notably under-used at this stage.



**Table 3.5 How do case study regions communicate (or plan to communicate) well-being indicators?**

	Newcastle (UK)	Rome (Italy)	Sardinia (Italy)	Southern Denmark (Denmark)	Morelos (Mexico)	North of the Netherlands (Netherlands)	US Partnership for Sustainable Communities
Dedicated public website	X	X	X	X (planned)	X	X	X
Public meetings		X	X		X (usually not focused on well-being per se, but on progress of major government activities)		Depends on the user
Media		X		X	X		Depends on the user
Social networks (e.g. Twitter, Facebook, etc.)					X		Depends on the user
Reports, books, dedicated workshops	X	X	X	X	X	X	Depends on the user
Others (please specify)							Depends on the user

Source: answers provided by case study regions to OECD questionnaire.

### Box 3.3. Regional well-being measurement initiatives of case study regions

- Newcastle: <http://www.wellbeingforlife.org.uk/>
- Rome: <http://www.provincia.roma.it/percorsitematici/statistica-e-studi> (in Italian)
- Sardinia: <http://www.sardegnaprogrammazione.it/index.php?xsl=1227&s=35&v=9&c=11607&na=1&n=10&nodesc=2> (in Italian)
- [http://www.sardegna statistiche.it/documenti/12\\_117\\_20130130154516.pdf](http://www.sardegna statistiche.it/documenti/12_117_20130130154516.pdf) (in Italian)
- Southern Denmark: <http://detgodeliv.regionsyddanmark.dk/det-gode-liv-indeks> (in Danish)
- Morelos: [http://periodico.morelos.gob.mx/periodicos/2013/5080\\_2A.pdf](http://periodico.morelos.gob.mx/periodicos/2013/5080_2A.pdf) (in Spanish)
- North of the Netherlands: <http://www.rug.nl/frw/?lang=en>
- US: <http://www.sustainablecommunities.gov/>



## Conclusion

104. The overarching value-added of regional well-being measurement initiatives is ultimately to bring *data*, *policies* and *funding* together for building better communities. Albeit intrinsically interrelated in principle, data, policies and funding may operate in isolation in practice. Such fragmentation may be particularly evident at the subnational level, where different levels of government control different parts of the three strands.

105. Comparing well-being measurement experiences across case study regions has pointed to a set of common challenges and a variety of strategic choices, which could be briefly summarised in the following guidelines:

- **Clarify what purpose the regional well-being measurement initiative is intended to serve:** building knowledge on trends and potential of people in places; providing evidence for policy choices; and evaluating policy results. The choice and the hierarchy of objectives determine the design and governance of the regional well-being measurement initiative.
  - **(i) Building knowledge on trends and potential of people in places.** Well-being indicators help to create a regional intelligence database, either by combining existing sources of data or sometimes developing new ones. Regions can then decide whether to offer well-being data as stand-alone knowledge for direct public consumption or to use it as supporting evidence for a strategy/action plan.
  - **(ii) Providing evidence for policy choices.** Well-being criteria can guide prioritisation of policy action and funding *across policy sectors* (by identifying specific dimensions of well-being that register low performances) or *across space* (by monitoring internal spatial disparities and targeting projects/funding to the most challenged areas).
  - **(iii) Measuring and evaluating policy results.** Often the most challenging purpose to fulfil, policy evaluation requires strong capacity to make the complex distinction between outcomes directly attributable to policy and outcomes stemming from other factors than policy.
- **Map and cross-check existing data before exploring the possibility of generating new data.** Policy-relevant information can usually already be extracted from identifying and crossing available data. In contrast, oversupply of data may blur their reading and policy interpretation.
- **Encourage the mix of indicators between objective and subjective dimensions, and between individual and place characteristics.** Blending different sets of data together contributes to shaping a more comprehensive assessment of what different groups of people experience in different parts of a place.
- **Invest in building strategic and technical capacity to design and select projects that fit with expected results.** This requires *collective* capacity as different skill sets lie in different constituencies.
- **Build a multi-stakeholder governance mechanism that balances clear leadership and shared ownership from the beginning.** While opening well-being measurement to public debate and participation might come with an initial cost in terms of time, its benefits on stakeholder engagement are likely to increase the overall effectiveness of the initiative throughout the process and help avoid the risk of technocratic initiatives that have only marginal impact on people's lives.



## ANNEX: SUMMARY OF REGIONAL WELL-BEING MEASUREMENT INITIATIVES IN SEVEN OECD CASE STUDY REGIONS

	Newcastle (UK)	Rome (Italy)	Sardinia (Italy)	Southern Denmark (Denmark)	Morelos (Mexico)	North of the Netherlands (Netherlands)	US Partnership for Sustainable Communities
<b>Unit of analysis</b>	Metropolitan area (Metropolitan District of Newcastle Upon Tyne)	Province	Region	Region	State	3 provinces (Friesland, Groningen and Drenthe)	National initiative for jurisdictions of all sizes (regions, counties, municipalities, neighbourhoods)
<b>Population</b>	279 100	4 million	1.6 million	1.2 million	1.8 million	1.8 million	n.a.
<b>Main policy challenges</b>	Inequalities in wellbeing and health	Cuts in public spending and subsequent constraints on the supply of public services in health, transportation, housing and education	Weak economic performances  Low accessibility to public services, especially in the hinterland  Environmental restoration of specific areas and fires	Weak economic performance  Low productivity  Demographic and economic strain on welfare model: budget pressure on healthcare and elderly care  Mismatch between supply and demand of labour  Infrastructure bottlenecks and shortages	Educational achievements  Accessibility to healthcare  Deterioration of natural ecosystems and natural resources  Security and safety	Link between well-being and innovation, environment and social inclusion respectively	Depends on the jurisdiction  Focus on the built environment and measurable factors that contribute to sustainable communities (e.g. transportation, housing, land use)
<b>Regional well-being strategy and/or regional development plan</b>	Wellbeing for Life Strategy – A Framework for Action 2013-2016	Strategy Project (elaborated by the council of the Province of Rome – which has been abolished since then)	2014-2020 Regional Development Plan (PRS) (strategic framework for other projects, plans and programmes, such as the EU ones)	"Good Life" vision included in the Regional Development Plan (RUP) 2012-2016	No specific strategy for well-being but dimensions of well-being included in the State Development Plan (PED) 2013-2018	Research and Innovation Strategy for Smart Specialisation (RIS3 – bringing together the three provinces Friesland, Groningen and Drenthe)	No single regional plan: US Partnership for Sustainable Communities programme



<p><b>Dimensions covered by the regional well-being initiative</b></p> <p><i>(also see Table 3.2 below on how they fit within the OECD How's Life framework)</i></p>	<p>The Wellbeing for Life Strategy has the ambition to ensure people who live, work or learn in Newcastle equally enjoy positive wellbeing and good health. Draw on the WHO's definition of health as a 'state of complete physical, social and mental wellbeing' but also recognises other dimensions of wellbeing such as cultural, economic, material and environmental wellbeing.</p> <p>5 cross-cutting themes:</p> <ul style="list-style-type: none"> <li>-A fair city</li> <li>-An age-friendly city</li> <li>-An inclusive city</li> <li>-A city of healthy lifestyles</li> <li>- A sustainable city</li> </ul> <p>3 main areas of action:</p> <ul style="list-style-type: none"> <li>-Tackle inequalities through improving the conditions in which people are born, grow up, live their lives and grow old</li> <li>-Tackle inequalities through strengthening the impact of services</li> <li>-Improve capacity to work with each other, with other partners, and with the people in Newcastle, to improve well-being and health</li> </ul>	<p>5 priorities of the Strategy Project:</p> <ul style="list-style-type: none"> <li>-Appraise biodiversity, ecosystems and agricultural activities</li> <li>-Reorganize the territory of the province which hosts the capital city</li> <li>-Promote culture and creativity favouring social territorial cohesion and economic development</li> <li>-Increase the ecological level of production and consumption</li> <li>-Reduce inequalities</li> </ul> <p>6 axes:</p> <ul style="list-style-type: none"> <li>-Clean environment</li> <li>-Local infrastructure</li> <li>-Smart development</li> <li>-Social cohesion</li> <li>-Innovative culture</li> <li>-Citizenship, equal opportunities and participation in public life</li> </ul>	<p>Several well-being dimensions such as:</p> <p>Income Jobs Health Education Environment</p>	<p>40 indicators organised into a "wheel" of three categories:</p> <ul style="list-style-type: none"> <li>-municipality profile (5 dimensions)</li> <li>-citizen profile (5 dimensions)</li> <li>-individuals' evaluation of life (5 dimensions)</li> </ul>	<p>5 strategies:</p> <ul style="list-style-type: none"> <li>-Security</li> <li>-Social investment</li> <li>-Economic development</li> <li>-Sustainable development</li> <li>-Governance</li> </ul> <p>Main strategy: Build a society of granted rights)</p>	<p>Jobs and earnings Health status Education and skills Social connections Civic engagement and governance Environmental quality</p>	<p>6 Sustainable Communities Livability Principles:</p> <ul style="list-style-type: none"> <li>-Provide more transportation choices</li> <li>-Promote equitable, affordable housing</li> <li>-Enhance economic competitiveness</li> <li>-Support existing communities</li> <li>-Co-ordinate and leverage federal policies and investment</li> <li>-Value communities and neighbourhoods</li> </ul>
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<b>Composite index vs. headline indicators</b>	Newcastle set out to describe wellbeing drawing on quantitative data, rather than measuring it No composite index (but produces an annual Vitality Index on most and least deprived neighbourhoods in the city; and partially draws from UK Indices of Multiple Deprivation)  As part of the Newcastle Future Needs Assessment (NFNA): quantitative data and research in "Know your city: a profile of Newcastle's people" report	No composite index, but one aggregate index for each of the axes  59 indicators published in 2011 report "New indicators of well-being: Monitoring the quality of development in the metropolitan capital"	Composite index: Multiple Deprivation Index of Sardinia (IDMS).  In the Region programming system, usage of indicators provided by statistical bodies.	Initially a composite "Good Life" index encompassing five sub indices (residents' health, security, relationships, self-fulfilment, and surroundings), which was later transformed into a "wheel" of headline indicators  Data on all 22 municipalities of the region published in a yearly publication (KONTUR)	Multidimensional measure of poverty and headline indicators to complement this measure	No composite index	No composite index  Sustainable Communities Indicator Catalog (SCIG): a national catalogue of indicators for different users to select according to their own jurisdiction's needs  Indicators that have a "track record" (i.e. have been used by other bodies in the US)
<b>Subjective indicators</b>	Yes (Residents' Survey every 2 years)	No	No	Yes	Partially: e.g. ENVIPE survey on citizen perception about public security, life satisfaction (ranking of happiness in Mexico)	Yes	No
<b>Quantitative targets</b>	No	No	No	No	Yes	No	No – depends on the user
<b>Leadership of regional well-being measurement initiative</b>	Newcastle City Council	Province of Rome	Region of Sardinia	Region of Southern Denmark (Department of Regional Development, Strategy and Analysis unit)	Undersecretary of Planning of the State of Morelos	North of the Netherlands Consortium (see below) led by the University of Groningen  Northern Provinces Alliance	Federal partnership between US Department of Housing and Urban Development, Department of Transportation, and the Environmental Protection Agency



<b>Strategic stakeholders and governance of the process</b>	<p>Wellbeing for Life Board (including Newcastle City Council, NHS Newcastle West Clinical Commissioning Group, NHS Newcastle North and East Clinical Commissioning Group, Newcastle upon Tyne Hospitals NHS Foundation Trust, Northumberland, Tyne and Wear NHS Foundation Trust, Northumbria University, Newcastle University, voluntary and community sector – <i>subject to recent updates</i>)</p> <p>Concordat between the Newcastle City Council and the NHS</p>	<p>Scientific Committee and Strategic Project Office at the Presidency of the Province of Rome</p> <p>In-house company ProvinciattivaS.p.a., in collaboration with Onlus Campagna Sbilanciamoci! (network of around 50 civil society organisations) and the Statistical Office of the Province of Rome</p> <p>Key role of ISTAT in developing indicators “Equal and Sustainable Wellbeing” (BES project): at national level, and at regional level only at a high aggregated level</p>	<p>Well-being indicators: institutional and socio-economic regional partnership (meeting held on September 2013 with participatory approach). For IDMS: steering Committee composed of representatives from the Region of Sardinia (Regional Programming Centre, Statistical Office) and the Business Innovation Centre of Sardinia (BIC)</p> <p>Strategic involvement of other stakeholders including University of Cagliari (Department of Social and Economic Research) on the general methodology, and the National Statistical Office of Italy (ISTAT) for preliminary consultations</p>	<p>The RUP is elaborated by a Committee for the Regional Development Plan (composed of 11 politicians from the Regional Council)</p> <p>Consultations with all 22 municipalities in the region separately over fall/winter 2012/2013</p>	<p>Most of the selected indicators are generated by INEGI or other national institutions, very few are generated by state level authorities</p> <p>The Undersecretary of Planning is in charge of analysing and monitoring the different indicators</p>	<p>Faculty of Spatial Sciences from the University of Groningen, Province of Friesland, SNN and UMCG Groningen and HANNN, the Wadden Academy and the WaLTER project</p>	<p>Over 760 federal grants distributed through the Sustainable Communities Programme</p>
<b>Communication of results</b>	<p>“Let’s Talk Newcastle” initiative</p> <p>Opendata portal under development</p>	<p>Website of the Province of Rome</p> <p>Opendata portal on the website of ProvinciattivaS.p.a. for one year (now closed)</p>	<p>“Sardegna secondo te” initiative for public debate on key themes (e.g. transport)</p> <p>Plans to set up an opendata portal</p>	<p>A yearly publication KONTUR communicates results to each of the region’s 22 municipalities</p> <p>Plans to design a website with interactive features</p> <p>Planning a national conference on well-being together with national labour and trade organisations</p>	<p>Citizen Committee of Social Development</p> <p>Neighbourhood Watch Committees (ComViVe) for security strategy</p> <p>Official website of the Government of Morelos, social networks, Governor’s press conferences</p>	<p>tbc</p>	<p>Website dedicated to the Partnership for Sustainable Communities</p>

Note: For the purpose of providing an easily readable and comparable format, this table offers a non-exhaustive summary of key points and contains some degree of simplification. Further details about each region’s initiative will be made available in the forthcoming individual case study reports. Source: OECD elaborations based on answers provided by case study regions to OECD questionnaire.



## REFERENCES

- Adger, N. (2006), “Vulnerability”, *Global Environmental Change*, Vol. 16, pp. 268–281.
- American Community Survey (2010)
- Amir, R. (2013), “Supermodularity and complementarity in Economics: an elementary survey”, *Southern Economic Journal*, 71, pp. 636-660.
- Aslam, A. and L. Corrado (2011) “The geography of well-being”, *Journal of Economic Geography* pp. 1–23.
- Baum-Snow, N. and R. Pavan (2013) “Inequality and City Size”, *The Review of Economics and Statistics*, Vol. 95(5), pp. 1535-1548.
- Berube, A. (2014) All Cities Are Not Created Unequal. Brookings Institution, Metropolitan Opportunity Series N. 52.
- Braga De Macedo, J. and J. Oliveira Martins (2008), “Growth, reform indicators and policy complementarities”, *Economics of Transition*, Vol. 16(2), pp. 141-164.
- Bleys, B. (2012) “Beyond GDP: Classifying Alternative Measures for Progress”, *Social Indicators Research* 109, pp. 355-376.
- Brezzi, M. and P. McCann (2014) “Urban Resilience and Natural Disasters: Redevelopment Insights from the Abruzzo-L’Aquila Earthquake”, *Special issue on 'Local Growth Evolutions: Recession, Resilience and Recovery' of the Cambridge Journal of Regions, Economy and Society* (forthcoming).
- Castells-Quintana D., Royuela V. (2014) Agglomeration, inequality and economic growth. *Annals in Regional Science*, forthcoming.
- Ciccone, A. (2002). “Agglomeration effects in Europe,” *European Economic Review*, vol. 46(2), pp. 213-227.
- Clark, A. E., (2010) “Where should we live?”, *Review of Economic Analysis*, 2, pp. 20-31.
- Charron, N., Dijkstra L. and V. Lapuente (2013), “Regional Governance Matters: Quality of Government within European Union Member States”, *Regional Studies*.
- Coricelli, F. and M. Maurel (2011), “Growth and crisis in transition: A comparative perspective”. *Review of International Economics*, 19(1), pages 49-64.
- Dasgupta, P. (2004) *Human Well-Being and the Natural Environment*, Oxford University Press.
- Diaz-Serrano, L., and A. Rodríguez-Pose (2012) “Decentralization, subjective well-being, and the perception of institutions”, *KYKLOS*, Vol. 65(2), pp. 179-193.



- Duval, R. and L. Vogel (2008), “Economic resilience to shocks: The role of structural policies”. *OECD Journal: Economic Studies*, Vol. 2008/1.
- European Commission (2011) *Regional Policy contributing to sustainable growth in Europe 2020*, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.
- Faggian, A., Olfert, M. R., and M. Partridge (2012), “Inferring regional well-being from individual revealed preferences: the ‘voting with your feet’ approach”, *Cambridge Journal of Regions Economy and Society*, Vol. 5 (1), pp. 163-180.
- Ferreira, S., Akay, A., Brereton, F., Cuñado, J., Martinsson, P., Moro, M., Ningal, T.F. (2013). “Life satisfaction and air quality in Europe”, *Ecological Economics*, Vol. 88(C), pp. 1-10.
- Folke, C. (2006) “Resilience: the emergence of a perspective for social–ecological systems analyses”. *Global Environmental Change*, 16, pp. 253–267.
- Fukuda-Parr, S. (2013) “Global development goals setting as a policy tool for global governance: intended and unintended consequences”, *Working Paper of the International Policy Centre for Inclusive Growth*, N. 108.
- Gaigné, C., Zenou, Y. (2013). “Agglomeration, City Size and Crime,” CEPR Discussion Papers 9430, C.E.P.R. Discussion Papers.
- Glaeser E.L., Sacerdote B., Scheinkman J.A. (1996) “Crime and social interactions.” *The Quarterly Journal of Economics*, Vol. , pp. 507-548.
- Huggins, R. and P. Thompson (2012), “Well-being and competitiveness: are the two linked at a place-based level?”, *Cambridge Journal of Regions, Economy and Society*, Vol. 5 (1), pp. 45-60.
- Kanbur R., Zhuang J. (2013). “Urbanization and Inequality in Asia,” *Asian Development Review*, vol. 30(1), pp. 131-147.
- Laurent, E. (2013), *Vers l'égalité des territoires: Dynamiques, mesures, politiques*. Rapport pour le Ministère de l'égalité des territoires et du logement <http://www.verslegalite.territoires.gouv.fr/>
- Laurent, E. (2014), *Beneath GDP: Theoretical and empirical perspectives on territorial well-being*; OECD Regional Development Working Papers, forthcoming.
- Lewis, K. and S. Burds-Sharp (2013), *The Measure of America 2013-2014*, American Human Development Report, Social Science Research Council.
- Lochner L., Moretti E. (2004) The Effect of Education on Crime. Evidence from Prison Inmates, Arrests, and Self-Reports. *American Economic Review* Vol. 94(1), pp. 155-189.
- Lora, E. and A. Powell (2011), “A new way of Monitoring the quality of urban life”, *IDB Working Paper Series*, No. IDB-WP-272
- Maslow, A.H. (1943) A Theory of Human Motivation. *Psychological Review*, Vol. 50, pp. 370-396.
- Machin S., Marie O., Vujić S. (2011) “The Crime Reducing Effect of Education,” *Economic Journal*, Vol. 121(552), pp. 463-484.



- Moretti, E. (2012), *The New Geography of Jobs*, Houghton Mifflin Harcourt.
- Mguni, N. and N. Bacon (2010), *Taking the temperature of local communities: The well-being and resilience measure*, The Local Wellbeing Project, The Young Foundation.
- OECD (2013a), *OECD Regions at a Glance*, OECD Publishing.
- OECD (2013b), *How's life? 2013*, OECD Publishing.
- OECD (2013c), *Vers une croissance plus inclusive de la métropole Aix-Marseille : Une perspective internationale*, OECD Publishing.
- OECD (2013d) *Regions and Cities: Where Policies and People Meet*, Chair's conclusions of the TDPC meeting at Ministerial level.
- OECD (2013e) *Policy making after disasters: Helping regions become resilient*, OECD Publishing.
- OECD (2012) *OECD Territorial Reviews: The Chicago Tri-State Metropolitan Area, United States 2012*, OECD Publishing.
- OECD (2012b) Measuring the access to public services: the case of public hospitals. Paper presented at the OECD Working Party on Territorial Indicators, 3 December 2012, OECD, Paris, [GOV/TDPC/TI\(2012\)4](#)
- OECD (2011a), *How's Life?* OECD Publishing.
- OECD (2011b), *Regional Outlook*, OECD Publishing.
- OECD (2011c), *Divided We Stand*, OECD Publishing.
- Owens, A. and R. J. Sampson (2012) "Community Well-Being and the Great Recession", Stanford, CA: Stanford Center on Poverty and Inequality.
- Perrings, C. (1998) "Resilience in the dynamics of economic-environment systems". *Environmental and resource Economics* 11 (3-4), pp. 511-520.
- Pittau, M. G., Zelli, R., and A. Gelman (2009), "Economic disparities and life satisfaction in European Regions", *Social Indicators Research*, 96(2), 339-351
- Prenzel, P. (2014) *When the mix matters: complementarities in multidimensional well-being*, OECD Working Paper, forthcoming
- Putnam, R. (2000) "Bowling Alone: The Collapse and Revival of American Community", Simon and Schuster.
- Rice, P., Venables, A.J., Patacchini, E. (2006) "Spatial determinants of productivity: Analysis for the regions of Great Britain," *Regional Science and Urban Economics*, vol. 36(6): 727-752.
- Robinson, J. and J. Tinker (1998) "Reconciling Ecological, Economic, and Social Imperatives" In Schnurr, J. and S. Holtz eds. *The Cornerstone of Development: Integrating Environmental, Social and Economic Policies*, Ottawa: International Development Research Centre, pp. 9-44



- Roemer, J. E. (1998), *Equality of Opportunity*, Cambridge: Harvard University Press.
- Sen, A. (1993). Capability and Well-Being. In Nussbaum, M. & Sen, A. (eds), *The Quality of Life* (30-45). Oxford: Oxford University Press.
- Silva, J. and Z. Brown (2013), “More than the Sum of their Parts: Valuing Environmental Quality by Combining Life Satisfaction Surveys and GIS Data”, *OECD Statistics Working Papers*, 2013/01, OECD Publishing. <http://dx.doi.org/10.1787/5k4840hfpwkb-en>
- Stiglitz, J.E., Sen, A., Fitoussi, J.P., (2009), Report by the commission on the measurement of economic performance and social progress, The New Press.
- UN (2008) Measuring Sustainable Development, Report of the Joint UNECE/OECD/Eurostat Working Group on Statistics for Sustainable Development. New York, NY: United Nations.
- UN (2003) Handbook of national accounting, integrated environmental and economic accounting 2003. New York, NY: United Nations.
- UNEP (2007), GEO-4, Division of Early Warning and Assessment of the United Nations Environment Programme. [www.unep.org/geo/geo](http://www.unep.org/geo/geo)
- UN World Commission on Environment and Development (1987) *Our Common Future*. Oxford University Press.
- U.S. Department of Housing and Urban Development (2010), Partnership for Sustainable Communities [www.sustainablecommunities.gov/](http://www.sustainablecommunities.gov/).
- Veenhoven, R. (2002) “Why social policy needs subjective indicators”. *Social Indicators Research*, Vol. 58, pp. 33-45.
- Walter-Busch, E. (1983). “Subjective and objective indicators of regional quality of life in Switzerland”. *Social Indicators Research*, 12: 337-391
- White M.P., Alcock I., Wheeler B.W., Depledge M.H. (2013) “Would you be happier living in a greener urban area? A fixed-effects analysis of panel data”. *Psychological Science* Vol. 24(6), pp. 920-928.