

**Using well-being indicators for policy making:
State of Morelos, Mexico**

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Executive summary

Overview of well-being outcomes

- Compared with the other Mexican states, Morelos ranks high in many dimensions, especially for education, health, housing and civic engagement. In contrast, safety is lower than the national average and it remains a major issue for people's well-being in the state.
- In international comparisons, Morelos has high employment outcomes, although the latter might be skewed by the general challenge of informal employment in Mexico. In line with the national pattern, Morelos has low levels of safety and income, together with high inequalities.

Framework for measuring well-being in Morelos

- A well-being measurement agenda has been introduced in the State Development Plan, which covers virtually all the well-being dimensions included in the OECD framework through five strategic axes.
- Morelos' state and municipal governments can make use of the information provided by the National Institute of Statistics and Geography (INEGI), which is promoting the use of data for policy, from a well-being perspective.

Strengths and opportunities for using well-being metrics in Morelos

- The state government has a strong commitment and leadership to improving the well-being of the population by providing more opportunities for all citizens.
- The State Development Plan developed by the state government provides a truly integrated regional development strategy, which identifies clear priorities of action, as well as a set of measures and targets to be achieved.
- The good level of institutional dialogue among different policy domains at the state level offers an opportunity for a more effective implementation of the well-being agenda.

Challenges and constraints for using well-being metrics in Morelos

- Too many indicators, without prioritisation among them, appear in the State Development Plan. This can negatively affect the efficiency of communication and, potentially, the effectiveness of the measurement process.
- While the development strategy of Morelos provides objectives, actions and indicators to measure societal progress, it is not clear how the monitoring process will be carried out.

What's next

- Morelos needs to set an effective communication strategy to boost its well-being agenda. This might require focusing on a more positive narrative – by choosing fewer indicators that emphasise assets rather than deprivation – and creating a communication platform to better connect to citizens.
- Municipalities should be more involved in the implementation of the state's well-being strategy through more effective alignment of objectives, better communication and capacity-building initiatives.

Introduction¹

Many regions and cities in the OECD have started developing metrics to monitor progress in people's well-being. That is to say, regions try to be places where opportunities for people to develop and to have a good quality of life are ensured for current and future generations. Adopting well-being metrics can help policy makers improve the design of cross-cutting policies focused on people and enhance their coherence. In this context, the focus at the sub-national scale is particularly relevant when analysing well-being, since the latter is determined by the interaction between the characteristics of individuals and those of the communities and places where such individuals live (OECD, 2014a).

In order to monitor well-being, policy makers need a system of indicators for its various dimensions, such as income, jobs, education and access to services, among others. It is also necessary that the adopted framework considers the interdependencies among the dimensions, which can be particularly strong at the regional and urban scale. Identifying a sound framework to monitor well-being in regions and cities is not enough, however; it is also necessary to ensure that well-being metrics are properly used. A common framework is also useful to identify the main challenges in implementing a well-being agenda and to help identify the most appropriate method (how to measure, which targets to set, which role for indicators, etc.) and the relevant actors (who chooses the indicators, accountability, etc.).

This report focuses on well-being outcomes in the state of Morelos, Mexico, and how well-being indicators can be used in policy making. It represents a pilot project that can be applied in other Mexican states. The review of well-being outcomes follows the OECD *How's Life in Your Region* framework. Such a framework assesses well-being achievements along several dimensions, which are in turn classified in two main pillars: material living conditions and quality of life. The analysis emphasises several important issues for improving well-being in Morelos, including increasing the levels of safety and of education outcomes as well as reducing inequalities. This case study also identifies a set of headline indicators that can help the state government to advance its well-being agenda and to monitor the progress of society.

A crucial issue when looking at well-being metrics at the sub-national level is the need to account for the complementarities among the various dimensions. In this respect, this work also offers several indicators that are specific to well-being issues in Morelos and that allow different dimensions to be taken into account in one single measure (cross-dimensional indicators). Finally, this work provides an overview of the use of well-being indicators in policy making in Morelos. The engagement of all the relevant stakeholders, the process with which indicators are chosen and targets are set, and the way the different well-being objectives are integrated with one another are discussed in the next sections.

This work is based on data and filed analysis, which was carried out through meetings and discussions with diverse stakeholders. The latter were co-ordinated by the state's Ministry of Finance (*Secretaría de Hacienda*) and the National Institute of Statistics and Geography (INEGI), and included international experts from other OECD regions participating in the OECD "How's Life in Your Region" project. The work provides an analysis of sub-national well-being according to an international framework as well as a toolkit on how to use well-being measures to improve the results of policy (Box 1).

The first section provides an overview of well-being outcomes by comparing the achievements in Morelos with those of other Mexican states and with OECD regions. The following section discusses the use of well-being metrics in Morelos by adapting the OECD Regional Well-Being Framework to the State's Development Strategy. A reduced set of strategic well-being indicators for Morelos is then proposed. The following section reviews the main implementation issues in the use of well-being metrics in Morelos and the final section provides a set of recommendations for a more effective use of well-being metrics.

Box 1. How can the measurement of regional well-being improve policy making?

Adopting well-being metrics can improve the design and delivery of policies in regions and cities along three lines. First, they provide a comprehensive picture of material conditions and quality of life in regions, making it possible to assess whether economic growth also translates into better non-economic outcomes (in terms of health, environmental quality, education, etc.) and whether progress is shared across population groups and places. The spatial concentration of advantages or disadvantages varies significantly at different territorial scales. Moreover, different sources of inequality can reinforce one another, locking households and communities into circumstances that make it particularly hard for them to improve their life chances.

Second, regional well-being metrics can help prioritise policy interventions by recognising where improvements are needed. Knowledge of local conditions can also help policy makers better understand citizens' preferences and identify potential synergies that can be leveraged by policy.

Third, well-being metrics can improve policy coherence. Many of the important synergies among sectoral policies are location-specific. In addition, the complementarities among different policies are likely to be most evident – and the trade-offs among them most readily manageable – when they are considered at local level. For instance, integrating land-use, transport and economic development planning can contribute to outcomes that are greener (increasing reliance on public transport), more equitable (improving access to labour markets for disadvantaged areas) and more efficient (reducing congestion, commuting times, etc.). More coherent policies can be designed and implemented through effective co-ordination across different levels of government and jurisdictions. They also need to engage citizens in the design and in the implementation of policy, using citizens' capacity to bring change and better understanding their needs. Designing coherent policies requires policy makers to consider the trade-offs and complementarities involved in both the objectives they wish to achieve and the channels by which to do so.

*Source: OECD (2014), *How's Life in Your Region? Measuring Regional and Local Well-Being for Policy Making*, OECD Publishing, Paris.*

Well-being in Morelos: A picture

Morelos is one of 32 states in the Mexican republic (Box 2). It is located in the central-south part of Mexico, and borders with the Federal District, the state of Mexico (north-west), Guerrero (south) and Puebla (south-east) (Figure 1). With 1.87 million inhabitants in 2013, Morelos represents less than 2% of total country population and is the third smallest state in Mexico in terms of total surface area, with 4 892 km². Its total population is expected to surpass 2 million inhabitants by 2020, driven mostly by an expected positive – albeit declining – natural population growth (1.19%), a positive inter-state migration (0.29%) and a negative international migration (-0.35%; CONAPO, 2014).²

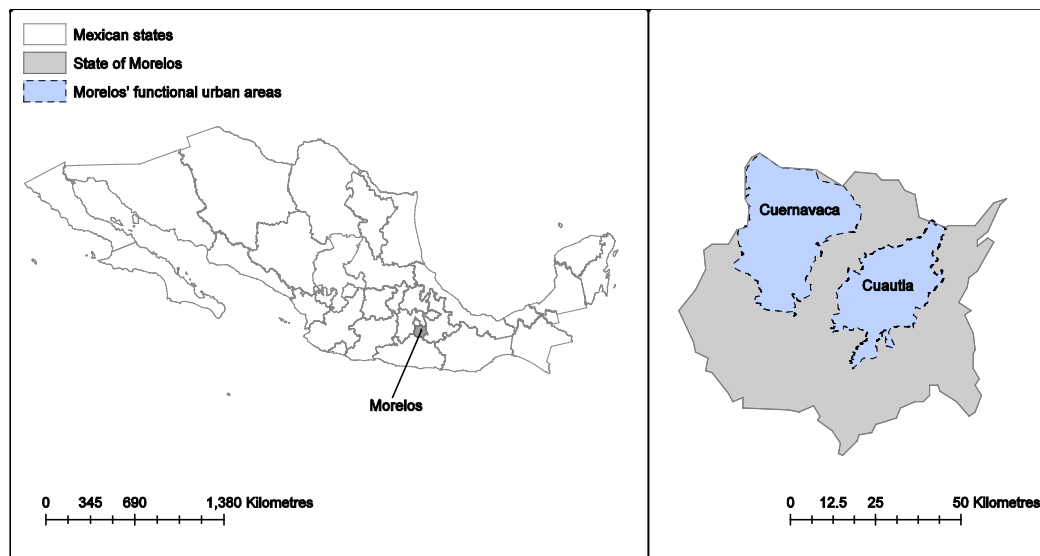
Box 2. Morelos: Territorial and institutional overview

Under the OECD territorial classification and as all the other Mexican states, Morelos is classified as a TL2 region, the first administrative layer after the federal government. As part of the Mexican federal country, the state of Morelos is a free and sovereign entity, with its own Congress and Constitution. The state must recognise the federal Constitution and be aligned to it. The state government is elected by popular, direct vote every six years, while the Congress has a three-year mandate. The state government designs and implements policies, plans and develops programmes according to the needs and demands of citizens. The Congress supervises the activities carried out by the government, implemented according to the State Development Plan (PED).

The state of Morelos has 33 municipalities, which are political entities with councils that are directly elected by citizens. Municipal presidents (mayors) are limited to a three-year mandate that is not immediately renewable, which in parallel results in significant – and in many cases, complete – turnover of administrative staff every third year. Recently, a new political-electoral reform was approved by the federation and states' congress, which will take effect from 2015. One of the main changes includes the re-election of mayors for two consecutive periods. A high rate of administrative turnover has clear policy implications, notably a lack of continuity, low capacity and incentive to develop and implement policy, and limited experience and technical capacity (OECD, 2013b). In addition, a high turnover can create pressure on the state government to make sure initiatives to implement the well-being agenda are acted on. Municipalities in Mexico provide and manage several public services, including the management and collection of waste, water and sewage, which are funded through federal transfers and municipal tax collection, such as the residential property tax (Political Constitution of the United Mexican States, Art. 115).

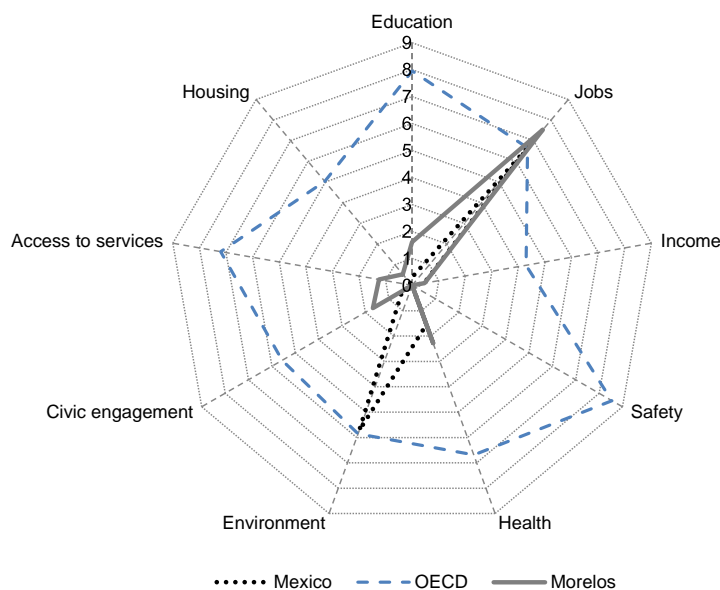
A first overview of well-being outcomes using the OECD measurement framework at the regional level shows that people living in Morelos experience on average a lower level of well-being than the average of OECD countries in most of the dimensions considered (Figure 2). In this framework, well-being outcomes are measured along nine different dimensions classified in two pillars, namely material conditions (income, jobs and housing) and quality of life (health, education, environmental quality, access to services, safety and civic engagement) (OECD, 2014a).³ As far as material conditions are concerned, income and housing outcomes are much lower than the OECD regional average while people living in Morelos are relatively better off in terms of employment outcomes, with a low unemployment rate (4% in 2013 against 7.8% in the OECD). Several dimensions of quality of life put Morelos significantly below the OECD average. While civic engagement, access to services and health are relatively low, improving education and personal safety appear to be the most important challenges.

Figure 1. The state of Morelos, Mexico



Note: This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Figure 2. Average well-being outcomes across the OECD, 2013



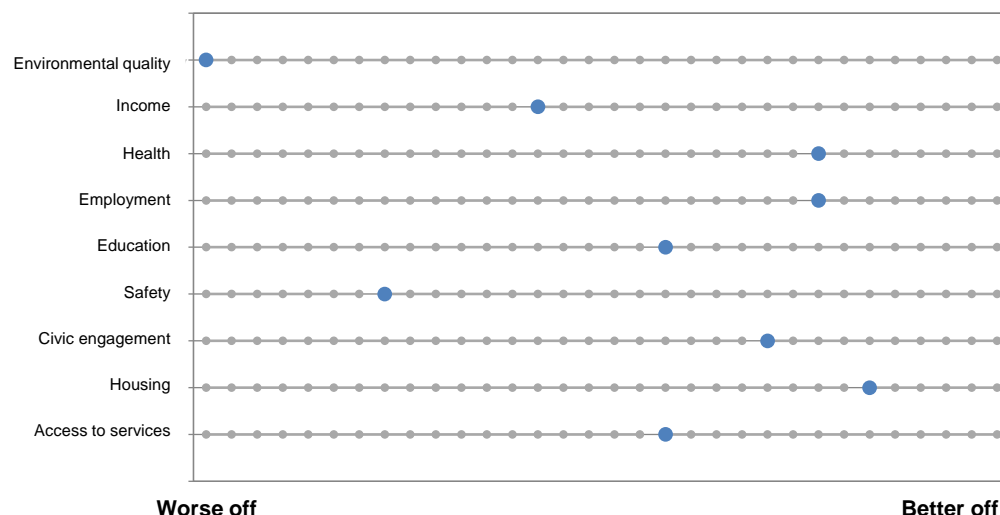
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Note: Each well-being dimension is measured by one to two indicators from the *OECD Regional Database*. Indicators are normalised to range between 10 (best) and 0 according to the following formula: (indicator value – minimum value) / (maximum value – minimum value) multiplied by 10. All OECD TL2 regions are considered in these calculations (identification of maximum and minimum values).

Source: OECD (2014), *Regional Well-Being* (database), [www.oecdregionalwellbeing.org](http://dx.doi.org/10.1787/region-data-en); <http://dx.doi.org/10.1787/region-data-en>.

Within the context of Mexico, the well-being overview shows that Morelos ranks above the national average in many dimensions (Figure 3). According to the OECD Regional Well-being framework, Morelos has the 8th best health conditions as measured by life expectancy at birth and age-adjusted mortality rate and the 6th highest housing outcomes in terms of number per rooms per person. Employment, civic engagement and education outcomes also put Morelos above the national average, and income is close to the national average. On the other hand, there are challenges in terms of safety, with a murder rate that puts the state in the bottom 30% nationally. Environmental outcomes appear particularly low in Morelos according to air quality, which is measured through people's exposure to PM_{2.5}.⁴ Figures 2 and 3 provide a first general overview, based on one or two indicators for each dimension, but allowing an immediate and sound comparison with the other OECD regions. The resulting picture is broadly consistent with the more in-depth analysis that follows, which includes a larger set of indicators. When using different indicators and, more precisely, when looking at how these have evolved in the last years, a highly nuanced picture of Morelos emerges.

Figure 3. **Morelos' ranking among Mexican states for each well-being dimension, 2013**



Note: Blue dots represent the rank of Morelos with respect to the other Mexican states for each of the well-being dimensions.

Source: OECD (2014), Regional Well-Being (database), [www.oecdregionalwellbeing.org](http://dx.doi.org/10.1787/region-data-en); <http://dx.doi.org/10.1787/region-data-en>.

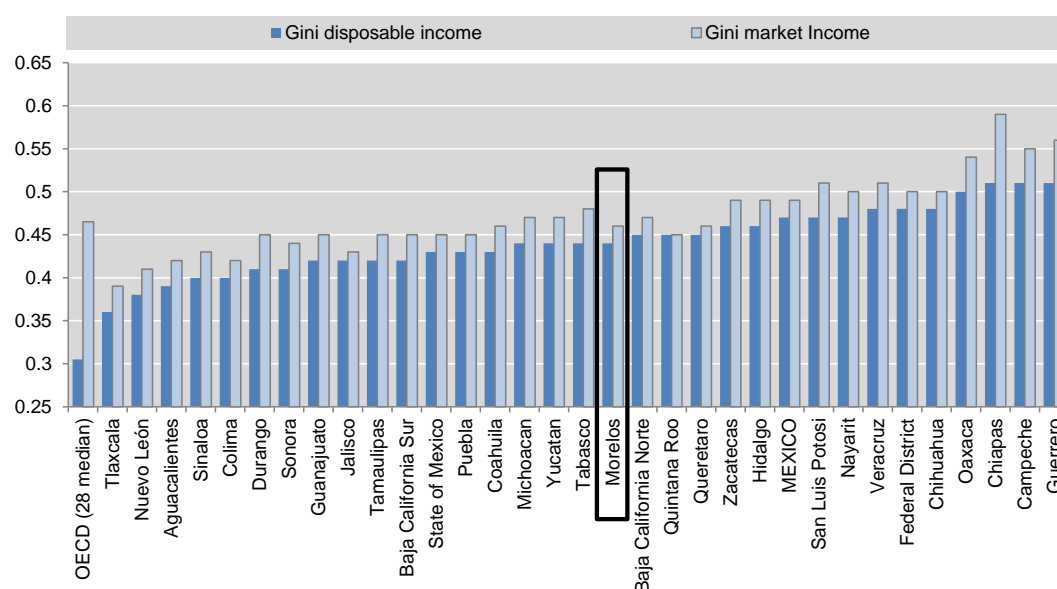
Income levels and inequalities in Morelos are far from the OECD average, but in line with other Mexican states

Income is an important component of individual well-being as it allows people to satisfy basic and other needs that are important for their lives. In 2012, disposable household income in Morelos stood at USD 7 410 (at 2010 purchasing power parity – PPP),⁵ in line with the national average, but well below the OECD regional average. This indicator showed a negative trend in Morelos between 2008 and 2010 due to the crisis, mirroring the trend at both the national and OECD levels. Another standard measure of income is GDP per capita, where Morelos displays lower values than the national average. GDP per capita has slightly decreased during the last decade, despite an increase in total gross domestic product (GDP). Looking at the economic structure that generates

the aggregate income in the state, manufacturing alone represents 21% of GDP. In terms of employment, the whole secondary sector represented 22% of the employed people in 2013, while the primary sector represented 10% of total employment and the service sector 68%.⁶ Manufacturing is mainly characterised by medium and large firms, which are often foreign-owned. However, Morelos' foreign direct investments (FDI), which target with particular intensity the chemical and pharmaceutical sectors, represented only 0.5% of the total national FDI between 1999 and 2012. Recent research on Mexico indicates that the capacity to attract FDI is determined, all other things being equal, by higher education levels and lower crime rates (Escobar Gamboa, 2013). This is particularly significant in Morelos where education and safety are two crucial dimensions to be addressed in order to improve well-being.

In addition to the average material living standards, inequality in household income can also affect the overall level of cohesion and well-being in places. Income inequalities in Morelos, measured through Gini indices for both disposable and market income, are slightly below the national average. Compared to the median values for OECD countries,⁷ all Mexican states show higher inequalities in household disposable income, while this is not the case when considering household market income (Figure 4). This suggests that taxation in Mexico has less impact in reducing income inequalities than it does on average among OECD countries. Another crucial element for the material conditions of a community is the level of poverty, which, along with discrimination and inequality, can hinder the prosperity of places by reducing opportunities. Relative poverty is defined here as the share of people with income levels lower than 60% of the national disposable median income. According to this indicator, Morelos had the 12th lowest rate of poverty among Mexican states in 2012, with a rate of 21.1%. This value is slightly higher than the median of OECD countries (18.1%),⁸ but lower than the national values (26.7%).

Figure 4. **Income distribution within Mexican states and the OECD, 2012**



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Source: Elaborations on data from Piacentini, M. (2014), "Measures of income inequality and poverty at the regional level in OECD countries", paper presented at the OECD Working Party on Territorial Indicators, 9 April 2014, Paris. The source of data for Mexican states is the Encuesta Nacional de Ingreso y Gastos de Hogares (2012).

Employment outcomes are relatively high and improving in the recent period

Related to income, employment represents another well-being dimension that can have an important impact on the material conditions of people. Having a job not only helps people maintain and develop their skills, but it affects other well-being dimensions, such as social connections, life satisfaction and health (e.g. Boarini et al., 2012; Wilson and Walker, 1993). A standard (inverse) measure of employment outcomes is the unemployment rate, which during the last decade has always been below the national average (Figure 5). In the first quarter of 2014, this indicator was 3.6%⁹ in Morelos, much lower than the OECD average (7.8%),¹⁰ though informality should be taken into account. As for the participation rate in Morelos, in the first quarter of 2014 it was 57.3%, also lower than the OECD average of 72.9%.¹¹ A similar pattern emerges for the female participation rate. While in Morelos this indicator is in line with the national average (43.9% and 43.1%, respectively in the first quarter of 2014), this indicator is still significantly lower than the OECD average (64.3% in 2013), though it slightly improved since 2006.

Figure 5. **Employment outcomes in Morelos and Mexico, 2005-14**



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Source: INEGI, ENOE (series 2005-14).

Official statistics on jobs can hide the size of the informal sector, which is extremely large, and this might have an impact on access to and quality of jobs. Any analysis of employment outcomes in Mexico should take into account that Mexico has a relatively high level of informality in the labour market compared to OECD countries (Brandt, 2011). In the first quarter of 2014, 35.7% of total employment in Morelos (27.9% at national level; INEGI, 2014) worked in the informal sector, meaning that more than 500 000 people worked without registering for tax payments and with no access to social security and to mortgages through Mexico's public and para-public lenders. In the same period, among the 32 Mexican states, Morelos had the 9th highest value of labour informality as defined by the National Institute of Statistics and Geography (INEGI)¹² (66.4% vs. a national average of 58.2%; Figure 5).¹³ OECD analyses demonstrated that informality in Mexico tends to decrease in periods of economic growth, while it tends to be higher where corruption is high and where the productive structure is characterised, on average, by small firms with a low stock of FDIs (Dougherty and Escobar, 2013).

Quality of life is relatively high, but some dimensions need particular attention

Personal safety is a major challenge for people's well-being in Morelos

Personal safety is the extent to which people is safe and protected from personal harm or crime. Crime has a major direct and often long-lasting effect on victims. However, it can also strongly affect the well-being (e.g. mental health) of those who are not victims but live in the same community (Cornaglia and Leigh, 2011). Overall, Mexico shows high spatial heterogeneity in the levels of crime, meaning that safety can vary significantly across the different parts of the country. For example, crimes against property tend to concentrate in cities and the extent to which these crimes are reported increases with GDP per capita in OECD countries (OECD/IMCO, 2013).

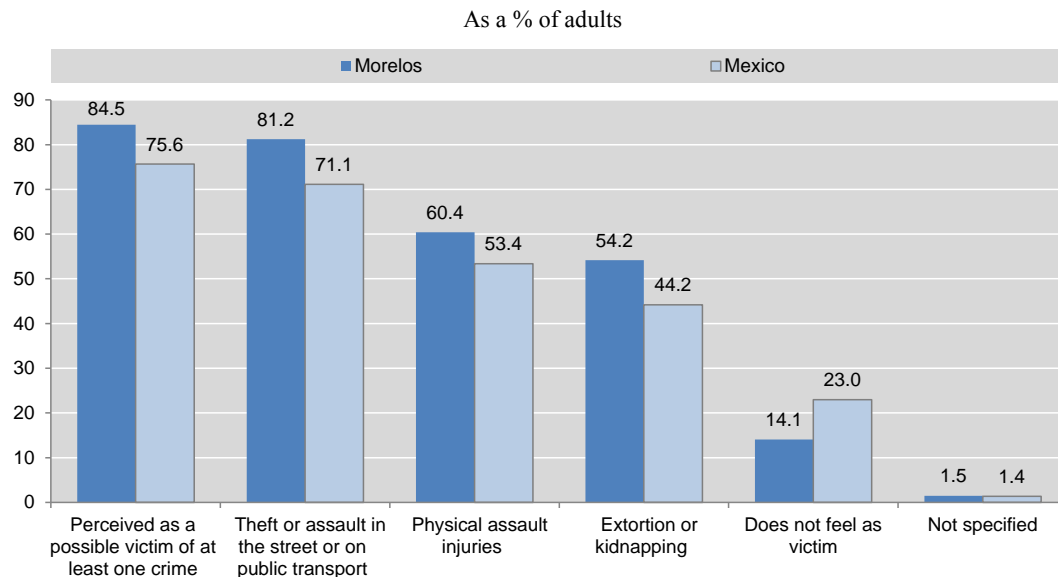
Crime and insecurity are associated with other well-being dimensions, such as education, income, access to jobs and social connections. While these relationships are complex, especially when looking for causal associations, the literature provides some useful findings. For example, there is evidence that high job accessibility is associated with lower crime rates (Gagné and Zenou, 2013) and that higher levels of schooling can lower crime rates (Lochner and Moretti, 2004; Machin et al., 2011). Insecurity can also affect other well-being outcomes and socio-economic conditions. Besides physical health and private security costs, previous attempts to measure the economic and social cost of crime include several external effects, such as the erosion of human and social capital, a worsening business climate and a high allocation of public resources away from more productive uses (OECD/IMCO, 2013). Indicators of security are also increasingly included in international measurement of competitiveness, such as in the *Global Competitiveness Report* of the World Economic Forum.

Morelos has a relatively low level of personal safety. According to the 2013 Victimization Survey, the share of adult victims of a crime in Morelos was 29.3% in 2012 (INEGI, 2013a).¹⁴ The most frequent types of crime in Morelos are extortions (33%) and thefts and assaults (28%) (INEGI, 2013a).¹⁵ Looking at personal safety, it is worth distinguishing objective measures from subjective ones (e.g. perception of safety). Regarding the latter, citizens of Morelos in 2012 felt relatively unsafe compared to the national average, ranking ten points higher than the national average when asked to consider the potential of being victim of a theft, assault, extortion or kidnapping (Figure 6) (INEGI, 2013a).¹⁶ In addition, in 2012, the state of Morelos had the second highest share of people feeling unsafe in their municipality of residence (77.8%). This share was substantially higher than the national average of 63%.

In terms of objective indicators, Morelos still shows a relatively low level of personal safety, but to a lesser extent than the results of perception measures. According to the most recent National Survey on Victimization and Perception of Public Safety (ENVIPE 2013) (Box 3), Morelos had the 8th highest victimisation rate in Mexico, with 29.3% of the population having been the victim of a crime in 2013, compared to a national average of 27.3%. Morelos also shows a relatively high murder rate, with 31.85 homicides per 100 000 inhabitants in 2013, when the same indicator at national level was 15.53 (SESNSP and SEGOB, 2014). Since 2000, murder rates increased fast in the whole country and the state of Morelos was no exception to this trend, where the murder rate practically doubled in 12 years.

The level of safety in a given place can also be associated to public trust. Trust is a keystone of good governance, an important factor influencing the functioning of the markets, economic growth and well-being of people (OECD, 2000). Both subjective and

Figure 6. Perception of being a potential victim of a crime, 2012



StatLink  <http://dx.doi.org/10.1787/888933145727>

Source: Authors' elaboration based on INEGI (2013), Encuesta Nacional de Victimización y Percepción sobre Seguridad Pública (ENVIPE, National Survey of Victimization and Perception of Public Safety).

objective measures of personal safety in Mexican states are negatively associated to the level of trust. As shown in Figure 7, the share of people feeling insecure in their municipality is higher the lower the level of trust in the public authorities (-0.46 correlation). A similar negative relationship was also found between the share of victimised people and public trust. As shown in Figure 7, people in Morelos turned out to have relatively weak levels of both trust in public authorities and perception of safety. The perception of safety also reflects what people think about the effectiveness of certain public services. According to the 2013 National Survey on Quality and Impact of Government (ENCIG), 18.5% of the population in Morelos is satisfied with the police services, against 25.8% at national level.

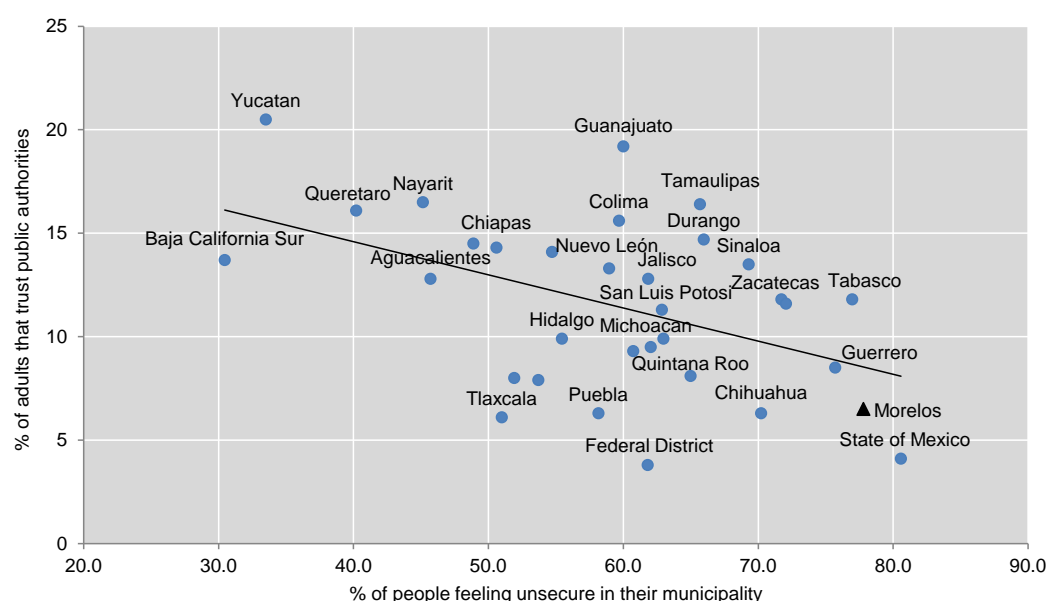
Box 3. The Victimization Survey in Mexico

With the National Survey of Victimization and Perception of Public Safety (ENVIPE) started in 2011 a new phase in the measurement of the phenomenon of victimization in Mexico, previously measured with the National Crime Survey (ENSI-2005, 2009, 2010) statistical exercise whereby INEGI provided information on citizens' perception of insecurity and made estimates of the crimes, both to national level.

The ENVIPE aims to collect information representative at the national and state level (for certain variables), which allows estimates to be carried out of the prevalence and incidence of crime affecting households and persons in the household, the black number (not reported crimes), the characteristics of crime, victims and the context of victimization. It also seeks to obtain information about the perception of public safety and performance and experiences with institutions in charge of public safety and justice.

Figure 7. Perception of safety and public trust

Share of people who feel unsafe rises negatively associated to the share of people who trust public authorities



StatLink  <http://dx.doi.org/10.1787/888933145730>

Note: Data on trust refer to 2010.

Source: Authors' elaborations based on INEGI (2013), Encuesta Nacional de Victimización y Percepción sobre Seguridad Pública 2013 (ENVIPE, National Survey of Victimization and Perception of Public Safety). Tabulados básicos.

The level of environmental quality is a development asset and should be preserved

Environmental quality can vary remarkably across places within a country and across the different environmental issues considered. Morelos distinguishes itself for the quality of its landscape and climate. In addition, Morelos had the 4th lowest level of CO₂ emissions compared with other Mexican states. However, looking at air quality outcomes highlights some concerns, as reflected by the OECD estimations of population exposure to PM_{2.5} (Figure 2). Air quality can be very different across places. In terms of NO₂ emissions at the level of OECD small regions (TL3, *grupos de municipios* in the case of Mexico), Mexico had the 12th highest regional disparities among OECD countries in 2011-12 (OECD, 2013a). Local air pollution tends to be negatively associated with self-reported life satisfaction (Silva and Brown, 2013), which, along with other health outcomes, are higher for people living in areas with more green space (White et al., 2013). Within the state of Morelos, people can also have different perceptions of the environment, according to where they live. Most of the population is concentrated in two metropolitan areas. Urban dwellers might experience lower air quality and the absence of green space while pollution caused by fertilisers might affect rural areas.

Environmental outcomes should be considered from a sustainability perspective since they can affect well-being both at a moment in time and across generations (Dasgupta, 2004). This issue should also be embedded in the indicators used to assess well-being. Morelos has one of the richest ecosystems in Mexico, despite its small size. However, this

richness is threatened by a relatively high rate of transformation of the natural ecosystem, which in the long run can hinder the preservation of the forestry surface. According to the Environmental Severity Index (*Índice de Criticidad Ambiental*), which monitors the transformation of the vegetation surface with respect to demographic trends, more than half of the total surface of Morelos is classified as territory in radical transformation, suffering from very high pressure for the use of land.¹⁷

Two other major environmental issues in Morelos are scarcity and pollution of water, and the discharge of waste. Regarding solid waste management, only 10 out of 33 municipalities in the state, accounting for 27% of the state population, provide collection, disposal and treatment services (State of Morelos, 2014). Besides the advantages in terms of health and environmental quality, a proper waste treatment helps extend the life of disposal sites. According to the 2013 National Survey on Quality and Impact of Government (ENCIG), 57.1% of the population in Morelos was satisfied with the waste collection service, while at national level this share was 67.3%. Regarding water treatment, in Morelos, all or at least a fraction of wastewater is treated in one-third of the municipalities. Water and waste management are related, since bio-waste discharge in open areas, as well as wastewater discharge without any treatment, cause higher water pollution. An effective treatment of wastewater is essential for the conservation of the ecosystems, biodiversity and human health, affecting the well-being of residents today and in the future. In any case, people in Morelos are, on average, more satisfied with water provision than the national average. Data from the 2013 ENCIG show that 74.2% of the population of Morelos were satisfied with water purity and clarity and 37.1% were satisfied with potability. At national level, these shares were 63.6% and 26.3%, respectively.

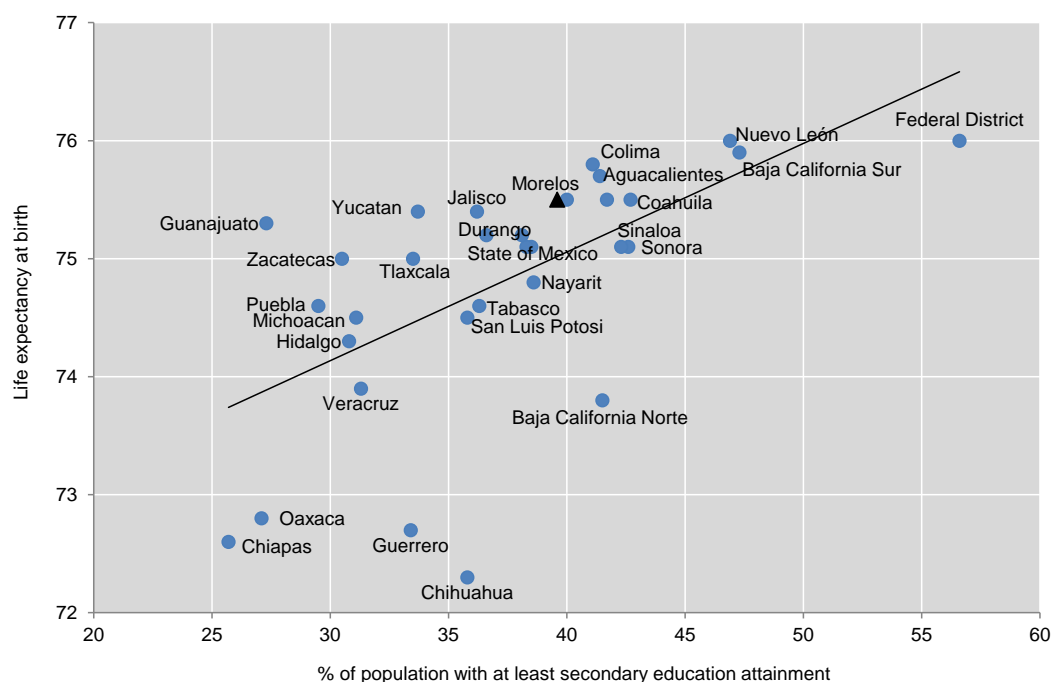
The ecological capital of Morelos should be preserved and strengthened to ensure environmental quality and economic opportunities in the future. The proximity to Mexico City, together with the climate and environmental amenities, make Morelos a popular destination for people living in the capital. This represents a potential for the economic development for the state and for the well-being of its citizens. In order to exploit this potential, it is necessary to consider the conservation of the major environmental resources and amenities in the policy agenda.

Health outcomes have been improving, but challenges remain

Health conditions strongly affect people's well-being. Besides the importance of health per se, good health increases the opportunity to find a job, to have a sufficient income and adequate social connections. The most standard measure of health outcomes is life expectancy. Compared to the average of OECD countries (79.5 years), Mexican citizens live less (74.7 years). However, in a national context, 2014 new-borns in Morelos have a life expectancy of 75.5, which is the 6th highest in the country and equivalent to that of three other states (Tamaulipas, Quintana Roo and Coahuila).¹⁸ Previous studies have demonstrated that life expectancy is connected to other well-being dimensions (OECD, 2006). For example, better education is positively associated to better health and this relationship is not explained only by average higher income and living conditions of highly educated people. Instead, increasing education can lead to different ways of thinking and behaviours that positively affect individual health conditions (Cutler and Lleras-Muney, 2006). Consistent with these findings, Figure 8 suggests that, considering Mexican states, there is a positive association between the levels of educational attainment (share of people with at least secondary education) and life expectancy.

Health outcomes can also be observed by looking at other health indicators, such as the incidence of diabetes or obesity. These indicators can allow health conditions to be better monitored in a community according to its specific characteristics and, at the same time, they help design and better target social policy in Morelos. Looking at the percentage of adults suffering from diabetes, there is a great variability among the Mexican states, ranging from 1.3% (Tabasco) to 23% (Baja California; see Figure 9). Diabetes sufferers in Morelos were 9.1% of the total adult population, slightly higher than the national average (8.7%). The share of obese people is also particularly relevant, since the phenomenon of obesity is remarkable in Mexico and can be connected to other well-being dimensions, such as income and education. According to the 2012 Survey for Health and Nutrition (ENSANUT), 34.9% of people living in Morelos aged 12-19 years old are overweight or obese, in line with the national average (35%), but showing an increasing trend since 2006, when this share was 32.9%. Gender distribution for people aged 12-19 years old in 2012 showed a higher number of obese and overweight women (37.8%) than men (32.1%).

Figure 8. Life expectancy and educational attainment in Mexican states, 2010



StatLink  <http://dx.doi.org/10.1787/888933145749>

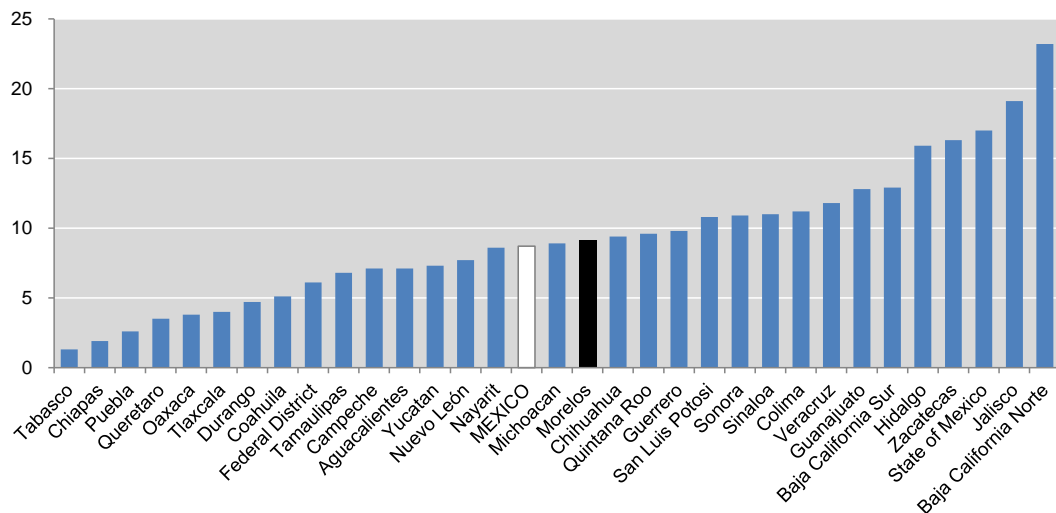
Source: OECD (2014), Regional Well-Being (database), <http://dx.doi.org/10.1787/region-data-en>, www.oecdregionalwellbeing.org

Education outcomes are low, as is the national average, but significantly improving

Education affects both individuals' material conditions and quality of life. There are several mechanisms by which education can shape well-being. First, the value of education per se directly benefits individuals, responding to the need to learn (OECD, 2011). By investing in education, people develop skills, many of which are important for having a good life, such as carrying out activities that bring stimulus and pleasure

(Scitovski, 1976). Education is also strongly linked with many other well-being dimensions. For example, higher education can increase health, not only through a higher income and better employment conditions, but through an effect on people's behaviours (Cutler and Lleras-Muney, 2006). With respect to the specific case of Mexico, there is evidence of a strong positive relationship between education and income (Binelli and Rubio-Codina, 2013; Harberger and Guillermo-Peon, 2012). In addition to private individual returns, education has important social returns that affect the overall productivity of places, reduce crime rates and increase political participation (Moretti, 2004). Literature also documents that higher levels of educational attainment are associated with higher civic engagement levels (e.g. Milligan et al., 2003).

Figure 9. Percent of people 20 years and older suffering from diabetes, 2011



StatLink  <http://dx.doi.org/10.1787/888933145759>

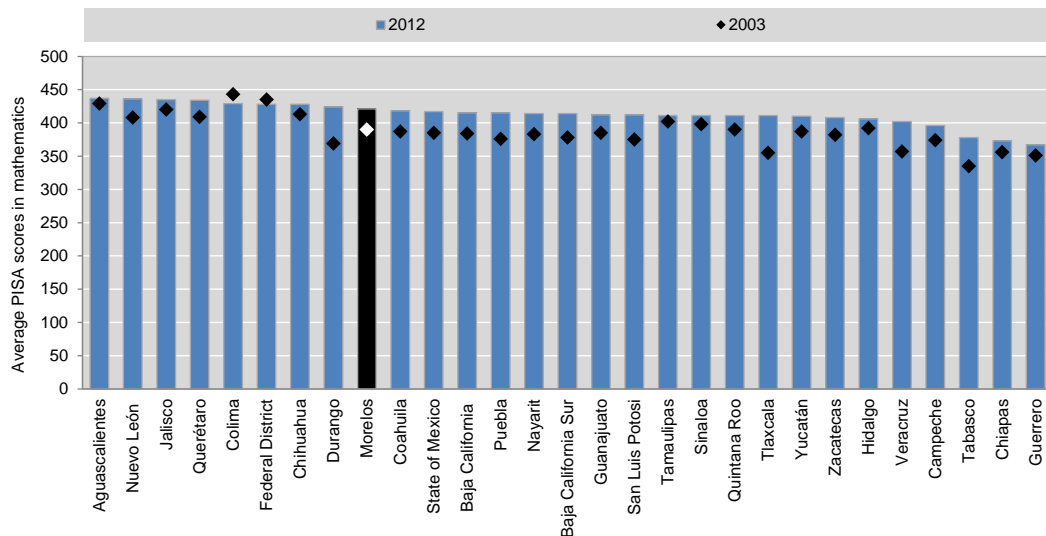
Source: INEGI (2013), “Estadísticas a propósito del día mundial de la diabetes”, INEGI, Mexico, www.inegi.org.mx/inegi/contenidos/espanol/prensa/contenidos/estadisticas/2013/diabetes0.pdf (last accessed in April 2014).

Both education coverage and its quality are crucial outcomes to be monitored in Morelos. Regarding coverage, Morelos – like the other Mexican states – shows a relatively low level of tertiary education attainment with respect to the OECD average. In 2012, 18.3% of the labour force had attained a tertiary education, slightly lower than the national average of 19.2% and much less than the OECD average (29.4%; OECD, 2014c). From a dynamic perspective, however, both secondary and tertiary education coverage have been growing in Morelos during the last years. Upper secondary education coverage increased from 66.8% in 2006 to 75.7% in 2012 (State of Morelos, 2014). Universal coverage of upper secondary education will be fully mandatory by 2021-22, making the use of indicators of education coverage essential to ensure the objectives are met. Quality of education can be assessed by looking at the skills acquired by students. Between 2006 and 2013, almost all the indicators of student achievement¹⁹ improved, especially for elementary school achievement, where Morelos performed better relative to the country average. Student achievement in secondary school has been improving continuously since 2003, especially in maths (Figure 10), while performances in Spanish have remained almost stable.

Access to services is in line with the national average

The extent to which a given service is accessible to an individual includes physical, economic and institutional aspects of accessibility (OECD, 2014a). Physical accessibility refers to the ability to reach the place where the service is provided, while economic access refers to the extent to which people can afford the cost of the service. Institutional access accounts for eventual constraints imposed by the institutional environment (laws, values, etc.). The physical aspect of accessibility to services (e.g. the distance to a certain service point) makes it necessary to focus at sub-national level, as it is the case for this study on Morelos. In fact, physical access to services varies strongly according to the spatial location of people and of the service points, making national averages misleading. Public transport accessibility, for instance, varies depending on the scale (metropolitan vs. neighbourhood), the settlement type (urban vs. rural) and the mode (rail vs. vehicle vs. bikes or walking). Another example is access to information technology services, which in turn is connected to access to knowledge. In 2013, 30.1% of households in Morelos had access to broadband Internet services, a value above the national average of 28.3% (Figure 11). This indicator has increased rapidly since 2010, though such increase was lower in Morelos than the average among Mexican states (3.7 and 7.3 percentage points of variation, respectively).

Figure 10. Average PISA scores in mathematics in Mexican states, 2012



StatLink  <http://dx.doi.org/10.1787/888933145760>

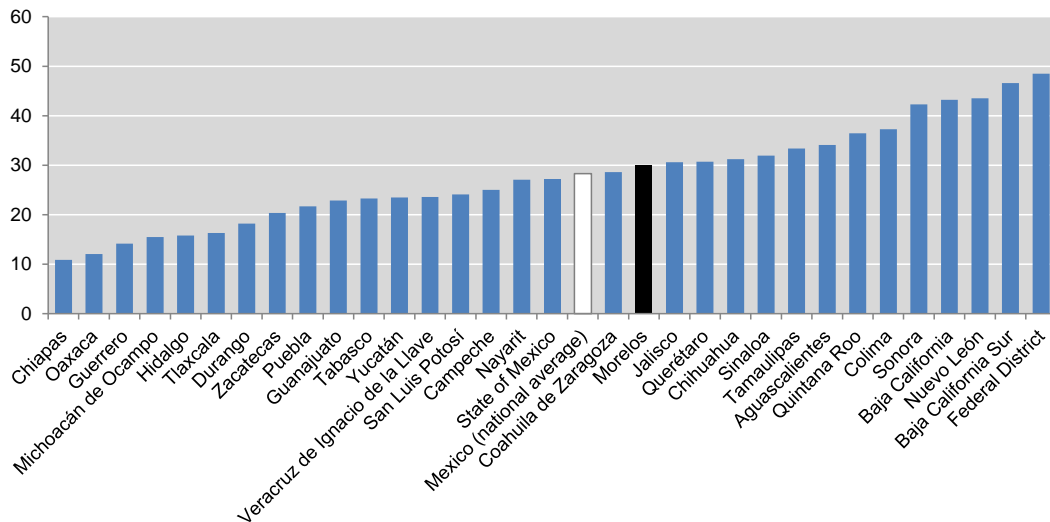
Source: PISA 2012 database.

Housing outcomes improved, but a stronger connection to urban development policy is needed

Mexico has made significant progress in addressing the country's quantitative housing gap in recent decades. The share of the population lacking basic housing services decreased from 35.7% to 17% between 1992 and 2012.²⁰ In Morelos, the share of dwellings with sewage facilities increased fast, passing from 79.2% in 2000 to 92.4% in 2010.²¹ There are nevertheless challenges, even in the case of very recent developments, of housing located far from jobs and urban centres, lacking basic infrastructure (water) and transport connections, within a broader context of cities that are

sprawling, economically underperforming and important energy consumers (OECD, 2014b). Between 1980 and 2010, the country's urban footprint expanded five times faster than its population, as development was pushed further into the periphery (SEDESOL, 2012). This has led to poorer environmental, social and economic outcomes, with cities that tend to be highly polluted, socially segregated and not fulfilling their full potential as engines of productivity growth.

Figure 11. **Percent of households with a broadband Internet connection, 2013**



StatLink  <http://dx.doi.org/10.1787/888933145776>

Note: The percentage of households with a broadband Internet connection is computed as the number of households that declared to have a broadband connection over the total number of households, where those who did not know the type of connection they had were excluded.

Source: INEGI, Módulo sobre Disponibilidad y Uso de las Tecnologías de la Información en los Hogares.

The social costs of this housing model have become increasingly evident in recent years. Residents living in the periphery usually have long commutes and high travel costs to carry out their daily activities. Homes may lack access to schools, health centres or public transport (OECD, 2014b). Mexican authorities are well aware of these challenges and, in 2013, outlined an ambitious shift in the approach to sustainable housing and urban development in Mexico. The new housing policy includes objectives to control urban growth, spur intra-urban development, diversify housing options beyond home ownership (e.g. rental, home improvements, access to land for self-constructed housing), improve urban mobility and increase the efficiency of land use.

Housing conditions in Morelos should be considered in relationship with the urban development occurring in the state. Morelos is undergoing a process of urbanisation, characterised by an increasing population living in the two major functional urban areas (FUA), namely Cuernavaca and Cuautla. Among the 33 municipalities of the state, 10 are considered part of an FUA (Box 4; Figure 1). Following the OECD definition of FUAs, 63% of the state population lives in urban areas (within a FUA), in line with the national average (63.7%), but still less than the OECD average (67%). The FUA of Cuernavaca had 876 000 inhabitants in 2011 and included 7 municipalities, while Cuautla accounted for 300 000 residents and 3 municipalities. Between 2001 and 2011, the resident

population in the two FUAs increased by 20% against an average increase of 17% in the whole state of Morelos.

Box 4. Functional urban areas in Mexico

The process of economic development together with improvements in information and communication technologies and the increasing diffusion of cars determined, in the last decades, an increased integration of cities with their surrounding hinterland. The main consequence of these processes is that today a city does not necessarily correspond only to the high-density settlements or to the boundaries identified by the administrative structure (e.g. municipalities). In order to identify the actual spatial and economic extent of cities, it is necessary to consider the spaces where people live and work, which cover existing “established” cities together with their functionally interconnected periphery. These units are called functional urban areas (FUAs).

By using a consistent method across 29 OECD countries based on a population density grid and commuting flows, the OECD identified 1 177 FUAs (OECD, 2012). The main idea underlying the identification of FUAs consists in selecting the urban cores on the basis of population density and then adding to each core city those contiguous municipalities that have a high connection with the core. As a result, FUAs are clusters of contiguous and functionally interconnected municipalities and they are considered here as economically defined cities. According to this definition, 67% of the total population in the 29 OECD countries considered lives in FUAs.

In Mexico, there are 77 FUAs, which accounted for 64% in 2012. These FUAs vary in size. There are 7 large metropolitan areas of more than 1.5 million inhabitants, while 26 have between 500 000 and 1.5 million inhabitants. There are then 44 FUAs whose population ranged from 140 000 to 490 000 in 2011. According to this definition, the share of total urban population in the country (total population of the FUAs over total national population) is 64%, which is still lower than the OECD average (67%). However, since 2001 Mexico has experienced the highest urban population growth across OECD countries (+20.7%). Although population is highly concentrated in the urban core (89%), population growth was much higher in the hinterland during the last decade (Veneri, 2014).

It is worthwhile clarifying that INEGI, *Consejo Nacional de Población* (CONAPO) and SEDESOL have a different definition of metropolitan areas than the OECD. According to INEGI et al. (2012), metropolitan areas are defined as the set of two or more municipalities in which a city of 50 000 or more inhabitants, the urban area, functions and activities located exceed the limit of the municipality that originally contained it, incorporating as part of its area of direct influence to adjacent municipalities, predominantly urban ones, with which it has a high degree of social and economic integration; this definition also includes those municipalities relevant to planning and urban policies, according to their particular characteristics. In the case of Cuautla, for example, the respective metropolitan area covers six municipalities instead of the three included in the OECD definition of the FUA of Cuautla.

Sources: INEGI, SEDESOL, SEGOB, CONAPO (2012), *Delimitación de las Zonas Metropolitanas de México 2010*, Edición 2012, INEGI, SEDESOL, SEGOB, CONAPO, Mexico and Aguascalientes, www.inegi.org.mx/Sistemas/multiarchivos/doc/702825003884/DZM20101.pdf; OECD (2012), *Redefining “Urban”: A New Way to Measure Metropolitan Areas*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264174108-en>; Veneri, P. (2014), “Urban spatial structure. Characteristics and trends 2001-11”, *OECD Regional Development Working Papers*, OECD Publishing, Paris, forthcoming.

Using well-being metrics in policy making in Morelos

Why measure well-being?

The state of Morelos has important responsibilities in the provision of public goods and services, which in turn play a significant role in the well-being of individuals and business. The state government's primary competences are:

- **Health.** The state is responsible for organising, controlling the maintenance and the provision of health services, designing and implementing health programmes, and training human resources accordingly.
- **Education.** The state has to provide primary and secondary education. This includes taking care of education infrastructure, training teachers, monitoring schools, implementing special education programmes and managing the licensing of private ones.
- **Safety.** The state is responsible for guaranteeing safe conditions to its residents. Competences include managing a police corps, which is recruited, trained and assessed by the state. The state responsibility for security covers ordinary crimes, while the nationally relevant crimes are treated at the federal level.²²
- **Social infrastructure.** The state is responsible for improving the social conditions of its citizens, especially by focusing on people in poverty, and facilitating the access to services and basic opportunities to improve citizen's well-being.

The bulk of financial resources to carry out these competences is provided by federal transfers (92% in 2012), while a small part comes from the state's own taxation (OECD, 2013a). An important part of the taxation power was recentralised back from sub-national governments to the federal government in the last three decades (OECD, 2013c). Despite being a federal state, sub-national governments in Mexico have the lowest share of resources coming from own taxes compared to OECD countries. In 2012, this share was 6.6% in Mexico with an average of 38% for OECD countries (OECD, 2013a). According to an estimate by the Inter-American Development Bank, Morelos has the 6th lowest sub-national fiscal autonomy, computed as the percentage of state own-source revenue over total revenue (Castañeda and Pardinas, 2012). This can be significant for the fiscal autonomy of the state, since the state government has to rely very heavily on federal resources to accomplish its own responsibilities.

Regarding the expenditure of the state, the highest share concerns education (52% in 2013), which has increased since 2012 (Table 1). Health expenditures have also increased, though their weight on total expenditure has slightly decreased. Expenditures for economic development has increased substantially since 2012, both in absolute and relative terms. At national level, 58% of the 2013 budget was spent on social development actions, 33% for economic development and 9% for government expenditure. Within the social development action, education and health represented 17.5% and 14.5% of total expenditure at national level, respectively (Ministry of Finance and Public Credit, 2013). When considering the local government level, in 2012, the 33 municipalities in Morelos spent 31.7% of their budget on the provision of services for people and 12.9% on transfers and subsidies, while 28.5% of the budget was invested. As for the state government, municipal resources come mostly from federal transfers and participations (32.3% and 33.7%, respectively), while local taxation contributes to around 16% of total resources.²³

Table 1. **Distribution of expenditures by the government of Morelos**

	Expenditure (MXN millions)		Distribution by sector (%)		Annual variation (%)
	2012	2013	2012	2013	
Education	8 025	10 142	49.8%	52.2%	26.4%
Health	2 784	3 213	17.3%	16.5%	15.4%
Government	2 181	2 002	13.5%	10.3%	-8.2%
Economic development	1 316	2 093	8.2%	10.8%	59.1%
Security	1 265	1 275	7.9%	6.6%	0.8%
Social development	441	516	2.7%	2.7%	17.1%
Culture	87	175	0.5%	0.9%	101.4%
Total	16 098	19 416	100.0%	100.0%	20.6%

Source: Public accounts 2013 and 2014, www.hacienda.morelos.gob.mx.

Well-being agenda in Morelos

The main objective of the state of Morelos is to build a society that guarantees the rights of citizens and to improve their quality of life. The state government is trying to make a significant shift in the way public policy is designed and implemented, through the use of indicators to assess people's quality of life and its evolution over time. The underlying objective is to improve the effectiveness of public policy and to make a better use of the rich statistical information provided by INEGI.

In order to achieve its main well-being goal, the state of Morelos developed a strategy, called "New Vision" (*nueva visión*), that brings a specific focus on universal rights for citizens and on democratic participation. The main tool for this strategy is the government's State Development Plan (PED). The PED builds a comprehensive strategy for Morelos along five main axes (or priorities). These priorities were decided according to the proposals from the electoral campaign (from November 2012 to January 2013), but also from public consultations (*foros de consulta ciudadana*). Such consultations involved citizens, experts and civil society forums and were carried out both during the election campaign and once the current government took office.

The five main axes identified in the PED are inspired by the need to improve the quality of life of Morelos' citizens. These axes are summarised as follows:

- Security and justice. Personal safety was perceived as the most important issue by civil society and policy makers. In order to build a safer and fairer state, the government, from a perspective of respect of human rights, aims at fighting crime through prevention, procurement, effective application of justice and social re-adaptation.
- Social cohesion and citizenship. This axis is linked with the willingness to overcome the challenges of high inequalities in socio-economic conditions and opportunities available to the residents of Morelos. The aim is to improve the social fabric in Morelos by focusing on education, health and social development (including sports, culture, etc.).
- Competitiveness and innovation. Sustainable economic development is the main focus of this axis, which includes generating income and jobs by developing highly qualified human resources in the state along with technology-based

businesses. In addition, the government aims at strengthening the domestic market, attracting investment, developing new touristic products, and investing in agricultural modernisation.

- Environmental sustainability. As explicitly mentioned in the PED, these issues include general respect for the environment, more efficient use and management of the water resources, waste recycling and clean energies.
- Transparency and democratic participation. From a well-being perspective, this axis has a strong cross-dimensional nature, since it is mainly related to building trust. In this respect, transparency, accountability and closeness to citizens are crucial factors for fighting corruption, improving state public governance and public policy effectiveness.

The state's strategy stems from the awareness of long-standing challenges. Criminality has long been a challenge in Morelos and there is an increasing perception of insecurity among people. Past failures in tackling crime as well as uneven capacities of local (municipal) governments have not improved the situation. However, there are opportunities to achieve important results, also through the government's commitment to use indicators in order to monitor the progress of society. The strategy to tackle crime focuses on a two-way strategy: first, the creation of a state police corps, called "*Mando Único*", which centralises the operation and command of the municipal police corps; second, the broadening of opportunities for people to reach better material conditions and on improving the conditions of young people through easier access to education.

The PED's strategic axes are accompanied by a comprehensive set of indicators with baselines and targets to be met by 2018. Indicators were chosen through a consultation process with local stakeholders and officials responsible for different areas of policy. However, the state would now like to introduce a more focused well-being metrics in the implementation of the PED. Several challenges arise to achieve this goal. Many stakeholders that participated in the meetings during the field analysis expressed a general concern about having a long list of indicators to understand the socio-economic performance of the state and very few to understand the actual well-being outcomes. In addition, it emerged a limited awareness of the potential use of data, since many participants knew very little about what data were already available and what potential use they could have.

Overall, the five-axis strategy defined in the PED represents a remarkable step ahead in defining a new approach to policy making based on well-being measures. First, the willingness to use indicators to monitor the situation in the state and the results of the government's action is an important commitment that helps bring citizens and other stakeholders closer to policy making. Second, the PED appears to embrace a truly integrated approach to development, avoiding a fragmented sectoral approach. The synergies and complementarities between several well-being dimensions are acknowledged in the plan and programmes are often co-ordinated accordingly. For example, the level of security is being tackled through specific measures in education and health. Third, the plan gives an important role to the issue of inequalities, which are approached as a factor that crosses different well-being dimensions. The focus on a more inclusive society is shaped by the idea that a more equal society yields more opportunities for everyone to develop and have control over their own lives. As Morelos, and Mexican states in general, shows higher inequalities in several well-being dimensions than the OECD average (e.g. income inequalities), a specific focus on inclusiveness appears appropriate. Lastly, the PED identifies a large set of indicators to be used to assess

well-being and to monitor the results of policy. This is a major commitment that can improve transparency and trust. However, guidance is needed in order to identify a selection of a few and meaningful indicators to help the state government and its citizens monitor the actual advancement of well-being in Morelos.

The importance of inequalities

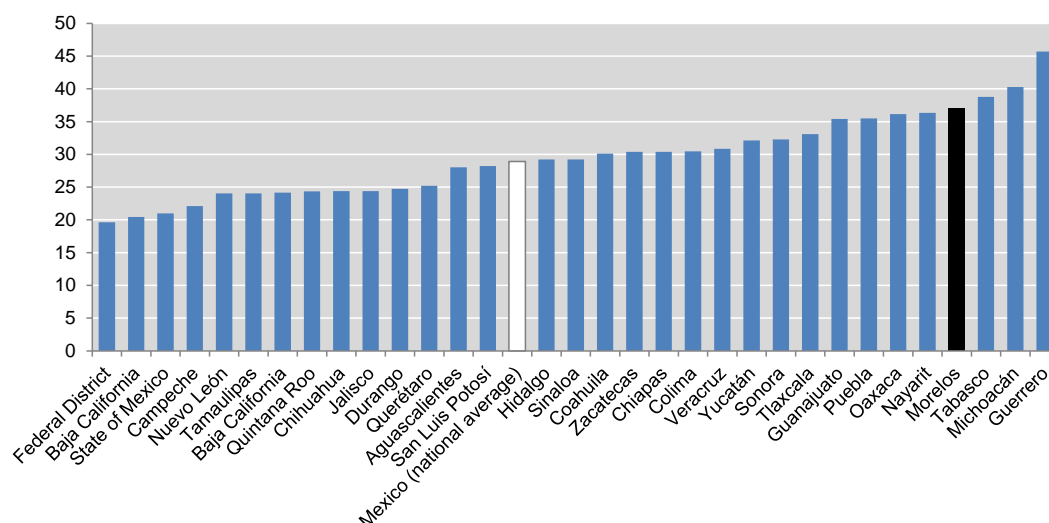
Morelos' conception of well-being gives a particular importance to the issue of inequalities and poverty, which is explicitly addressed in the state's strategic axis of social cohesion and citizenship. Poverty is a prominent issue in Morelos, especially when focusing on some specific groups of people. For example, Morelos has the fourth largest share of young people aged 6-12 years old with no access to food among Mexican states (37%; Figure 12). The National Council for the Evaluation of Social Development (CONEVAL) provides indicators and analysis in order to measure poverty, with a multi-dimensional approach, across all Mexican states. In some cases, measures are even detailed at the municipal level. Such an approach includes income, education, access to food, health and social security as well as the quality of housing and services. The final output is a poverty index available by state, which is currently used to allocate public funds relative to policies that target the extreme poor people. According to CONEVAL, Morelos made progress in reducing extreme poverty between 2008 and 2012 (-30.2%) and an increase of the population not poor and not vulnerable (+36.7%). Social deprivation of such estimate has also been reduced; the most relevant are the lack of access to basic services for housing and a lack of access to healthcare services (-39.9% and -38.7%, respectively, between 2008 and 2012).²⁴

Monitoring poverty is a crucial issue for Morelos. From a well-being perspective, however, measures that focus on assets instead of on deprivation can better fit in a well-being agenda for all citizens. Indicators focusing on a positive narrative can increase ownership by civil society and the other stakeholders on the whole agenda of well-being measurement. This might enhance policy from which most people will benefit. Finally, considering the well-being dimensions separately – though accounting for complementarities – and using headline indicators can increase the accountability in public policy and help a more transparent well-being assessment.

The use of composite indexes

The State Development Plan of Morelos presents a dashboard of indicators for each of its strategic axes. These indicators are the tools to assess the current well-being conditions and their evolution over time according to the government's objectives and actions. The general approach is mainly focused on a dashboard of indicators for the distinct well-being dimensions. However, the PED mentions specifically four overall strategic indicators that include composite indexes and cross the various axes of the plan. These indicators are GDP growth, an index of human development, an index of competitiveness and an index of extreme poverty. The PED also identifies, for each of these indexes, specific targets to be achieved by the end of the government's mandate (2018). However, the way these measures are linked to the PED's strategic axes and the related indicators is not entirely clarified. On the one hand, these measures help provide an overall assessment of economic and social conditions in the state. On the other hand, the extent to which the different goals of the plan are achieved requires considering more specific indicators.

Figure 12. Percent of young people aged 6-12 years old with no access to food



StatLink  <http://dx.doi.org/10.1787/888933145788>

Source: Elaborations on INEGI (2012) Encuesta Nacional de Ingresos y Gastos de los Hogares” (ENIGH).

Selecting well-being indicators for Morelos

This section provides a selection of headline well-being indicators that can be used to implement a well-being agenda in Morelos and to be possibly integrated in the PED. Such a selection builds on data and field analysis as well as on the consultation work carried out by the state Ministry of Finance with the main stakeholders in the state. The selected indicators are summarised in Table 2 and they include both perception and objective measures. They represent an adaptation of the OECD Regional Well-being framework – as represented in the well-being dimensions of Figure 2 – to the specificities of Morelos in order to help implement the strategic axes of the PED. Indicators in Table 2 should be subject to further consultation between the state, citizens and local stakeholders in order to increase ownership, to make the well-being metrics more solid and to make meaningful comparisons across Mexican states possible.

Once shared with stakeholders, the well-being metrics should be operational, meaning that they can be integrated in the PED and used to monitor the progress of society in Morelos. If an indicator is missing, it should be made available, likely with the help of INEGI. Most of the measures listed in Table 2 should already be available and some of them are included in the OECD framework. The OECD, in collaboration with national institutes of statistics, is committed to updating the statistics and to making them comparable across OECD countries in order to facilitate international benchmarking. Perception indicators are not included in the OECD framework for reasons of data availability and comparability. Thanks to INEGI, however, such measures are available for a remarkable number of well-being dimensions in Mexico and hence they should be used. Perception measures are also particularly important for the well-being agenda in Morelos, since it is in the interest of policy makers to understand citizen appraisal of local services and initiatives.

Table 2. **A streamlined well-being metrics for Morelos**

Morelos's strategic axis (PED)	Well-being dimensions (OECD)	Well-being indicators (source)	Description of indicator	Baseline value (year)
Security and fairness	Personal safety	Victimisation rate (ENVIPE 2013, q. 1.5)	Share of adults that were victim of a crime	29.3% (2012)
		Perception of safety (ENVIPE 2013, q. 5.4)	Share of adults that feel safe in the state	18.8% (2012)
Social cohesion and citizenship	Health	Life expectancy at birth (CONAPO) ¹	Number of years of life expectancy	75.5 years (2014)
		Overweight and obesity in people 12-19 years old (ENSANUT)	Share of people between 12 and 19 years old who are obese or overweight	34.9% (2012)
		Maternal death rate (ODM – Secretaría de Salud) ²	Share of maternal deaths per 100 000 live births	39 (2012)
	Education	Secondary school dropout (SEP, SNIEE)	Number of dropouts over total enrolled students	18.1% (2012-13)
		Student skills (e.g. PISA) (OECD)	Performance scores in mathematics	421 (2012)
	Accessibility to services	Access to healthcare (CONEVAL, INEGI)	People with access to healthcare over total population	77.7% (2012)
		Access to public transport (INEGI)	Share of population without access to public transport	31% (2010)
	Housing	Dwelling provided with basic facilities (e.g. piped water) (CONEVAL-INEGI)	Share of households with piped water from the public network	87.6% (2010) ³
	Social connections	Perception of social network (CONEVAL) ⁴	Share of people that feel improvement in social interaction	Medium (2010)
Attractiveness, competitiveness and innovation	Income	Disposable household income	Disposable household income	USD 7410 (2012) ⁵
		Income gap between low- and average earners	Ratio between bottom and middle quintile income	3.44 (2012)
	Jobs	Female participation rate (ENOE, INEGI) ⁶	Share of female labour force over total female working age population	44.4% (2013)
		Employment rate (ENOE, INEGI) ⁷	Share of employed population in working age	55.5% (2013)
Environmental sustainability	Environmental quality/sustainability	Air quality (PM ₁₀ concentration)	Concentration of PM ₁₀ expressed in µg/m ³ , annual average	576.52 µg/m ³ (Jan-Jun 2014) ⁸
		% of proper waste disposal	Share of waste disposed according to law over total waste generated	24.5% (2012)
		Water consumption with respect to the annual volume	Total gross withdrawals to total actual renewable freshwater resources	
Transparency and democratic participation	Civic engagement	Transparency index (Ar. Información) ⁹	Index of quality of information provided by the state's website	68.9 (2013)

Notes: 1. www.conapo.gob.mx/work/models/CONAPO/Proyecciones/2010_2050/RepublicaMexicana.xlsx (last accessed 12 May 2014). 2. www.objetivosdesarrollodelmilenio.org.mx/cgi-win/odm.exe/ANODM005000100010,26,DxA183226198467,000,2012,False,False,False,False,False,False,0,0,E. 3. 12.4% of households represented 57 087 people. 4. Source: CONEVAL, Indicadores de cohesión social según entidad federativa 2008-2010, índice de percepción de redes sociales, www.coneval.gob.mx/Medicion/Paginas/Cohesion_Social.aspx. 5. At 2010 PPP. Data are elaborations from the income distribution database. Data are regional estimates from national income surveys. See OECD (2014a). 6. INEGI, National Survey on Employment (ENOE), www.inegi.org.mx/est/contenidos/Proyectos/encuestas/hogares/regulares/enoe. 7. INEGI, ENOE, www.inegi.org.mx/est/contenidos/Proyectos/encuestas/hogares/regulares/enoe. 8. The value is the average from January to June 2014 for Cuernavaca. 9. www.finanzasaxaca.gob.mx/pdf/transparencia/ITDIF_2013_Resultados.pdf.

There are specific issues that are particularly important for well-being in Morelos and constitute policy priorities. One of the dimensions of well-being that is currently shaping the debate is safety. However, safety is strongly inter-related with almost all the other well-being dimensions and it seems that there is a high awareness of such links. The action of the government towards better education and safety outcomes (e.g. *Beca-salario* initiative and *Mando Único*) to reduce crime and improve safety is an example of such an awareness. Another example is the efforts to improve income and employment outcomes, through strategies such as the Morelos Women Businesses programme (*Empresa de la Mujer Morelense*) or with the recovery of public spaces through culture and sports. Of course, the inter-relationships among well-being dimensions are complex and public policy can be more effective in some dimensions than others. In this respect, the government's priorities and the extent to which these priorities are actionable given the state's competences are important factors to consider when selecting the indicators.

Security and justice

Safety at the local level can have a significant impact on well-being in Morelos. The joint use of subjective and standard measures of safety is particularly useful. What people actually feel with respect to safety directly affects their quality of life, and this can be more effectively grasped through perception indicators. However, people and policy makers also need to monitor the actual evolution of security conditions to be able to understand the main trends and take the best actions in a rational way. In the case of Morelos, two indicators are suggested to assess safety conditions and their improvement over time: the rate of victimization and the perception of safety. Both indicators are available for all Mexican states and make comparisons with international benchmarks possible. Given the specific characteristics of security in Morelos by type of crime (e.g. Figure 6), an alternative useful and largely available measure of safety is the number of car thefts per 1 000 inhabitants.

Social cohesion and citizenship

Health. The population in Morelos is slowly ageing and the health challenges in the state are changing accordingly. As discussed in the first section, chronic and degenerative diseases, such as diabetes, are increasingly relevant in determining people's health in Morelos, since they are the main cause of death in the state. The PED identifies a large set of indicators that are useful to assess health outcomes. In the attempt to identify fewer, particularly relevant health indicators, life expectancy at birth is proposed as the headline one. Despite being a complex and in some ways generic indicator, it accounts for all possible causes of death, from crime to poor access to food and chronic diseases, which are all relevant in Morelos. Other proposed indicators are the percentage of young obese people and the maternal death rate. The former is relevant because it focuses on a specific health issue that is prominent in Mexico with respect to other OECD countries. In addition, monitoring the share of young obese people makes it possible to adopt a long-term perspective, assessing health conditions today that will have an impact both today and in the future. The maternal death rate is defined as the share of women dying while giving birth. It also indirectly allows for assessing the quality of prenatal care.

Housing. Urban expansion in Mexico is characterised by sprawling development (OECD, 2013b; SEDESOL, 2012) and urbanisation has pushed new housing far into the periphery. In the construction of new housing, all the public and collective costs related to the new settlement locations are not always fully taken into account. People living in the periphery usually have a long commute and high costs to carry out their daily activities

due to their geographic isolation. Another issue can be the connection to the public facilities, such as water, waste and sewage. Connecting new housing to public facilities can be expensive and not always easily doable. In order to measure the material conditions in Morelos with respect to housing, a meaningful indicator is the percentage of dwellings with basic facilities, such as piped water. In Morelos, 12.4 %²⁵ of dwellings did not have piped water in 2010, despite an improvement of 2.5 percentage points with respect to 2005. This can be related to the fact that new housing construction can occur in places far from the water network or to the housing finance model and to an increase in the informal settlements emerging in a fast process of urbanisation.

Education. Increasing social cohesion and citizenship must include a specific focus on education. The role of education is well recognised throughout the PED, which introduced nine indicators to assess educational outcomes. In order to account for education coverage and quality, which are two major issues in Morelos, two measures of educational outcomes are proposed as headline indicators. The first is the rate of secondary school dropout, which seems particularly important in the whole country, since coverage will be fully mandatory by 2021-22. This will oblige education authorities to make upper secondary education available for everybody, challenging the current level of provision. Compared to the secondary educational attainment, which remains a valid option, school dropout could have the advantage of being more sensitive to policy actions in a span of three to five years. The second proposed headline measure is related to the main final outcome of education, meaning the level of people's skills, which can be measured through the scores obtained in skill assessment tests, such as PISA,²⁶ already available for Mexico at the state level. These measures have the advantage of being largely available across countries – skill assessment is also included in the OECD Regional Well-being framework – hence international comparisons will be possible.

Access to services. The physical accessibility to specific services could be different across space and these differences can be important for people's opportunities and social cohesion. Two indicators proposed for this dimension are the percentage of households with access to public transport and the percentage of households with access to healthcare. Another valid alternative, which is included in the OECD framework, is the share of households with broadband Internet connection.

Social connections. A measure of the extent of social connection can be important for Morelos, given the state's objective – made explicit in the PED – to build a stronger citizenship. This dimension can be assessed looking at perception measures, such as the self-reported strength of social networks, made available by INEGI.

Competitiveness and innovation

Income. The average level of household income, and its evolution over time, is an essential measure of material conditions in a place. Disposable household income is a standard and internationally comparable measure and as such it should be included among the selected indicators. Another very important aspect to consider, however, is the distribution of income. As discussed in the first section, inequalities in Mexico are a major issue compared to other OECD countries, and Morelos is not an exception. While there are many indicators of income distribution, it seems worthwhile to consider a measure that gives relatively more emphasis to the people that are in the bottom of the distribution in terms of earning capacities. One example is the ratio between the bottom 20% and the median income in the state. This can help take into account some aspects of

poverty, with a simple indicator based on income only. As for a multi-dimensional measure of poverty, the index provided by CONEVAL can provide useful information.

Jobs. The unemployment rate in Morelos has been relatively low for several years. Among the employment outcomes that are more important to be monitored are the extent to which people of working age participate in the labour market. In this respect, a standard measure is the employment rate, which is the proportion of the working-age population that is employed. While it does not give direct information on unemployment, this indicator provides a general picture of labour market conditions and the capacity of the labour market to generate jobs. An alternative measure of employment outcomes for Morelos is the female participation rate in the labour market. As shown in the first section, Mexican states have, on average, much lower values of this indicator compared with the average of OECD countries. Increasing the female participation in the labour market is a necessary step to improve well-being, since it can lead to, among others, better health for women and their children, better education for children and an improved social security system. Another measure that is worth considering is the rate of labour informality, which is very relevant in Morelos and strongly affects jobs quality and people's quality of life in many of its dimensions (e.g. access to housing, to healthcare, etc.).

Environmental sustainability

Environmental quality is one of the state's strengths in terms of regional well-being. However, there are specific issues related with environment – also acknowledged in the PED – that need to be monitored through appropriate indicators. Subjective indicators could be particularly informative for environmental outcomes, but their availability has to be checked. A first important issue is the conservation of landscape and of the natural ecosystem. These assets are crucial for the state, both in terms of quality of life and economic opportunities, but they are threatened by a fast deterioration and transformation of the ecosystem. In order to measure the extent to which people can benefit – also from a long time-horizon perspective – from a high environmental quality, the annual rate of conservation, restoration and reforestation can be taken into account. The question of short-term vs. long-term environmental outcomes is crucial and should be considered when selecting indicators. Regarding water, for example, the extent to which it can be provided everywhere and treated appropriately are major issues in Morelos. If selecting one headline indicator, it would be important to identify a measure that accounts for the current situation without abandoning a sustainability approach. A possible simple solution is to look at water consumption relative to the total annual volume available.

Two other major domains for environmental outcomes in Morelos are the discharge of waste and air quality. The latter emerged as particularly important in the consultation with the stakeholders of the environmental sector in Morelos. Air quality should be measured by looking at other particulates that are more connected to the local environmental outcomes. The OECD provides estimates of people's exposure to PM_{2.5} at regional level based on satellite data, but there are no direct and regularly collected measures for this indicator in Morelos. A possible solution is to use the per capita emissions of PM₁₀, which is directly measured in three cities of Morelos (Cuernavaca, Ocuilutco and Zacatepec) with data collected every day. Regarding waste management, data from the state of Morelos shows that 19% of the total solid waste is disposed in open dumps and the rest, which is disposed in landfills, is not separated adequately (State of Morelos, 2014). A possible indicator to monitor the improvement of waste management

is the percentage of recycled waste or the share of waste disposed according to law over total waste generated.

Transparency and democratic participation

Civic engagement. In order to assess advancement in transparency and democratic participation in Morelos, a possible indicator is the transparency index, which was already included among the set of the PED's indicators. Transparency is related to trust, which in turn can strongly affect civic engagement (Uslaner and Brown, 2005). Voter turnout is another indicator that can be used to assess democratic participation. It is included in the OECD Regional Well-being framework, and available for all the 362 OECD regions, facilitating cross-regional and international comparison.

Accounting for complementarities

Looking at well-being from a regional/sub-national perspective helps take into account complementarities across policy dimensions, because of a closer relationship between people and policy makers. The development strategy of Morelos elaborated in the PED takes into account many of the complementarities that exist among well-being dimensions. One of the most important initiatives carried out by the state on education is the introduction of the *beca salario*, a universal scholarship programme that directly benefits students in public schools. It applies to students between the third year of junior high school and the fourth year of higher education (university). By encouraging students to attend school and get a better education, the final aim of this programme includes improving safety, health and civic engagement.

Several channels connect well-being dimensions with each other. In the case of Morelos, for example, access to public services such as transport might be related with safety. More efficient and competitive public transport service could be useful in terms of personal security since many crimes occur while using public means of transport. Another domain where complementarities are high is environmental policy, which is related to almost all the other governmental policies (e.g. education, culture, economic development, etc.). For example, in order to decide whether or not to open a mine, many elements concerning the consequences on air quality, public health, tourism and social issues should be considered carefully.

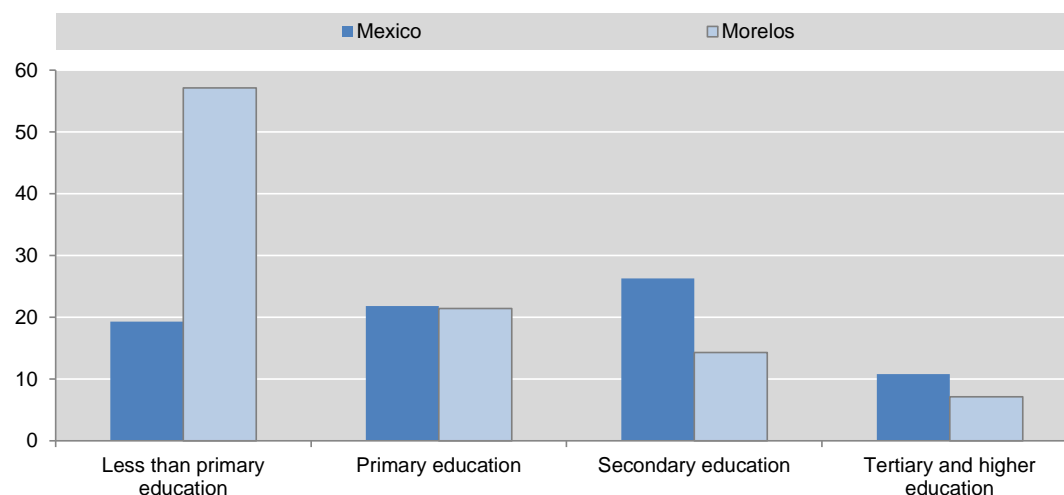
Complementarities among well-being dimensions can be measured, at least partially, by specific indicators that account for two well-being dimensions at the same time (cross-dimensional indicators). These indicators are the combination of two well-being dimensions, where the first is measured along the distribution of the second one. Table 3 presents a short list of cross-dimensional well-being indicators that can complement the dashboard discussed in Table 2. The main advantage is that these measures can help monitor complementarities among policies and well-being dimensions as well as monitor specific issues or groups of people. For example, the share of households that devote 30% or more of their income to energy consumption allows income and environmental dimensions (energy consumption) to be taken into account. The hypothesis is that household income can affect the type and quantity of energy consumption through various channels (e.g. greener and more expensive technologies, etc.). In the case of Morelos, a useful measure that accounts for health and education is the share of obese adult people with no more than primary educational attainment. Another example looks at maternal death rates, which is an important issue in Morelos, by differentiating for the level of education. On this issue, Figure 13 shows that in the state of Morelos, low levels

of education are associated with higher maternal death rates. The list of measures presented in Table 3 is certainly not exhaustive, but it helps focus on specific issues related to regional well-being and for which the issue of complementarity is particularly relevant. As for the set of measures in Table 2, cross-dimensional indicators should be discussed among the state ministries, citizens and the various stakeholders.

Table 3. Possible cross-dimensional well-being indicators

Indicator	Well-being dimension considered	Source
Share of students in primary education with no access to food	Education and material conditions	CONEVAL, INEGI
Diseases of children due to pollution	Health and environmental conditions	–
Share of obese people with no more than a primary education	Education and health	INEGI (ENSANUT)
Life expectancy for low-income earners	Income and health	INEGI
Maternal deaths by level of education	Education and health	INEGI (mortality statistics)
Share of households living in houses not accessible by public transport	Housing and access to services	INEGI

Figure 13. Rate of maternal mortality by level of education, 2012



StatLink  <http://dx.doi.org/10.1787/888933145791>

Source: Authors' elaborations based on INEGI data, www.inegi.org.mx/est/contenidos/proyectos/registros/vitales/mortalidad/descripciones.aspx#.

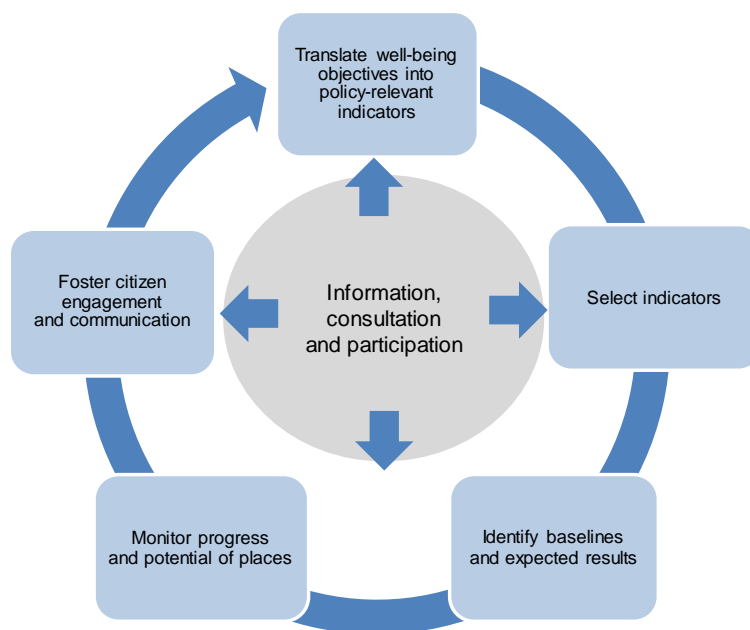
Implementing the well-being measurement agenda

The implementation cycle of well-being measures in Morelos

The development and implementation of regional well-being metrics involves several steps that identify what might be called the regional well-being measurement cycle (OECD, 2014a) (Figure 14). The well-being measurement cycle can serve as an implementation toolkit to compare different regions across the OECD. Carrying out all the phases of this cycle can present different challenges according to the specific objectives of measuring well-being and to the type of actor leading the process. This work can serve to identify some challenges and to strengthen the implementation process, which is currently on-going in Morelos.

The first step in the well-being measurement cycle is the translation of policy goals into well-being dimensions. The state government carried out this step through the elaboration of the PED. The PED first recognises the strengths and challenges of the state in terms of well-being and then provides an integrated strategy in five axes, along with a large set of measures. Most of the indicators are linked to the specific strategic axes built after having agreed on the main challenges of the state in terms of well-being. A strong point of the well-being strategy in Morelos is that the PED introduced both perception and “objective” indicators. Both types of measures should be monitored and communicated, as they affect one another (De Neve et al., 2013).

Figure 14. **Regional well-being measurement cycle**



Source: OECD (2014), *How's Life in Your Region?*, OECD Publishing, Paris.

A key and cross-cutting element in the well-being measurement cycle is the consultation process. The state of Morelos actively involved institutional partners and citizens in the process. Community surveys and social network platforms were used by different ministries in order to gather input on the strategic choices and feedback on the

main well-being challenges in the state. This consultation was limited to the preliminary phases of the PED and it seems to have ended afterwards. However, the recently approved Social Development Law provides that the monitoring and evaluation of social policies involve civil society through the Citizen Observatory of Social Development. In addition, the State Commission for the Evaluation of Social Development was introduced as a major mechanism to promote citizen participation and involvement in the work of the government.

The use of well-being measures in Morelos is facilitated by the fact that the state government has clear leadership in fostering the well-being agenda, and also the capacity and legitimacy to take action. The competences on education, health, safety and social infrastructure allow the state to identify and implement a comprehensive strategy, which is not always the case for sub-national governments in OECD countries. The PED also provides an integrated approach that prevents institutional conflicts as well as policy and programme incoherence among the different relevant sectors. In this respect, the PED acknowledges the complementarities across policies and well-being dimensions and uses these complementarities to foster the well-being agenda of the state.

The indicators identified in the PED, however, include some possible limitations that can challenge the actual and effective use of these measures in policy. First, there are too many indicators for each axis. Without any hierarchical structure or system of weights, the assessment of the actual situation in Morelos and its communication can be difficult. Second, the link between some strategic composite indicators, such as the CONEVAL Poverty Index or the Human Development Index, is not entirely clear or connected enough to the PED's five axes. Clarifying these links is important, especially if these composite indicators are to be eventually used as a global assessment of well-being in Morelos. It is therefore necessary to focus on a selected number of indicators that are used for the single axes, since they have a better chance to catch the actual specificities of Morelos and the progress on the well-being of people.

The set of indicators in the PED presents quantitative targets to be achieved by the end of the government mandate in 2018. The main purpose is to monitor progress in the different strategic axes through a commitment to a transparent system of assessment. Among the seven case study regions analysed in the OECD Regional Well-being project, Morelos is the only one that identified specific targets for each well-being measure. Indicators and targets could then help citizens to assess government action through a transparent system that also builds on quantitative measures. However, in the case of Morelos, indicators are not associated to a specific policy, but to the overall government results. This is different from a situation in which, for example, indicators are used for allocating resources to specific places, according to the achievement of certain targets, whereas when targets are not met, resources are not allocated.

Identifying targets is a useful and powerful exercise, but it must be robust. This is not always an easy task, especially when the indicators considered are numerous. Setting precise values to be achieved for each indicator requires at least a previous overall assessment of the current situation and of the feasibility of the objectives, the involvement of the scientific community and consultation with citizens and other stakeholders from civil society. In the case of Morelos, the extent to which all these different steps were carried out during the elaboration of the PED is not entirely clear. This issue needs careful consideration, since the identification of targets also needs to provide information on what happens if such targets are not met. While the use of

indicators is a good way to increase transparency and trust, too many targets and measures can be confusing and make assessments on the targets difficult to carry out.

The last phase considered in the well-being measurement cycle is the monitoring of progress over time and the communication of the results achieved. This phase is strongly connected and linked to the consultation process, since both monitoring and communication, to be effective, need to be shared with citizens and other relevant stakeholders. While the development strategy of Morelos provides objectives, actions and indicators to measure the progress, it is not clear how the monitoring process will be carried out. In this respect, it would be useful to involve citizens through, for example, the provision of updated information on a dedicated website. INEGI could help by preparing the infrastructure for the interpretation and communication of data, which should be open to everyone free of charge. This type of communication would complement the regular meetings organised between the government and the civil society.

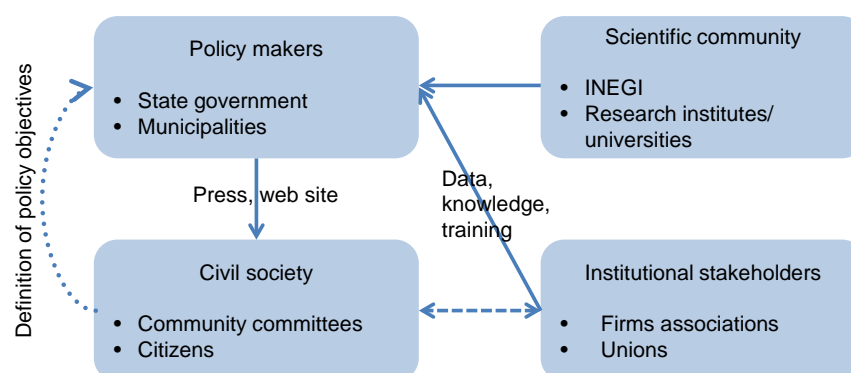
Consultation process in a multi-level governance framework

The state of Morelos was the leading actor in devising and launching the strategic axes along with a battery of indicators. The PED was elaborated following a networked government approach (*gobierno en red*) – formalised by law in early 2013 – which focuses on citizens' participation and co-ordination across governments and policy sectors. An effective horizontal co-ordination among the different state ministries yielded a development plan that is actually integrated and that accounts for complementarities. In contrast, the vertical relationships with other layers of government are less evident. Municipalities are important levels of government that should participate actively in the design of policy under a well-being agenda and hence a genuine dialogue with the state is important. At the same time, municipalities need to improve their capacity to implement local policies and to use indicators to assess and monitor the progress of well-being outcomes in their territories. Capacity can vary widely across municipal governments, also depending on their size, with larger municipalities often having more resources and technical capabilities. The implementation of the PED in Morelos needs to rely on effective co-ordination mechanisms between the state and municipalities. This is particularly true for metropolitan areas, where different municipalities can be highly integrated in economic and social terms. In this respect, the strong socio-economic interdependence among the municipalities that constitute the two FUAs of Cuernavaca and Cuautla requires vertical co-ordination with the state and horizontal co-ordination among municipalities.

An intense interaction of the state government with relevant stakeholders is a crucial aspect to consider for an effective and integrated well-being agenda. The preparations of the PED engaged many different actors in dialogue through a hearing process, meetings and forums (Figure 15). As an example, the education sector in the state was involved in the consultation forums organised for developing the PED. These consultation forums were convoked to account for the main demands and needs of the citizens related to education and to highlight the main challenges. This dialogue involved several community committees (*comités comunitarios*), which are local structures of citizens that help identify and prioritise the needs of a given community in various sectors. Presidents of community committees are often municipal mayors. Although the state government does not allocate specific resources to promote the participation of civil society, it tries to involve community committees in the various phases of the policy cycle. For example, the health committee participated directly in the definition of the objectives elaborated in the PED. The state also organises citizen consultation forums. On the other hand, citizens

seem to remain less solicited in the current setting of the State Development Plan. After the elaboration of the PED, however, the interaction between the state and the other actors is based mainly on weekly press conferences organised by the government. The link with the well-being agenda is, however, not necessarily included in this communication strategy.

Figure 15. **Involvement of different stakeholders in Morelos' development strategy and well-being agenda**



Source: OECD elaboration based on answers of the state of Morelos to the OECD questionnaire.

A crucial stakeholder in the well-being agenda of the state of Morelos is INEGI. The first contribution of INEGI is clearly that of providing all the statistical information and knowledge that is essential to carry out a well-being strategy that uses indicators. However, the role of INEGI does not end with quality, accurate and timely data provision, since its final aim is to contribute to national development.²⁷ Its activities also include the building and diffusion of knowledge in the country. INEGI is very active in promoting the use of statistical information in policy, also through specific initiatives, such as providing training to policy makers. Other crucial stakeholders in Morelos' well-being strategy are universities and nationally relevant research institutes, which actively participated in the citizen's dialogue forums for the elaboration of the State Development Plan, but have not been actively involved in the consultation process of the well-being agenda. Universities and research institutes provide an important contribution in generating knowledge with stronger relationships with INEGI and the other stakeholders in the education domain. They could help evaluate policy and monitor the progress of society by building on the large amount of data and knowledge already available.

Conclusions and recommendations

Morelos ranks above the national average in several well-being dimensions. With respect to the other Mexican states, it presents relatively high employment, housing and health outcomes. However, other well-being dimensions appear significantly lower than the OECD average and this gap has not been reduced substantially over the last decade. Improving personal safety is a priority for the state, in particular as the safety issue is related to other well-being dimensions. Unmet social needs contribute to a less safe environment, which in turn can hinder economic activities and trust.

The state of Morelos is trying to implement its integrated State Development Plan (PED) that aims to build a society that guarantees the rights of citizens and to improve their quality of life. Both the design and the implementation of the state strategy foresee the use of indicators in order to assess the actual well-being conditions in Morelos and their evolution over time. The PED introduces a wide spectrum of indicators for which targets were identified and are to be achieved by 2018. One challenge is that not all of the objectives set in the PED have the same time horizon. Some of the objectives are actually only achievable in a longer time span than the six years of the government mandate. In addition, it is necessary to identify a selection of a few headline indicators that reflect the policy priorities. A set of indicators tailored on the specificities of Morelos was provided by adapting the OECD Regional Well-Being Framework with the five-axis strategy of the PED.

In order to improve the effectiveness of the implementation of the development strategy in Morelos through a better use of well-being metrics, the following recommendations should be considered.

Select the right indicators

- Use headline indicators. It is important to keep using separate indicators for the various well-being dimensions in order to increase accountability and help monitor progress of the different aspects of well-being. In order to carry out meaningful assessments of well-being conditions in Morelos, it is necessary to identify priorities and select a limited number of well-being indicators to be integrated and emphasised in the PED. These indicators should be the ones used in the selection of targets and for communication. This does not prevent using a larger set of measures for assessing the challenges and potentialities in a place and to help design policy.
- Combine perception and objective indicators. The assessment of well-being can consider both perception indicators and objective ones. These two types of indicators should be combined, especially with respect to specific well-being dimensions, such as safety. Perception indicators can help policy makers identify the major needs in a particular dimension and the actual satisfaction of citizens with respect to the government action. On the other hand, objective indicators are useful tools to assess the actual conditions in a given place and are easier to compare with international peers.
- Consider the use of cross-dimensional indicators. The well-being metrics should not only reflect the specific objectives set in the State Development Plan, but should also take into account as much as possible the potential complementarities among well-being dimensions. In this respect, cross-dimensional well-being indicators can be complementary tools to assess specific issues, such as the link between education and health policy.

Set an effective communication strategy

- Create a communication platform. The current situation of people's well-being in Morelos should be communicated to citizens as well as to all other stakeholders through a dedicated platform, such as a website on Morelos's well-being. This platform should be easily accessible and connected to the priorities identified by the government. Better communication can help the actual use of indicators for policy purposes as well as achieve higher levels of transparency, which can in turn improve trust and general well-being conditions in the state. Regular consultations with civil society and other stakeholders could also be useful after results are communicated, as it was done in other OECD regions (e.g. province of Rome).
- Focus on a positive narrative. Greater ownership by the various stakeholders on the use of well-being measures can be achieved by emphasising a positive narrative in choosing the indicators. While poverty and deprivation are crucial issues to be considered, well-being measures should possibly point to positive aspects to be improved. Well-being should be communicated with respect to the overall achievements rather than only on problems. Similarly, well-being measures and the way they are communicated should focus on the whole population rather than only on those that are worst off.
- Promote open data. The use of open data should be fostered in order to allow citizens and all stakeholders to compare experiences and to measure well-being conditions in their communities. The state government could make administrative data available, while INEGI could play a twofold role. First, it could provide a website that could also be used for the other states. Second, it could help make sense of data available by training policy makers on how to use the available data. This represents an opportunity to improve the measurement and effectiveness of government action and to engage citizens.

Engage all relevant stakeholders

- Strengthen leadership and co-ordination. In order to ensure an effective implementation of well-being metrics in policy making, it is important that the state – through its Ministry of Finance – strengthen its co-ordination role to move an integrated well-being agenda forward, in order to build more coherent and effective policies.
- Encourage dialogue with municipalities and other actors. Municipalities should be involved more in the implementation of the state's well-being strategy through a more effective alignment of objectives, through better communication and capacity-building initiatives. The state could set up meetings with municipalities, as well as with other stakeholders, to discuss whether the objectives and actions of the state government are relevant to them and to decide how to address the major issues. For example, building a forum where municipalities and the state meet, as it happens between municipalities and the federal state, might constitute an effective solution. Similarly, actors from the scientific community, such as universities and research institutes, have the potential to build knowledge and improve both the design and implementation of the state's strategy. These actors should be included in the discussions on well-being in Morelos, from the definition of objectives to the monitoring activities for the government actions.

Notes

1. This case study received the financial support of the Ministry of Finance (*Secretaría de Hacienda*) of the government of Morelos and INEGI. The report was prepared by Paolo Veneri with inputs from Monica Brezzi, Eric Gonnard, Soo-Jin Kim and Maria Varinia Michalun (OECD). This report would not have been possible without the help and support of the team from the Ministry of Finance (*Secretaría de Hacienda*) of the government of Morelos (Adriana Flores, Paola Gadsden, Maria Rosa Hermida Cruells and colleagues) and from INEGI (Norberto Roque, Alberto Trillo, Oscar Gasca Brito, Jessica Melendez and colleagues).
2. All values are average values of forecasted rates between 2014 and 2020.
3. A visualisation of regional well-being according to this framework has been made available through a dedicated web-tool, which is available at: www.oecdregionalwellbeing.org.
4. Satellite-derived surface PM_{2.5} concentration dataset, annual mean. See as a reference: Van Donkelaar et al. (forthcoming).
5. Elaborations from the *Income Distribution Database*. Data are regional estimates from national income surveys. See OECD (2014a).
6. State Statistical Yearbooks, INEGI.
7. All OECD countries were included in this measurement, with the exception of Estonia, Ireland, Korea, Luxembourg and Portugal for reasons of data availability.
8. All OECD countries were included in this measurement, with the exception of Estonia, Hungary, Ireland, Korea, Luxembourg and Portugal for reasons of data availability.
9. Elaborations using information from Consulting System of State Statistical Yearbooks, INEGI.
10. The OECD value refers to 2013.
11. The OECD value refers to 2013.
12. INEGI, following the standards of the International Labour Organization, defines the rate of labour informality (TIL 1) as the sum, without duplication, of those who are occupationally vulnerable for the economic unit for which they work, with those whose labour dependency is not recognised by their employers over total population. This rate also includes those that work in unregistered or informal micro-enterprises or who are self-employed in subsistence agriculture, as well as employees working without the protection of the social security sector.
13. INEGI, National Survey of Employment (ENOE), Labour informality, basic indicators, Q1 2014.
14. Data refer to 2012.
15. Data refer to 2012.
16. Data refer to 2012.

17. For more information about this indicator see Márquez (2000).
18. Source: INEGI, <http://cuentame.inegi.org.mx/poblacion/esperanza.aspx?tema=P> (last accessed June 2014).
19. ENLACE annual results 2008-2013 Morelos, SEP.
20. Source: Estimates by CONEVAL based on INEGI data. ENIGH, several years.
21. Source: INEGI, www3.inegi.org.mx/sistemas/sisept/default.aspx?t=mviv36&s=est&c=26565.
22. Ordinary crimes (*delitos del fuero común*) include robbery, homicide, kidnapping, sexual offences, fraud, threats, etc. On the other hand, crimes of federal relevance include drug trafficking, tax evasion, environmental crimes, money laundering, etc.
23. Source: INEGI, Statistics of State and Local Public Finance.
24. Source: CONEVAL, Evolution of national and states poverty and extreme poverty 2008-2012.
25. CONEVAL estimations based on XII Censo de Población y Vivienda 2000. II Conteo de Población y Vivenda 2005, and Censo de Población y Vivienda 2010.
26. www.oecd.org/pisa.
27. 2008 Law of the National System of Statistical and Geographical Information.

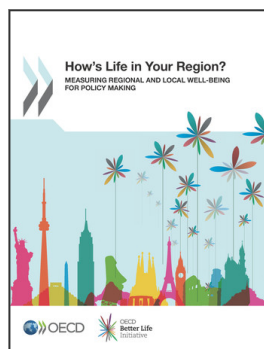
Bibliography

- Binelli, C. and M. Rubio-Codina (2013), “The returns to private education: Evidence from Mexico”, *Economics of Education Review*, Vol. 36(C), pp. 198-215.
- Boarini, R., et al. (2012), “What makes for a better life: The determinants of subjective well-being in OECD countries: Evidence from the Gallup World Poll”, *OECD Statistics Working Paper*, No. 2012/03, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k9b9ltjm937-en>.
- Brandt, N. (2011), “Informality in Mexico”, *OECD Economics Department Working Papers*, No. 896, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5kg3nznlp1vmq-en>.
- Castañeda, L.C. and J.E. Pardinas (2012), “Sub-national revenue mobilization in Mexico”, *IDB Working Paper Series*, No. IDB-WP-354, <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=37275683>.
- CONAPO (National Population Board) (2014), “Projections on population 2010-2050”, available at: www.conapo.gob.mx/es/CONAPO/Proyecciones_Datos (last accessed in April 2014).
- Cornaglia, F. and A. Leigh (2011), “Crime and mental well-being”, *CEP Discussion Paper*, No. 1 049, April, <http://cep.lse.ac.uk/pubs/download/dp1049.pdf>.
- Cutler, D.M. and A. Lleras-Muney (2006), “Education and health: Evaluating theories and evidence”, *NBER Working Papers*, No. 12 352, National Bureau of Economic Research, Inc.
- Dasgupta, P. (2004), *Human Well-Being and the Natural Environment*, Oxford University Press.
- De Neve, J.-E., et al. (2013), “The objective benefits of subjective well-being”, *CEP Discussion Paper*, No. 1 236, London School of Economics, London, <http://cep.lse.ac.uk/pubs/download/dp1236.pdf>.
- Dougherty, S.M. and O. Escobar (2013), “The determinants of informality in Mexico’s states”, *OECD Economics Department Working Paper*, No. 1 043, OECD Publishing, Paris, April, www.oecd.org/economics.
- Escobar Gamboa, O.R. (2013), “Foreign direct investment (FDI) determinants and spatial spillovers across Mexico’s states”, *The Journal of International Trade & Economic Development*, Vol. 22, No. 7, pp. 993-1 012.
- Gaigné, C. and Y. Zenou (2013), “Agglomeration, city size and crime”, *CEPR Discussion Papers*, No. 9 430.
- Government of Mexico (2013), *Plan Nacional del Desarrollo 2013-2018*, Mexican Government Publishing, Mexico.
- Government of Morelos (2013), *Plan Estatal de Desarrollo 2013-2018*, Government of Morelos Publishing.

- Harberger, A.C. and S. Guillermo-Peon (2012), “Estimating private returns to education in Mexico”, *Latin American Journal of Economics*, Vol. 49, No. 1, pp. 1-35.
- INEGI (2014), “Encuesta Nacional de Ocupación y Empleo (ENOE)”, informality indicators, INEGI, Mexico, available at: www.inegi.org.mx/est/contenidos/Proyectos/encuestas/hogares/regulares/enoe.
- INEGI (2013a), “Encuesta Nacional de Victimización y Percepción sobre Seguridad Pública 2013” (ENVIPE), INEGI, Mexico.
- INEGI (2013b), “Estadísticas a propósito del día mundial de la diabetes”, INEGI, Mexico, www.inegi.org.mx/inegi/contenidos/espanol/prensa/contenidos/estadisticas/2013/diabetes0.pdf (last accessed in April 2014).
- INEGI (2012), “Encuesta Nacional de Ingresos y Gastos de los Hogares” (ENIGH), Mexico, available at: <http://www.inegi.org.mx/est/contenidos/Proyectos/encuestas/hogares/regulares/enigh/> (last accessed in August 2014).
- INEGI, SEDESOL, SEGOB, CONAPO (2012), *Delimitación de las Zonas Metropolitanas de México 2010*, Edición 2012, INEGI, SEDESOL, SEGOB, CONAPO, Mexico and Aguascalientes, www.inegi.org.mx/Sistemas/multiarchivos/doc/702825003884/DZM20101.pdf.
- Lochner, L. and E. Moretti (2004), “The effect of education on crime. Evidence from prison inmates, arrests, and self-reports”, *American Economic Review*, Vol. 94, No. 1, pp. 155-189.
- Machin, S., O. Marie and S. Vujčić (2011), “The crime reducing effect of education”, *Economic Journal*, Vol. 121, No. 552, pp. 463-484.
- Márquez, G. (2000), “Vegetación, población y huella ecológica como indicadores de sostenibilidad en Colombia”, *Gestión y ambiente*, No. 5, pp. 33-49, Universidad Nacional de Colombia, Medellín.
- Milligan, K., E. Moretti and P. Oreopoulos (2003), “Does education improve citizenship? Evidence from the U.S. and the U.K.”, *National Bureau of Economic Research Working Papers*, No. 9 584.
- Ministry of Finance and Public Credit (Secretaría de Hacienda y Crédito Público) (2013), “Presupuesto ciudadano 2013”, www.hacienda.gob.mx/EGRESOS/Presupuesto%20Ciudadano/Presupuesto%20Ciudadano%202013%20Final.pdf.
- Moretti, E. (2004), “Human capital externalities in cities. Handbook of Regional and Urban Economics”, In: Henderson, J.V. and J.F. Thisse (ed.), *Handbook of Regional and Urban Economics*, Elsevier, pp. 2 243-2 291.
- OECD (2014a), *How's Life in Your Region? Measuring Regional and Local Well-being for Policy Making*, OECD Publishing, Paris.
- OECD (2014b), *National Housing and Urban Policy Review of Mexico*, OECD Publishing, Paris, forthcoming.
- OECD (2014c), *OECD Regional Statistics* (database), <http://dx.doi.org/region-data-en>.
- OECD (2013a), *OECD Regions at a Glance 2013*, OECD Publishing, Paris, http://dx.doi.org/10.1787/reg_glance-2013-en.

- OECD (2013b), *OECD Territorial Reviews: Puebla-Tlaxcala, Mexico 2013*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264203464-en>.
- OECD (2013c), *OECD Economic Surveys: Mexico 2013*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eco_surveys-mex-2013-en.
- OECD (2012), *Redefining “Urban”: A New Way to Measure Metropolitan Areas*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264174108-en>.
- OECD (2011), *How’s Life? Measuring Well-being*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264121164-en>.
- OECD (2006), *Measuring the Effects of Education on Health and Civic Engagement. Proceedings of the Copenhagen Symposium*, OECD Publishing, Paris, www.oecd.org/education/innovation-education/37437718.pdf.
- OECD (2000), *Trust in Government: Ethic Measures in OECD Countries*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264187986-en>.
- OECD/IMCO (2013), *Strengthening Evidence-Based Policy Making on Security and Justice in Mexico*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264190450-en>.
- Piacentini, M. (2014), “Measures of income inequality and poverty at the regional level in OECD countries”, paper presented at the OECD Working Party on Territorial Indicators, 9 April 2014, Paris.
- Scitovsky, T. (1976), *The Joyless Economy. An Inquiry into Human Satisfaction and Consumer Dissatisfaction*, Oxford University Press, London.
- SEDESOL (Secretaría de Desarrollo Social de México) (2012), *La Expansión de las ciudades*.
- SESNSP and SEGOB (2014), “Tasas por cada cien mil habitantes 1997-2014”, Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública and Secretaría de Gobernación, May, available at: www.secretariadoejecutivosnp.gob.mx/work/models/SecretariadoEjecutivo/Resource/1/1/tasas100milhab.pdf.
- 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*, No. 2013/01, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5k4840hfpwkb-en>.
- State of Morelos (2014), “Background questionnaire for the OECD Regional Well-being project”, Morelos, Mexico.
- Uslaner, E.M. and M. Brown (2005), “Inequality, trust, and civic engagement”, *American Politics Research*, Vol. 33, No. 6, pp. 868-894, <http://dx.doi.org/10.1177/1532673X04271903>.
- Van Donkelaar, A., et al. (forthcoming), “Global fine particulate matter concentrations from satellite for long-term exposure assessment”, *Environmental Health Perspectives*, forthcoming.
- Veneri, P. (2014), “Urban spatial structure in OECD cities: Is urban population decentralising or clustering?”, *OECD Regional Development Working Papers*, OECD Publishing, Paris, forthcoming.

- White, M.P., et al. (2013) “Would you be happier living in a greener urban area? A fixed-effects analysis of panel data”, *Psychological Science*, Vol. 24, No. 6, pp. 920-928.
- Wilson, S. and G. Walker (1993), “Unemployment and health: A review”, *Public Health*, Vol. 107, pp. 153-162.



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