Regional statistical data on measuring progress

The OECD approach "How's Life? – Measuring Well-Being"

1. Preliminary remarks

Measuring progress is a key and overarching priority area of the OECD. In recent years, it has laid all of the foundations – organisational, technical, methodological and content-related aspects – that are required in order to measure progress and has discussed important partial steps with representatives from the areas of politics, academia and official statistics at so-called global forums. As part of its report "How's Life?", the OECD has now presented an indicator-based strategy for measuring progress using information provided at member country level. Given its social mandate as a provider of information and its generally acknowledged reputation, official statistics should be the main data supplier. The aim is to enable citizens, as well as the fields of politics, academia and business, to use statistical data in order to gain a better understanding of the growing complexity of social, economic and ecological processes and their impact not only on the lives of individuals, but also on society as a whole.

Based on the set of indicators for measuring progress in material living conditions and their determinants, as presented in the report entitled "How's Life?", the aim of this paper is to illustrate the extent to which the official statistics programme is able to provide a study for Germany based on a specific area, namely at the level of administrative districts. Taking the OECD indicators as a basis, the situation for Germany – in particular for selected towns, both big and small – is described in greater detail. Since Germany and Europe already have long-established overarching policy programmes in place which are both generally accepted and supported by statistical monitoring – of particular note here are the national sustainability strategy "Sustainable Development in Germany" and the European strategy "Europa 2020" – the OECD approach is, where necessary, to be supplemented by indicators for selected towns. Using the available data in each case, various evaluation options – namely tabular, geographic and cartographic – are employed with the following two objectives: first, the possibilities and limitations of the informational value derived from the OECD's progress indicators and approximate solutions are to be presented for specific areas; second, the potential to analyse indicators based on the freely accessible and free to use range of federal statistical data is presented to potential users, and ideas and suggestions for further analyses are to be proposed .

For some time now, the OECD has been working on the development of indicators to describe and record progress and well-being, at both macroeconomic and microeconomic level, building on approaches already in place[1]. The project is a result of the realisation that traditional and generally accepted statistics, in particular gross domestic product (GDP), fail to provide comprehensive data on progress and well-being. The OECD has therefore introduced a holistic approach, which is also designed to provide a framework for already established sets of indicators at national, supra-national and international level.

Initial proposals on this approach are included in the OECD publication entitled "How's Life? – Measuring Well-Being" [2]. Its aim is not only to give a more detailed description of a particular nation's or region's economic capacity, but also to consider the living conditions of the population living and working there, as well as the respective environmental conditions. The approach is based on an expert report by the Stiglitz-Sen-Fitoussi Commission [3], established by the former French President Nicolas Sarkozy in 2008 and which in 2009 presented its report on measuring progress, including at the OECD's 3rd World Forum in Busan, Korea. With the approach adopted in "How's Life", the OECD follows up on the recommendations of this Commission. Based on academic research and a number of concrete initiatives developed around the world, the Commission has identified the following key dimensions that should be taken into account when defining well-being [4]:

- Material living standards (income, consumption and wealth);
- Health;
- Education;
- Personal activities, including work;
- Political voice and governance;
- Social connections and relationships;
- Environment (present and future conditions);
- Insecurity, of an economic as well as a physical nature.

Entitled "Measuring Well-Being for Development and Policy Making", this approach was the subject of the 4th OECD World Forum on Statistics, Knowledge and Policy, held from 16 to 19 October 2012 in New Delhi/India. Around 1,000 representatives from 80 countries, from the fields of politics, academia and statistics, held in-depth talks on various points, based on best practices, current academic findings and practical experiences in both industrialised and developing countries. Included in these discussions was praise for the OECD approach, not only as regards its implementation for various political systems and regions of the world, but also for its suitability as a framework for already existing systems of indicators for carrying

1 A review was already carried out for the 3rd OECD World Forum in Busan [1].

out comprehensive measurements of progress in the broader sense, as well as for its further development, especially at supranational and international level. Besides a series of sustainability approaches which are more environmental in focus[2], of particular note here are the works of the European Union on the basis of the European Commission's communication entitled "GDP and Beyond"[3] as well as that of the European growth and employment strategy "Europa 2020"[4], including the addition of an environmental dimension under the European Union Sustainable Development Strategy (Sustainable Development Indicators (SDI)).[5] At international level, another approach of note is the United Nations (UN) Millennium Development Goals (MBG), which are currently being evaluated and modified [5]. All of the above focus on realigning objectives and the addition, in particular, of environmental aspects with a view to sustainable development. The new integrated approach is to be approved by the UN General Assembly before the end of 2013 and implemented in 2016.

Even though the various approaches at supranational and international level have different objectives and points of focus, from a statistical perspective they share many common traits. For instance, the OECD approach on measuring progress displays a number of parallels to the German federal government's strategy entitled "Sustainable Development in Germany", which was implemented over a decade ago. Sustainable development has been a fundamental principle of Germany's policy since 2002 [6, p. 12]. It is an approach that is both inclusive and intergenerational in character. All dimensions – society, the economy and the environment – are considered from a number of different perspectives such as "Intergenerational equity", "Quality of life", "Social cohesion" and "International responsibility", and the effects are studied not only for the current generation but for future generations as well. For the aforementioned dimensions, a total of 21 separate domains and 38 targets and indicators were drawn up and quantified. The national sustainability strategy is revised regularly, based on the "Sustainable Development in Germany Indicator Reports" [7] published every two years by the Federal Statistical Office. The German federal government's progress report is published at less regular intervals: the third progress report was adopted in 2012[6] [8].

Comparing the statistical indicators selected for monitoring under the National Sustainability Strategy with those for the European Union's "Europa 2020" and the OECD's "How's Life" strategies in particular, the contents of the two highest levels of each strategy are shown in the summary below (Overview 1):

Overview 1 **Measuring progress "in the broader sense" for Germany, the European Union and the OECD**

System	Domain	Indicators
Sustainable Development in Germany (D)	Intergenerational equity	Resource conservation, Climate protection, Renewable energy sources, Land use, Species diversity, Government debt, Provision for future economic stability, Innovation, Education and training
	Quality of life	Economic output, Mobility, Farming, Air quality, Health and nutrition, Crime
	Social cohesion	Employment, Prospects for families, Equal opportunities, Integration
	International responsibility	Development cooperation, Opening markets
Europa 2020 (EU)	Smart growth	R&D investment volume ≥3% of GDP, School drop-out rates≤10%, 30-34-year-olds with third level education≥40%
	Sustainable growth	Share of renewable energy sources≥20%, 20% increase in energy efficiency, 20% reduction in greenhouse gas emissions
	Inclusive growth	School drop-out rate≤10%, Employment rate for women and men aged 20-64≥75%, Reduction in the number of people affected by poverty or social exclusion by 20 million
How's Life? Measuring Well-Being (OECD)	Material living conditions	Income and Wealth, Jobs and Earnings, Housing conditions
	Quality of life	Health status, Work-life balance, Education and skills, Social connections, Civic engagement and governance, Environmental quality, Personal security, Subjective well-being

2 An overview and further information is available at ec.europa.eu/environment/eussd/. These will not be given further consideration in this paper.

3 See also the European Commission website www.beyond-gdp-eu/

4 Europa 2020 is the current European growth and employment strategy and is the successor to the Lisbon Strategy, which was in place between 2000 and 2010; see also ec.europa.eu/europe2020/index_de.htm

5 Because of the specific, complex and comprehensive approach, the latter will not be addressed further. For the objective, see also the Communication from the Commission to the European Council: Partnership for Integration; a strategy for Integrating Environment into EU Policies, COM (1998) 333 final, Brussels, 27.5.1998. A critical appraisal on the strategy and the indicators is included, for example, in the report by Adelle, C.; Pallemaerts, M.: Sustainable Development Indicators – An Overview of relevant Framework Programme funded research and identification of further needs in view of EU and international activities, published by the European Commission, European Research Area, n.p. 2010.

6 See also [8] and the further information given there.

Overview 2 **A comparison of sustainability and progress indicator systems for the OECD, Europe and Germany**

Indicator system	Indicators		Targets	Focus		Elements	Aggregate indicator
	objective*	subjective**		micro-economic	macro-		
How´s life	x	x	–	x	–	2 domains, 22 headline indicators and 27 secondary indicators	is desired
Europa 2020	x	–	x	–	x	3 priorities, 5 targets 8 indicators	–
Sustainable Development in Germany	x	–	x	–	x	4 domains 21 indicator areas with a total of 38 individual indicators	–

* can be counted, measured, weighted.

** based on individual preferences, estimates

Although there are differences in the way the indicators are defined and assigned, the various levels share a number of core elements:

- material living conditions;
- health;
- level of education;
- social cohesion;
- economic output, especially their innovative capacity;
- protection of the climate and natural resources.

A comparison of the three approaches from conceptual perspectives is shown in Overview 2.

While the "How's Life" approach from the OECD is open in terms of target attainment, both the national sustainability strategy "Sustainable Development in Germany" and "Europa 2020" are associated with politically established targets. Furthermore, in the case of "Europa 2020", the targets given above are accompanied by so-called flagship initiatives, which in some cases are associated with further extensive sets of indicators[7] [9, 10]. There are also differences with regard to the level of abstraction. In the case of "Europa 2020", analysis is primarily from the perspective of the overall economy. The aim of the OECD, however, is to analyse "individual well-being".

At national level, Germany has defined the strategy of sustainable development as a guiding principle of its policy approach. The country's federal structure means that a number of relevant approaches have been formed in some Länder, as well as in selected municipalities and regions. At a workshop of the German Council for Sustainable Development held on 7 November 2007 and attended by experts from the 16 Länder, there was a broad consensus regarding the principal fields and indicators for describing in particular ecological developments. It is assumed that consistent data frameworks will be created in the foreseeable future, at least for some of the indicators included in the sustainability strategies[8] [11].

As a result of the substantive debate on social welfare, individual well-being and sustainable development, primarily in connection with GDP as a growth indicator – in Germany, other countries as well as internationally and supranationally –, at its 77th sitting on 1 December 2010, the German Bundestag decided to appoint a Study Commission on "Growth, Well-being and Quality of Life – Paths to Sustainable Economic Activity and Social Progress in the Social Market Economy" [12]. The aim of the Commission – independent of the geographical dimension – is first to examine the importance attached to growth in the economy and society, and second to develop a holistic indicator of well-being and progress. This aims to "… establish a suitable means of evaluating political decisions on the basis of economic, ecological and social criteria" [12, p. 3] taking account of the following aspects:

- material standard of living;
- access to and quality of work;
- social distribution of prosperity, social inclusion and cohesion;
- intact environment and availability of limited natural resources;
- educational opportunities and levels of education;
- health and life expectancy;
- quality of essential public services, social security and political participation;
- people's subjectively experienced quality of life and satisfaction [12, p. 3].

Initial considerations regarding the design of a comprehensive approach, including core elements and the potential of its informational value, have already been delivered [13].

2. How's Life – the OECD approach

In its approach to measuring progress, the OECD [14, pp. 18 et seqq.] focuses on individual well-being. For the purposes of monitoring, this means that it is primarily statistical data relating to private households and individuals that is required and used. The findings relate in particular to well-being "outcomes", as opposed to input factors.

7 An overview is given in [9], see also [10] for details.

8 See also the comments of the Council for Sustainable Development on the sustainability policy of the Länder [11].

The approach focuses on the distribution of well-being components across different social groups. Furthermore, it will consider both objective and subjective aspects of well-being. Objective criteria, i.e. those that can be physically measured, are essential in order to give a neutral assessment of people's actual living conditions and quality of life. These are supplemented by subjective criteria which are used to take account of citizens' feelings, opinions and attitudes (Figure 1).

The determinants of material living conditions are given as:

- Income and wealth;
- Jobs and earnings;
- Housing.

Components of quality of life are:

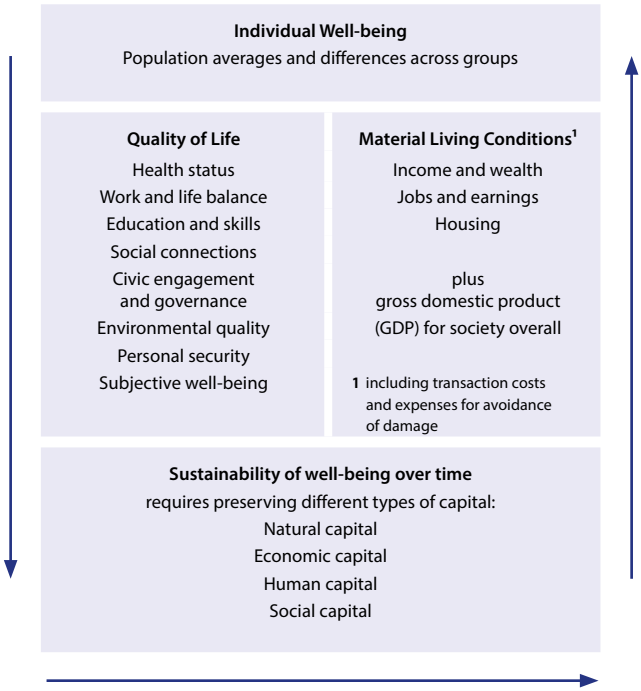
- Health status;
- Work and life balance;
- Education and skills;
- Civic engagement and governance;
- Social connections;
- Environmental quality;
- Personal security;
- Subjective well-being.

As shown in the box in figure 1 opposite, this set of indicators on the social well-being of the current generation should be supplemented further by other aspects with a view to measuring progress over time; the aspects listed are natural, economic, human and social capital.

The aim is for the indicator system on which the "How's Life" report is based to be developed further so as to incorporate an additional element on "Green Growth". The OECD also aggregates the indicators listed, into what are termed "composite indicators". The relevant methodological preparations have already been in place for some time[9].

The OECD has adopted a pragmatic solution for its approach. The organisation begins by building on existing indicators, primarily from official statistics sources. It distinguishes between "headline indicators" and "secondary indicators". Headline indicators are primarily those that are of sufficiently good quality and can be used for monitoring well-being over time and across countries [14, p. 21]. Secondary indicators provide complementary information at country level. However, there may also be differences in the quality of these indicators to the extent that they are less robust than the so-called headline indicators. Overall, the OECD differentiates between 11 different dimensions (including Subjective Well-Being) with a total of 49 indicators, 22 of which are headline indicators. Most of the objective indicators come from official statistics. The subjective indicators are based mainly on information from other academic institutions or market research and polling institutes.

Fig. 1 **The "How's Life" framework** [14, S. 19]



In the introduction to each dimension in the "How's Life" publication, the OECD uses a table to provide an overview of the meaning of the indicators used and the quality of the underlying statistical data. The headline indicators include

(1) with regard to material living conditions:

- Household net adjusted disposable income per person/(IW I)[10],
- Household net financial wealth per person/(IW II)
- Employment rate/(JE I)
- Long-term unemployment rate/(JE II)
- Average of rooms per person in a dwelling/(HO I)
- Average annual earnings per employee/(JE III)
- Lack of access to basic sanitary facilities/(HO II)

(2) with regard to the quality-of-life:

- Life expectancy at birth/(HSI)
- Self-reported health status/(HS II)
- Employees working very long hours/(WL I)
- Time for leisure and personal care/(WL II)
- Employment rate of mothers with children of compulsory school age/(WL III)
- Educational attainment/(ES I)
- Students' cognitive skills/(ES II)
- Social network support/(SC I)
- Voter turnout/(CEG I)
- Consultation on rule-making/(CEG II)
- Air quality/(EN I)
- Intentional homicides/(PS I)
- Self-reported victimisation/(PS II)
- Life-satisfaction/(SW I)
- Affect balance/(SW II).

9 See the joint publication by the OECD and the Joint Research Centre of the European Commission's Directorate-General for Research and Innovation [15, p. 3].

10 The abbreviations in brackets are the abbreviations of the indicators used in the report. The letters used are the abbreviations for the respective sub-dimension, e.g. "IW I" means the first indicator in the dimension "Income and Wealth".

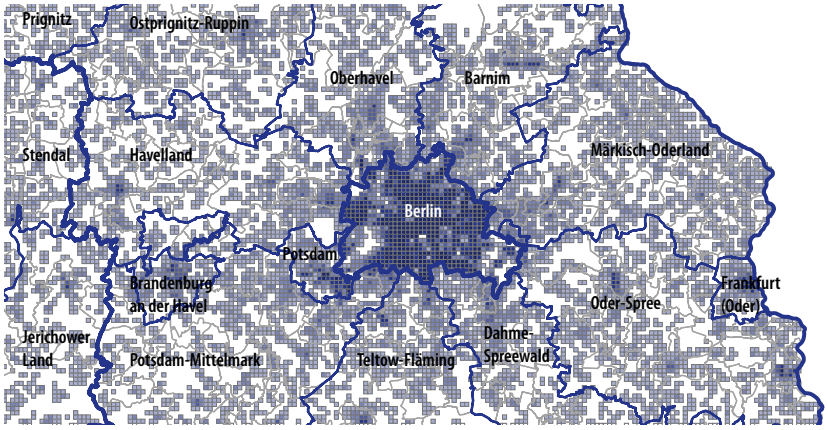
Overview 3 **OECD indicators –"How's Life"**

Headline indicators and secondary indicators			
Material living conditions	Income and Wealth	IW I	Household net adjusted disposable income
		IW II	Household net financial wealth
		iw 1	Household final consumption
		iw 2	Household total consumption
		iw 3	Subjective evaluation of material well-being
	Jobs and earnings	JE I	Employment rate
		JE II	Long-term unemployment rate
		je 1	Involuntary part-time employment
		JE III	Average annual earnings per employee
		je 2	Employees working on temporary contracts
		je 3	Work accidents
	Housing conditions	HO I	Number of rooms per person
		ho 1	Housing cost overburden rate
		HO II	Lack of access to basic sanitary facilities
		ho 2	Satisfaction with housing
Quality of life	Health status	HS I	Life expectancy at birth
		hs 1	Infant mortality
		HS II	Self-reported health status
		hs 2	Self-reported long standing illness
		hs 3	Self-reported limitations in daily activities
		hs 4	Overweight and obesity
	Work and life balance	WL I	Employees working more than 50 hours per week
		WL II	Time for leisure and personal care
		wl 1	Commuting time
		wl 2	Satisfaction with work-life time allocation
		WL III	Employment rate of mothers with children of compulsory school age
	Education and skills	ES I	Educational attainment
		es 1	Education expectancy
		es 2	Lifelong learning
		ES II	Students' cognitive skills
		es 3	Students' civic skills
	Social connections	SC I	Social network support
		sc 1	Frequency of social contact
		sc 2	Time spent volunteering
		sc 3	Trust in others
	Civic engagement and governance	CEG I	Voter turnout
		ceg 1	Participation in political activities
		CEG II	Consultation on rule-making
		ceg 2	Confidence in national government, judicial system, courts and the media
	Environmental quality	EN I	Air quality
		en 1	Environmental burden of disease
		en 2	Satisfaction with the local environment
		en 3	Access to green spaces
	Personal security	PS I	Intentional homicides
		PS II	Self-reported victimisation
		ps 1	Domestic violence on children
		ps 2	Feeling of security
	Subjective well-being	SW I	Life satisfaction
		SW II	Affect balance

With regard in particular to the relevant dimensions and indicators – and irrespective of any objectives associated thereto – the OECD approach is in many respects consistent with the sustainability strategy entitled "Sustainable Development in Germany". Some of the objective indicators are also adopted for monitoring purposes in the national sustainability strategy "Sustainable Development in Germany" and are defined in the same way (e.g. the employment rate, the share of people with a tertiary level of education or selected health indicators such as obesity); other indicators do tend to be the same in principle, although different types of indicator, such as the income situation of men and women for example, are applied. Germany's national sustainability strategy does not use any indicators which provide data relating to the time spent on a particular activity[11] (Overview 3).

11 Information of this kind is provided primarily by time use surveys. In the past, the Federal Statistical Office has conducted two studies, see also [16]. A new time use survey is currently being carried out.

Fig. 2a **Grid based data for Berlin and Brandenburg**



Source: European Forum for Geostatistics: http://www.efgs.info/data/eurogrid/Grid_ETRS89_LAEA_DE_1K.zip/view, chart produced internally.

Fig. 2b **Degree of urbanisation (DegUrb) in Berlin and Brandenburg 2011**

Source: epp.eurostat.ec.europa.eu, chart produced internally.

3. How's life – in Germany

3.1. Preliminary remarks – databasis and regional units

Regional statistical information provided by official statistics and which is comparable nationwide can be accessed relatively easily and free of charge, most notably in joint publications by the Federal Statistical Offices and the statistical offices of the Länder; the two foremost sources of published information are the regional database for Germany ("Regionaldatenbank Deutschland") [17] and the interactive regional atlas [18]. Both of these products essentially contain information on administrative territorial units smaller than the Länder. These include, in particular, information for administrative districts, i.e. for rural districts and towns not attached to an administrative district. Some of the information in the regional database for Germany is available nationwide at municipal level; a comprehensive and current overview of selected data for German municipalities can be found in the List of Municipalities/Information System (GV-ISys) [19]. At European level, regional data for selected towns are offered under the Urban Audit [20] for Europe. The data for Germany are provided by KOSIS-Gemeinschaft Urban Audit in cooperation with the Federal Statistical Office [21].

Except in a very small number of cases, the regional database for Germany is the basis for the analyses below. For 78 different statistics, the database can be used to retrieve numerous characteristics and indicators relating to various areas of society, the economy, environment and public sector. Given that the federal statistics programme is based for the most part on European laws, much of the regional statistical data can also be compared on a Europe-wide basis. The basis for this is the European territorial classification NUTS [22, p. 3], which for Germany includes administrative territorial units ranging from Gemeinde [municipalities] (LAU2) and Gemeindeverbände [associations of municipalities] (LAU1), to Kreise [administrative districts] (NUTS3) and Regierungsbezirke [local government areas]/statistische Regionen [statistical regions] (NUTS2) and Bundesländer (NUTS1)[12].

12 The NUTS classification is updated on a regular basis, at intervals of several years. It provides the basis on which to carry out Europe-wide comparisons – especially at the NUTS2 level – in particular for European regional and social policy.

Given that the different size of administrative territorial units, for example administrative districts, means that they are only of limited suitability for comparison purposes in the various Länder, and even more so in the Member States of the European Union, the OECD and the European Commission together revised the former territorial classification and approved the new classification, under the name "DEGree of URBAnisation" (DEGURBA) in summer 2011[13] [23, 24]. This is based on grid cells measuring 1 km x 1 km. Based on the number of residents and the population density, a calculation is carried out for each cell to determine whether it represents a (1) large urban area, (2) small urban area or (3) rural area. Classification is at the level of the Gemeinde (LAU2). The decisive factor in determining whether an area is assigned to the category of "densely populated" or "thinly populated" is whether more than half of the population lives in correspondingly "densely" or "thinly" populated grid cells. Cells with a population density of at least 500 inhabitants per km² and a minimum population of 50,000 inhabitants are classed as densely populated. A density of at least 100 and a minimum population of 50,000 is classed as an intermediate density area [25]. All regional units which cannot otherwise be assigned are categorised as being "thinly populated".

In view of the fact that, to date, there has been no statutory general regulation in Germany's official statistics regarding the preparation and analysis of statistical data for grid cells – a corresponding legal basis is to be created under the E-Government Act [26] – assignment in the List of Municipalities is carried out on the basis of administrative units. Grid cells are said to have the advantage of offering a more accurate regional classification which offers flexibility as well as stability over time.

For the following spatial surveys on living conditions in Germany, selected data regarding population density will be outlined. These data are based on the indicators, in particular at the level of administrative districts, as proposed in the OECD report "How's Life", and are mainly taken from the regional database and the regional atlas. A more detailed analysis is carried out for towns in Germany that are not attached to an administrative district, as per the territory on 31 December 2011. If the administrative territorial units available within federal statistics are considered as the smallest regional units, this distinction is appro-

13 For a detailed description, see [23]; a brief description can be found under [24].

Tab. 1 **Rural districts and towns not attached to an administrative district on 31 December 2011, by urban-rural typology**

Urban-rural typology[1]	Area	Population	Population density
	km²	Number	Pers./km²
1	17,800	28,932,890	1,625
2	100,754	34,009,378	338
3	238,575	18,901,475	79
1 to 3	357,129	81,843,743	229
		Share in %	
1	*5.0*	*35.4*	•
2	*28.2*	*41.6*	•
3	*66.8*	*23.1*	•
1 to 3	*100*	*100*	•

1 Classification based on population density:
1 = densely populated areas
2 = intermediate density areas
3 = thinly populated areas

Tab. 2 **Selected characteristics in towns not attached to an administrative district, by size of population**

Population size class	Towns not attached to an admin. district	Inhabitants	Area			
			Total	Recreation area	including Green spaces	Living floor space in dwellings
	2011		2010			
	Number		km²			1,000 m²
Towns not attached to an administrative district with… inhabitants						
500,000 and over	13	12,868,277	4,664	398	334	481,087
250,000 – 499,999	13	4,076,914	2,386	145	113	158,132
100,000 – 249,999	42	6,712,916	5,330	284	223	260,400
50,000 – 99,999	24	1,693,322	2,402	86	67	70,479
Below 50,000	15	624,861	1,011	21	15	27,653
Total	107	25,976,290	15,793	934	752	997,751
Germany total	•	81,843,743	357,127	3,985	2,671	3,426,896
	Share of towns not attached to an administrative district in %					
500,000 and over	*12.1*	*49.5*	*29.5*	*42.6*	*44.4*	*48.2*
250,000 – 499,999	*12.1*	*15.7*	*15.1*	*15.5*	*15.0*	*15.8*
100,000 – 249,999	*39.3*	*25.8*	*33.8*	*30.4*	*29.7*	*26.1*
50,000 – 99,999	*22.4*	*6.5*	*15.2*	*9.2*	*8.9*	*7.1*
Below 50,000	*14.0*	*2.4*	*6.4*	*2.2*	*2.0*	*2.8*
Total	*100*	*100*	*100*	*100*	*100*	*100*
	Share of all administrative districts and towns not attached to an administrative district in %					
500,000 and over	*65.0*	*15.7*	*1.3*	*10.0*	*12.5*	*14.0*
250,000 – 499,999	*17.3*	*5.0*	*0.7*	*3.6*	*4.2*	*4.6*
100,000 – 249,999	*19.4*	*8.2*	*1.5*	*7.1*	*8.3*	*7.6*
50,000 – 99,999	*32.4*	*2.1*	*0.7*	*2.2*	*2.5*	*2.1*
Below 50,000	*93.8*	*0.8*	*0.3*	*0.5*	*0.6*	*0.8*
Total	*26.6*	*31.7*	*4.4*	*23.4*	*28.2*	*29.1*

priate when analyses are to be carried out not only of population density – densely populated areas and medium density areas – but also of selected municipalities, both large and small. For instance, on 31 December 2011, the total number of large towns not attached to an administrative district and with more than 500,000 inhabitants was 13. Based on the criteria above, these are – without exception – densely populated. There are of course other large towns, such as Hanover or Aachen, with a resident population of more than 200,000. However, due to recent territorial reforms, the surrounding area of these towns has now been incorporated into the respective NUTS3 level. As a result, it is now no longer simply possible to consider the town in isolation even though this is shown in the database. The smallest German towns not attached to an administrative district with less than 50,000 inhabitants were–with the exception of Frankenthal (Pfalz) – classified as "intermediate density areas".

Although around a third of the OECD indicators for "How's Life" are measured at district and, in some cases, at municipal level, fundamental aspects closely linked to both current and future material living conditions, such as general living space, income, employment and level of education will be studied extensively below. Given the complexity of the subject matter, a detailed study of the quality of life in analogy with "How's Life" is to remain reserved for a separate publication. This publication will focus on the following aspects:

(1) Opportunities to use space and land (Access to green spaces en 3[14], Number of rooms per person in a dwelling HO I),
(2) Income and wealth (Household net adjusted disposable income IW I),
(3) Employment (Employment rate JE I, Long-term unemployment JE II),
(4) Formal education and vocational training (Educational attainment ES I).

The aim here is to bring the definition of these indicators as closely into line with those from "How's Life"; where necessary, these should be supplemented in conjunction with other statistical indicators which are at least similar in terms of their definition – irrespective of their objectives – for the national sustainability strategy "Sustainable Development in Germany" and "Europa 2020", and discussed briefly.

14 These codes refer to the numbering used in the OECD publication "How's Life"; see Overview 3.

Tab. 2 contd. Selected characteristics in towns not attached to an administrative district, by size of population

Population size class	Disposable income of households	Employees subject to social security contributions at place of residence	Persons in employment according to the place-of-work concept	Unemployed persons			Graduates/school-leavers	
				Total	of which		with general higher education entrance qualification	without secondary general school certificate
					aged from 15 to under 25 years	long-term unemployed		
	2009	2010	2009	2011			2010	
	EUR 1,000	Number	1,000	Number				
Towns not attached to an administrative district with … inhabitants								
500,000 and over	246,812,846	4,138,416	7,917	637,732	65,646	232,611	47,672	8,654
250,000 – 499,999	75,895,543	1,378,495	2,558	183,278	20,013	72,456	17,068	2,957
100,000 – 249,999	121,472,285	2,150,894	4,167	298,891	32,497	113,120	27,915	4,955
50,000 – 99,999	29,873,991	543,978	1,129	78,727	8,896	26,961	8,563	1,412
Below 50,000	11,777,010	211,002	435	21,770	2,604	6,259	3,759	723
Total	485,831,675	8,422,785	16,207	1,220,398	129,656	451,407	104,977	18,701
Germany total	1,554,260,000	27,599,714	40,271	2,975,823	278,886	1,051,603	267,850	53,058
	Share of towns not attached to an administrative district in %							
500,000 and over	*50.8*	*49.1*	*48.8*	*52.3*	*50.6*	*51.5*	*45.4*	*46.3*
250,000 – 499,999	*15.6*	*16.4*	*15.8*	*15.0*	*15.4*	*16.1*	*16.3*	*15.8*
100,000 – 249,999	*25.0*	*25.5*	*25.7*	*24.5*	*25.1*	*25.1*	*26.6*	*26.5*
50,000 – 99,999	*6.1*	*6.5*	*7.0*	*6.5*	*6.9*	*6.0*	*8.2*	*7.6*
Below 50,000	*2.4*	*2.5*	*2.7*	*1.8*	*2.0*	*1.4*	*3.6*	*3.9*
Total	*100*	*100*	*100*	*100*	*100*	*100*	*100*	*100*
	Share of all administrative districts and towns not attached to an administrative district in %							
500,000 and over	*15.9*	*15.0*	*19.7*	*21.4*	*23.5*	*22.1*	*17.8*	*16.3*
250,000 – 499,999	*4.9*	*5.0*	*6.4*	*6.2*	*7.2*	*6.9*	*6.4*	*5.6*
100,000 – 249,999	*7.8*	*7.8*	*10.3*	*10.0*	*11.7*	*10.8*	*10.4*	*9.3*
50,000 – 99,999	*1.9*	*2.0*	*2.8*	*2.6*	*3.2*	*2.6*	*3.2*	*2.7*
Below 50,000	*0.8*	*0.8*	*1.1*	*0.7*	*0.9*	*0.6*	*1.4*	*1.4*
Total	*31.3*	*30.5*	*40.2*	*41.0*	*46.5*	*42.9*	*39.2*	*35.2*

Fig. 3a **Population on 31. December 2011 …**
… in the largest towns[1]

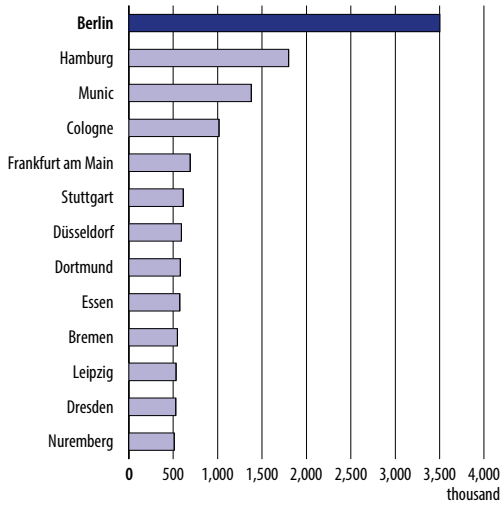


Fig. 3c
… in the smallest towns[1]

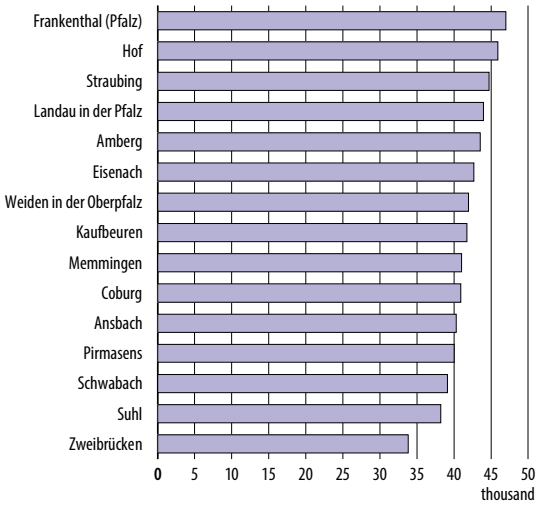


Fig. 3b **Population density 2011 …**
… in the largest towns[1]

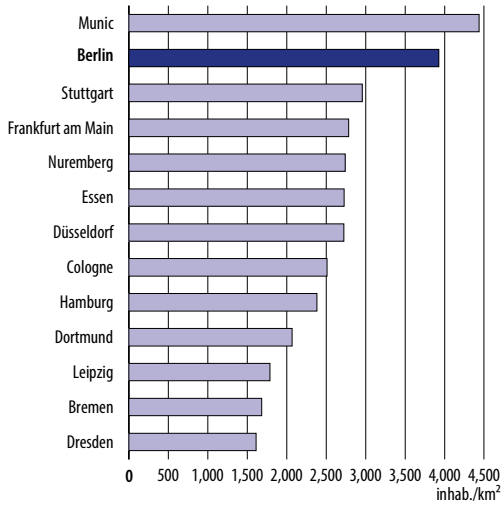
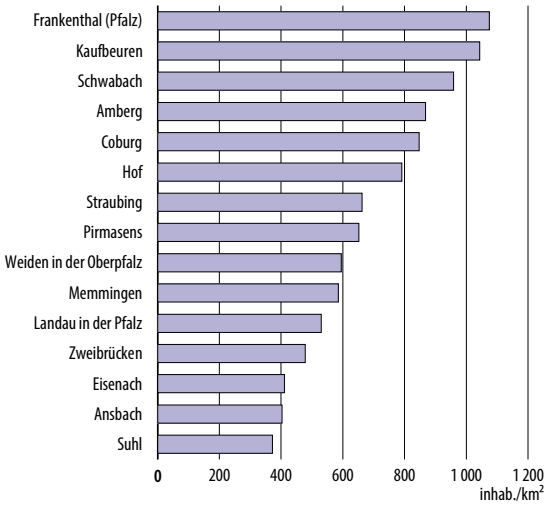


Fig. 3d
… in the smallest towns[1]



1 not attached to an administrative district

3.2. Life in Germany – Material living conditions

3.2.1. Opportunities to use space and land

The use of space and land not only gives an insight into settlement structure but also into material living conditions and the quality of life. In the OECD report there are two different dimensions in which indicators relating to the use of space are addressed. First, there is the dimension entitled "Housing conditions"; second, green spaces are used as an indicator of environmental quality.

This section will start by setting out the settlement structure in Germany against the background of the methodological approaches outlined in section 3.1. Towns not attached to an administrative district – both the largest and smallest towns – practically serve as examples of areas which are "densely" populated or with a predominantly "intermediate density". Because of the particular importance of the living environment – in this case green spaces – to densely populated areas, the situation in the towns under review will be illustrated below. Finally, the housing situation itself will be scrutinised.

Germany has a surface area of around 357,000 km². On 31 December 2011 it had a population of approximately 82 million people (see table 1). The average population density therefore ranged from more than 1,600 inhabitants per km² in densely populated administrative districts to 79 inhabitants per km² for thinly populated administrative districts. Overall, two thirds of Germany is thinly populated. More than one third of its inhabitants (35.4%) live on an area equal to just 5% of the country. In total, 31.7% of the German population lives in the 107 towns that are not attached to an administrative district, i.e. in roughly 1% of Germany's municipalities[15] [27].

Comparing towns not attached to an administrative district shows that around 50% of urban dwellers live in towns with more than 500,000 inhabitants

15 Approx. 11,300 municipalities were registered in Germany on 31.12.11 (see [27]).

Fig. 4a **Percentage of green spaces in the total surface area 2010 …**
… in the largest towns[1]

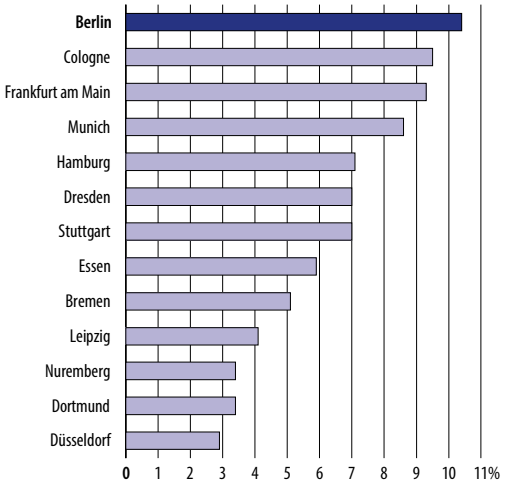


Fig. 4c **… in the smallest towns[1]**

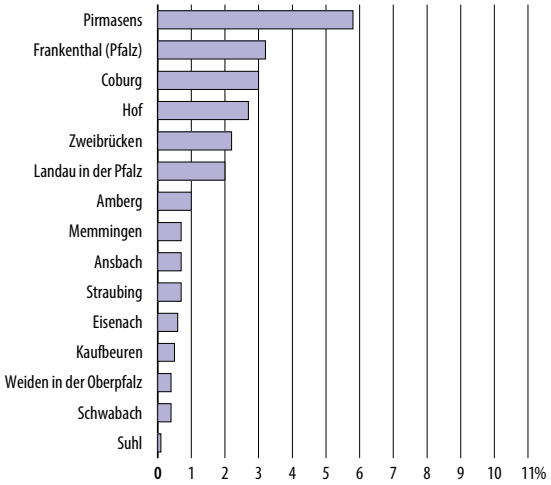


Fig. 4b **Living floor space per inhabitant, in residential buildings 2010 …**
… in the largest towns[1]

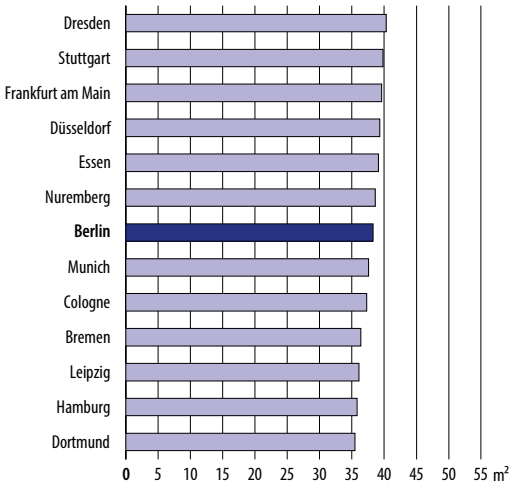
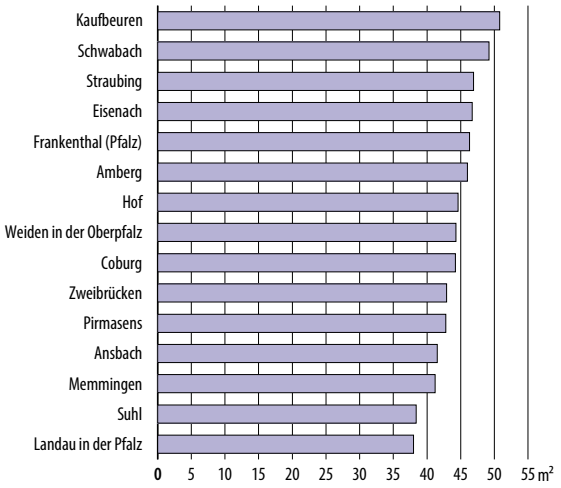


Fig. 4d **… in the smallest towns[1]**



1 not attached to an administrative district

while a further 42% live in towns not attached to an administrative district of 100,000 to less than 500,000 inhabitants (table 2).

A comparison of the 13 largest towns not attached to an administrative district (figure 3a) shows that four of the towns have a population of more than 1 million inhabitants. Berlin has the largest number of inhabitants, with 3.5 million, while Nuremberg is the smallest with 511,000 inhabitants. However, in terms of population density (figure 3b), i.e. the number of inhabitants per unit area, here km², Munich is the most densely populated town with 4,436 inhabitants per km², followed by Berlin with 3,927 inhabitants per km². In eight towns, the population density is between 2,000 and 3,000 inhabitants per km². With population densities ranging between approximately 1,800 and 1,600, the remaining towns (Leipzig, Bremen and Dresden) are much less densely populated.

In terms of the number of inhabitants, there is a greater degree of homogeneity among the smallest towns not attached to an administrative district. Figures range from approximately 34,000 to roughly 47,000 inhabitants (see figure 3c). Much like their larger counterparts, these small towns not attached to an administrative district are spread throughout the whole of Germany. Four of the large towns are in North-Rhine Westphalia, while the others are mainly in the Länder of Bavaria and Baden-Wurttemberg.

The population density in the small towns not attached to an administrative district is between approximately 400 and 1,000 persons per km². As a result, these were mainly classed as having an "intermediate density" in the List of Municipalities (figure 3d).

Access to green spaces is a key indicator of well-being, especially in densely populated areas. The OECD and other institutions, such as the World Bank, therefore assert that access to green spaces is essential for individual recreation and thus for overall quality of life [14, p. 215]. The closer people live to one another (i.e. the greater the population density), the more

Fig. 5a **Regional atlas Germany**
Indicators relating to population

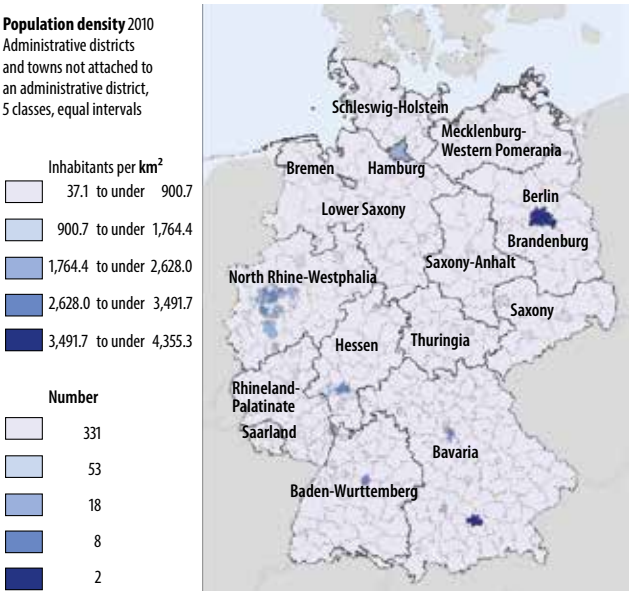
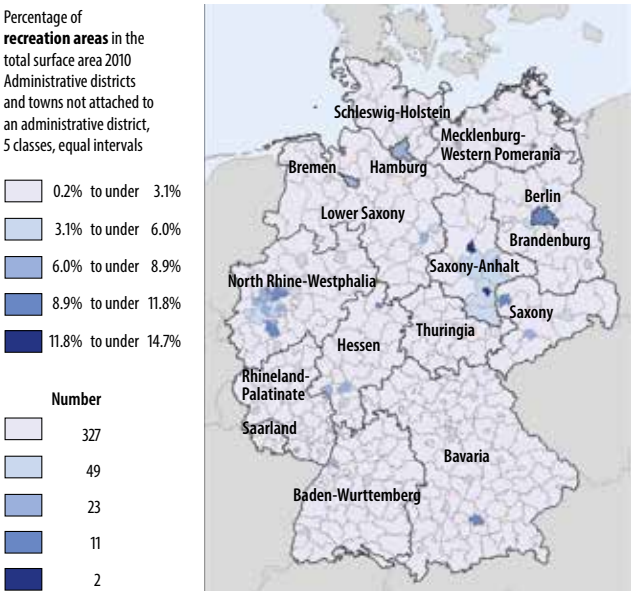


Fig. 5b **Indicators relating to region and area**



this applies. "Green space" was classed as a secondary indicator by the OECD since the only cross-OECD comparison possible to date has been based on subjective data from non-official sources. Objective data from the area survey are, however, available in the official statistics for Germany.

The indicator showing the share of green spaces in the total surface area provides some initial pointers as to this aspect of the quality of life. Whereas the share of green spaces in the total surface area averages 7% in towns of over 500,000 inhabitants, the corresponding figure in small towns (<50,000 inhabitants not attached to an administrative district is 1% (table 2)). The figures for individual towns vary. For large towns not attached to an administrative district (figure 4a) in particular, the share of green spaces ranges from a maximum of around 10% for Berlin and Cologne to 3% in Dortmund and Düsseldorf; these percentages are even lower for small towns. In the majority of these towns (9), the share of green spaces is around 1% or less (figure 4c). However, measured in terms of the total surface area of green spaces in Germany, towns with more than 500,000 inhabitants account for 44% of such spaces, compared to just 2% for towns with a population of less than 50,000.

Based on such an isolated study as this, it is not possible to say whether a high proportion of urban open space results in a high recreational value. Additional analyses would be necessary in this case, e.g. with regard to the recreational opportunities afforded by the surrounding area. Another indicator which is based on the personal environment of either individuals or a household is the living floor space.

The OECD describes housing as the most important component for the living standard of a society. This not only covers basic needs such as protection against bad weather (rain, snow) or natural disasters, etc., but also provides grounds on which to assess individual security as well as the potential private life of an individual.

The OECD recommends a total of four different indicators for assessing the housing situation. Headline indicators include the number of rooms per person in a dwelling and access to basic sanitary facilities, such as connection to the public sewage system[16] [28]. Regional statistics for Germany provide an insight into both of these indicators[17]. For the purposes of simplicity,

16 Information at municipal level is available for both indicators from federal statistics; see [28], here p. 72 regarding the dwelling stock and p. 79 regarding public waste water treatment.

17 In the regional database for Germany, the rooms per person can be calculated based on the number of residential buildings and the number of dwellings and rooms contained therein. Due to the different sizes of the rooms, the indicator "Living floor space per person in m²" is preferred. With regard to the amenities available in dwellings, it is important to note that all of the dwellings covered in the statistics have relevant sanitary facilities. As a result, the indicator does not appear to be sufficiently suitable for carrying out an assessment for Germany based on the OECD definition.

only living floor space per person in m^2 is to be used as an indicator below.

The living floor space per person in m^2 in large towns is between $36m^2$ (Dortmund) and $40m^2$ (Dresden) (figure 4b). These figures are largely irrespective of the number of inhabitants in a town. In small towns not attached to an administrative district, the living floor space statistically available to each inhabitant is in most cases greater, between $38m^2$ (Landau in der Pfalz and Suhl) and 51 m^2 (Kaufbeuren) (figure 4d). In terms of living floor space, the housing situation is therefore much better in small towns not attached to an administrative district than it is in large towns of this nature. However, since the difference between urban and rural areas is reflected not only in the size of dwellings but also in their price and the household structure, further indicators that are specific to particular groups of people or groups of household should, where necessary, be used to carry out a more sophisticated study of the quality of life. Rental and living costs are two examples of such indicators.

When studying the various area indicators relating to settlement, recreation and housing from a geographical perspective, it is advisable to use the maps provided by the standard programme of publications from official statistics, especially the regional atlas.

As the population density map (figure 5a) shows, although there are densely populated areas spread throughout Germany, often these are concentrated in individual administrative districts. Larger contiguous areas which are densely populated can be found in particular in North-Rhine Westphalia – around Düsseldorf – and in the Rhine-Main region between Frankfurt and Mainz. Several (more) densely populated administrative districts with a population density of at least 900 inhabitants per km^2 can also be found adjoining one another in the Nuremberg region and in the area between Mannheim and Heidelberg.

In addition to green spaces, recreation areas include parks, allotments, sports grounds and campsites, areas which are used mainly for sport and recreation, or for showing animals or plants. Recreation areas in Germany largely follow the settlement structure. Particularly large areas can be found above all in those districts which are (more) densely populated. Large contiguous recreation areas accounting for more than 3% of the total area can be found most notably in the Ruhr area, the Magdeburg triangle and the Burgenlandkreis administrative district south of Halle and Leipzig. These findings tend to be consistent with those for the smallest and largest towns not attached to an administrative district, and which were studied more closely above, in such a way that the share of green spaces and recreation areas in the total area increases in line with a town's population.

3.2.2 Income and wealth

The "How's Life" report lists income and wealth as essential components of material well-being. While income allows individuals to satisfy their needs and wishes, wealth makes it possible to sustain an acquired living standard over time [14, pp. 37 et seq.]. The European strategy "Europa 2020" also refers to the income situation, albeit with the target of reducing the risk of poverty in Europe [29].

Fig. 6a **Disposable income per inhabitant 2009 … … in the largest towns[1]**

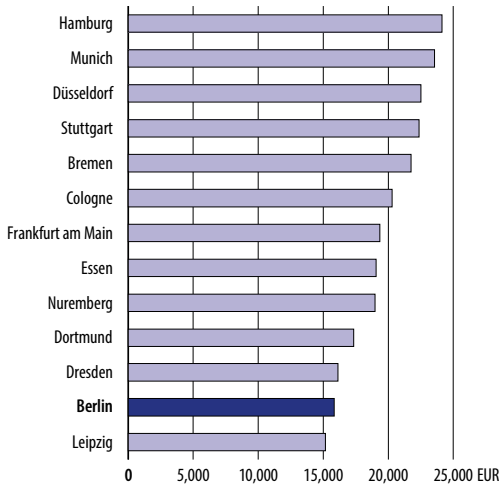
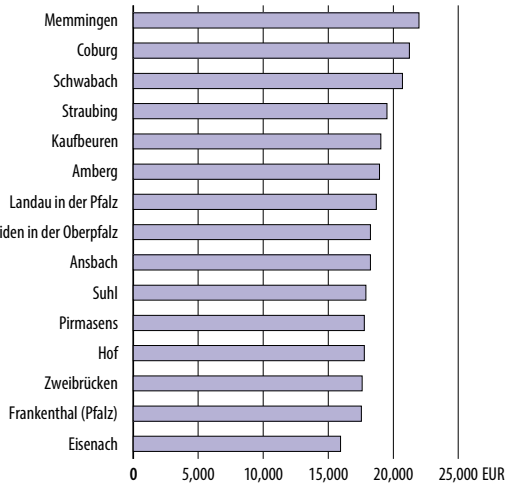


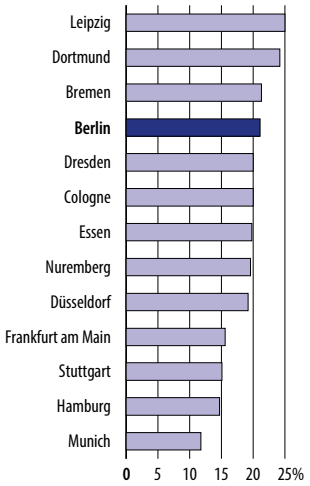
Fig. 6b **… in the smallest towns[1]**



1 not attached to an administrative district

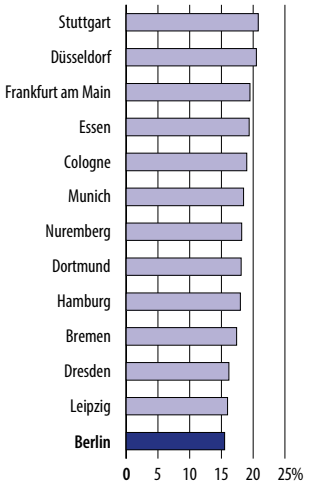
The OECD recommends household net adjusted disposable income, calculated based on national data [14, p. 39] as "the best measure of people's economic resources" [14, p. 39]. These data are also available for Germany at the level of administrative districts, based on employment accounts from the Federation and the Länder, producing the following results for 2009. Large towns not attached to an administrative district account for most household disposable income. For instance, at 31.3%, the population of such independent towns has virtually a third of all disposable income. In large towns, the average annual figure is EUR 19,200 per inhabitant. At EUR 17,600, it is lowest in towns with between 50,000 and 100,000 inhabitants (table 2). Clear differences arise when the largest and smallest towns not attached to an administrative district are considered (figures 6a and 6b). In six large towns (Hamburg, Munich, Düsseldorf, Stuttgart, Bremen and Cologne), average disposable income per inhabitant was more than EUR 20,000. The highest and lowest figures were recorded for Hamburg and Leipzig, with

Fig. 7a **At-risk-of-poverty rates[1] by selected large towns 2011 …**
… measured against the federal median



1 The share of persons with an equivalent income below 60% of the median equivalised income of the population in private households, at the main place of residence, per 100 persons. Equivalised income is calculated based on the modified OECD scale.

Fig. 7b **… measured against the median for each large town**



Source: Social reporting 2012

Fig. 8 **Regional atlas Germany**
Indicators relating to wealth and income

Disposable **income**
per inhabitant 2009
Administrative districts and towns not attached to an administrative district.
5 classes, equal intervals

	Number
13,895 EUR to under 17,320 EUR	119
17,320 EUR to under 20,745 EUR	228
20,745 EUR to under 24,170 EUR	57
24,170 EUR to under 27,595 EUR	5
27,595 EUR to under 31,020 EUR	3

around EUR 24,000 and EUR 15,000 respectively. For the smallest towns not attached to an administrative district, the range in disposable income per inhabitant was much narrower, from EUR 16,000 in Eisenach to EUR 22,000 in Memmingen. These figures provide an insight into the assessment of the material situation; however, any study wishing to reflect reality as closely as possible must also take into account additional factors. These include, in particular, population and household structure in demographic and socio-demographic terms, or income opportunities from a professional and geographical perspective.

The material situation can not only be measured in positive terms based on disposable income. Viewing the situation from a negative angle, as is done at least to some degree by "Europa 2020", offers further insights. The "at-risk-of-poverty" rate was established under the aspect of integration and inclusion. This rate, which is calculated in Germany by the statistical offices of the Federation and the Länder, is a relative measure of income distribution. It is defined as the share of people with an equivalised income below 60% of the median equivalised income of the population in private households at their main residence. Depending on the geographical reference variable used (Federation, Länder, detailed regional breakdown), a number of different at-risk-of-poverty rates can be calculated. In the case of the underlying at-risk-of-poverty rates as measured against the federal median, as initially used here, the basis for all towns is a standard at-risk-of-poverty threshold (EUR 848 for single person households), which is calculated by taking the median income across the whole of Germany. Differences in the income level between large towns are not taken into consideration in this calculation.

Nationwide, a detailed regional breakdown of at-risk-of-poverty rates is available for the level of NUTS2 under the European classification (Regierungsbezirke and Statistische Regionen). The same rates can also

be retrieved for spatial planning regions and consolidated territorial units and for Germany's 15 largest towns (with more than 500,000 inhabitants)[18] [30].

Using such a breakdown produces the following rankings for the large administratively independent towns that have formed part of the study[19], whereat-risk-of-poverty rates are measured against the federal median (see figure 7a) and the median of the respective large town (see figure 7b).

In 2011, the poverty risk was greatest for Leipzig at 25%; this means that one quarter of the resident population here had an income below 60% of the federal median equivalised income. Leipzig was followed, in descending order, by Dortmund (24.2%), Duisburg (23.5%) and Hanover (22.6%). The poverty risk as measured against the federal median was lowest in Munich (11.8%) and in Hamburg (14.7%).

In cartographic terms, i.e. looking at Germany as a whole, only the income situation nationally is available at the level of the administrative districts (see figure 8).

If administrative districts are selected as a regional unit and the study is extended to the whole of Germany, then the disposable income per inhabitant in 2009 was highest in the urban district of Heilbronn, at approximately EUR 31,000. This figure was therefore as much as around EUR 7,000 more than in Hamburg and Munich, the large towns not attached to an administrative district with the highest disposable incomes (figure 6a). The map shows that the administrative districts with the highest income are predominantly rural districts. In descending order, the disposable income per inhabitant was especially high in Heilbronn, in the rural district of Starnberg, the district of Hochtaunuskreis, Sankt Wendel, the rural district of Munich, the urban district of Baden-Baden, the administrative district of Olpe and the rural district of Erlangen-Höchstadt, the city state of Hamburg and the Main-Taunus rural district (the latter having an average per capita income of EUR 23,612). This top 10 includes only three towns not attached to an administrative district, namely Heilbronn, Baden-Baden and Hamburg (in descending order). Most of the administrative districts in which disposable income per inhabitant is greatest are rural districts near large towns, in other words the places where those people earning high incomes live.

Fig. 9a **Persons in employment at a place of work (% of the population aged 15 to 64) 2010 … … in the largest towns[1]**

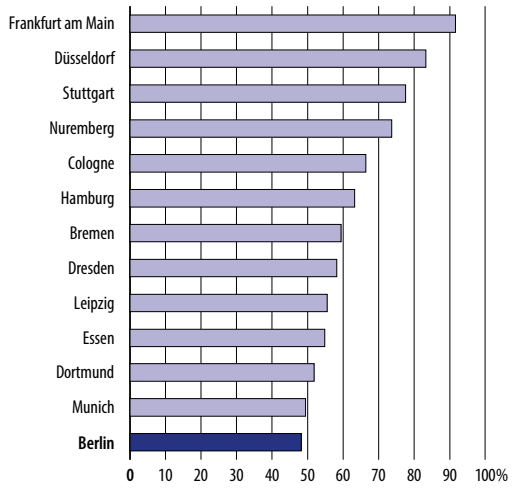
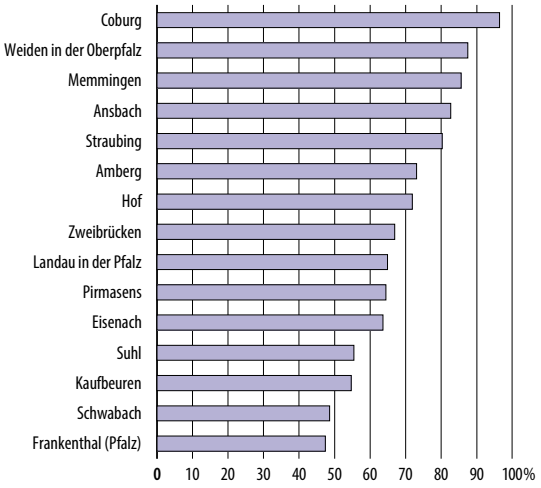


Fig. 9b **… in the smallest towns[1]**



1 not attached to an administrative district

3.2.3 Employment

Whereas the previous section examined the scope and source of people's financial resources, this section focuses primarily on work and the associated aims. In its preliminary remarks to this section, the OECD states that having a job that matches one's aspirations and competences and that pays adequate earnings is a universal aspiration of people around the globe. The income situation is also an important element of Germany's national sustainability strategy "Sustainable Development in Germany", albeit in connection with the aim of achieving fairness in the pay scales for men and women[20] [7, p. 58 et seq.].

The headline indicators given in the "How's Life" report are as follows: (1) the employment rate, long-term unemployment rate and the average annual earnings per employee.

The employment rate is defined as the share of people in work in the employable age group (15 to 64 years).This indicator is also included in both Germany's national sustainability strategy and "Europa 2020". For Germany and Europe, there are targets attached to these indicators. In both cases, the goal is to increase the employment rate to 75% by 2020. For Germany, this will mean a rise of 2 percentage

18 These findings can be downloaded free of charge from [30].

19 For the sake of completeness and in order to avoid distortions, data for the towns of Hanover and Duisburg are also included in the text. These towns were excluded from the study on account of not being an administratively independent town (Hanover) or because of the number of inhabitants (Duisburg).

20 In the national sustainability strategy "Sustainable Development in Germany", the gender pay gap indicator was used to narrow social inequality; see [7, p. 58 et seq.].

Fig. 10a **Regional atlas Germany**
Indicators relating to employment

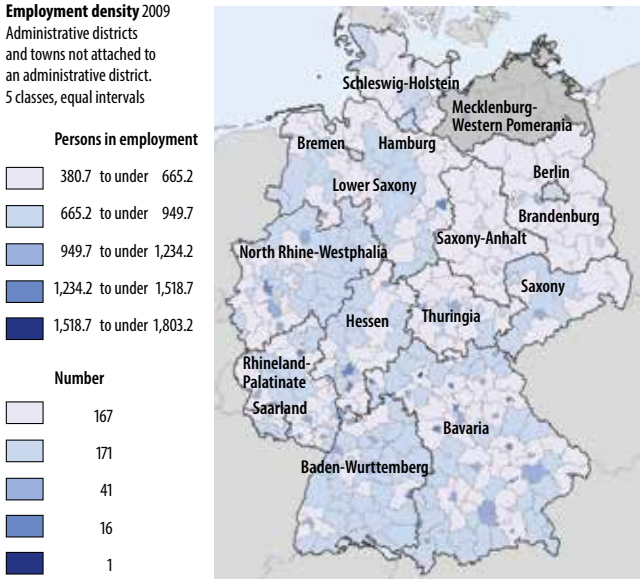
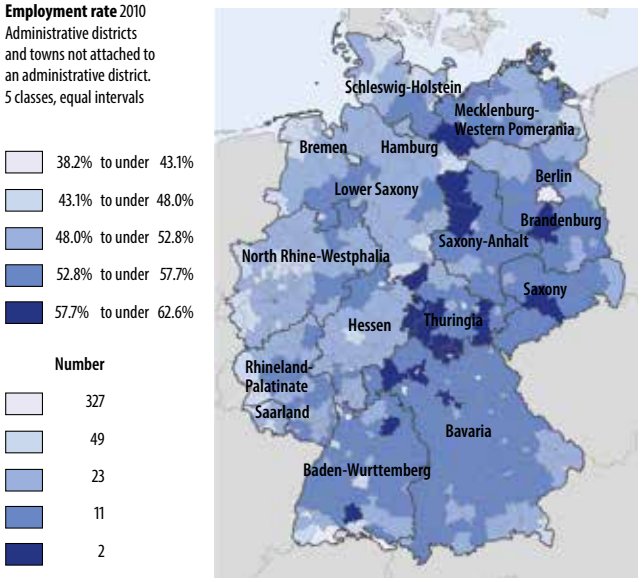


Fig. 10b **Indicators relating to employment**



points, from a figure of 73% in 2010 [7, pp. 54 et seqq.]. The indicator of total persons in employment (at a place of work) per 1,000 inhabitants of working age (15 to 64 years) provides information about the employment density.

For Germany's large towns, the indicator ranges from 92% in Frankfurt am Main, to 48% in Berlin. Above all, the indicator says something about the labour supply locally in the age group under review. A similar range is apparent for small towns not attached to an administrative district. Indicator values range from 96% for Coburg at the highest end, to 47% for Frankenthal (Pfalz) at the lowest end.

Figures 10a and 10b offer an overview of the situation in Germany with regard to the supply of labour and the number of jobs available.

For Germany on the whole, the share of persons in employment between the ages of 15 and 64 in the resident population (figure 10a) is over two thirds in more than half of all administrative districts. This is particularly the case in the west and south of Germany. A different picture emerges if employees subject to social insurance at the place of residence are considered. In most administrative districts, the share of employees subject to social insurance at the place of residence in relation to the working age population (aged 15 to 64) at the place of residence (figure 10b) is more than 50%. These percentages are especially high in eastern and southern Germany. In border regions especially, and in the west in particular, there are nevertheless administrative districts where the employment rate is less than 48%. The OECD uses examples to illustrate these indicators [14, p. 60 et seq.].

A key indicator used to describe the labour market situation in a country or region is unemployment. The OECD has selected long-term unemployment as an indicator of the risk of social exclusion, potential poverty and deprivation. A study of long-term unemployment is required in as much as the OECD indicators in "How's Life" are used first and foremost to take stock of a situation, i.e. to describe the current status in its member states or worldwide. In the European strategy "Europa 2020" – which applies to Germany as well – the at-risk-of-poverty indicator, as already set out above, is used as well.

The OECD refers to long-term unemployment as those persons of working age (15 to 64 years) who have been unemployed for one year or more. For Germany, the Federal Employment Agency provides data based on the long-term unemployed as a share of the total number of unemployed[21] [31]

21 This indicator is also included in the regional atlas; see [31].

Fig. 11a **Long-term unemployment (% of total unemployment) 2011 … … in the largest towns[1]**

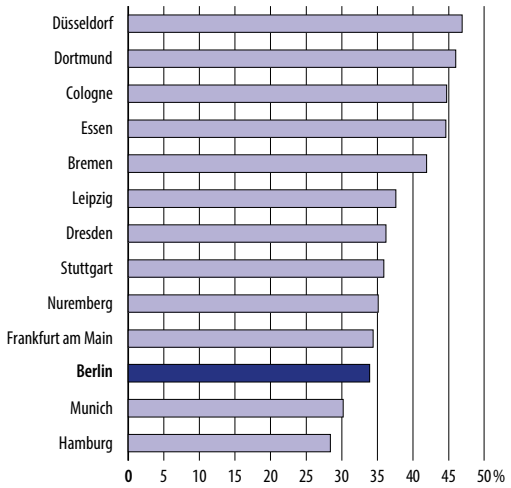
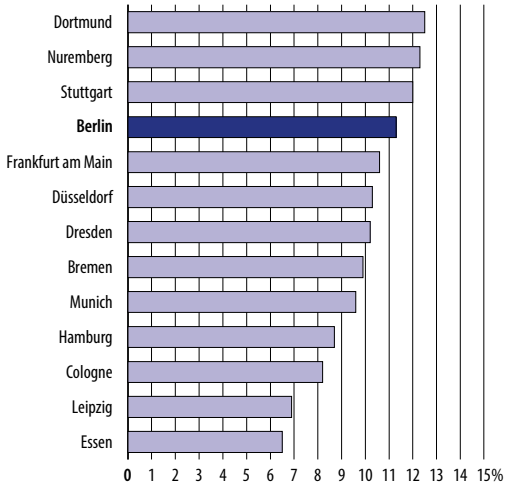


Fig. 11b **Unemployment among persons aged 15 to 24 (% of total unemployment) 2011 … … in the largest towns[1]**



1 not attached to an administrative district

Fig. 11c **… in the smallest towns[1]**

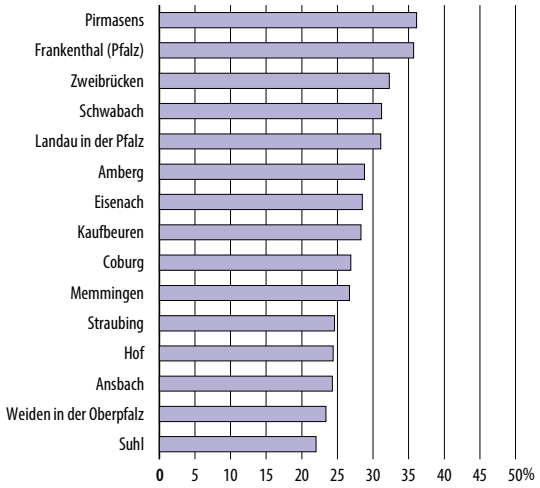
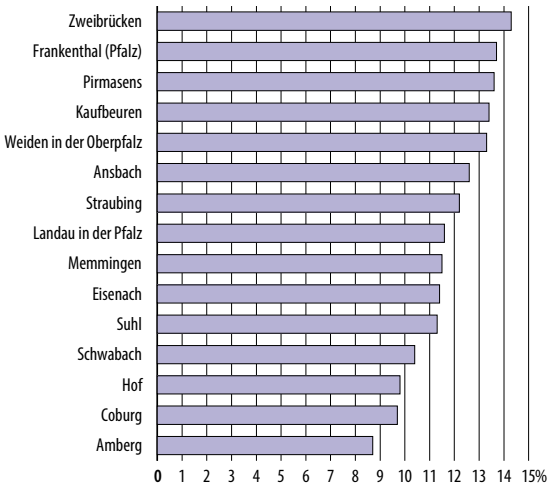


Fig. 11d **… in the smallest towns[1]**



The situation for the largest and smallest towns not attached to an administrative district is as follows (figures 11a and 11c).

In most of the large towns under review, long-term unemployment accounted for more than 35% of total unemployment. This means that in 2011, at least one in every three unemployed persons had been without work for more than one year. In relative terms, long-term unemployment was lowest in Hamburg, at 28.4%, followed by Munich at 30.2%. In these two towns, 3 out of 10 unemployed persons had therefore been registered as without work for more than a year.

As shown in table 2, in absolute terms the number of unemployed persons in large towns is considerably greater for the 13 largest towns with a population of more than 500,000. The figure of approximately 233,000 corresponded to roughly half of the total number of persons in long-term unemployment (around 451,000) in all of the administratively independent towns. The situation is different in small towns not attached to an administrative district. Here, long-term unemployment ranged from a maximum rate of 36% (Pirmasens) to a minimum rate of 22% (Suhl). In contrast to large towns not attached to an administrative district, the share of long-term unemployment in total unemployment in small towns was below 30%, with the exception of five towns. A differentiated picture of those groups of people affected by unemployment, such as men, women, young people and foreigners, can be obtained from the relevant rates of registered unemployed. Given the particular importance attached to formal education and vocational training in "How's Life", the national sustainability strategy and "Europa 2020", the situation of young people in the labour market, and in particular unemployment, should also be touched upon. Youth unemployment, defined as persons aged 15 to 24 who are registered as unemployed as a proportion of the total number of unemployed, is shown below for selected rural districts (figure 12c).

Fig. 12a **Regional atlas Germany**
Indicators relating to unemployment

Share of **long-term unemployment** in total unemployment 2011
Administrative districts and towns not attached to an administrative district.
5 classes, equal intervals

	Number
15.1% to under 23.6%	39
23.6% to under 32.0%	151
32.0% to under 40.5%	151
40.5% to under 48.9%	46
48.9% to under 57.4%	4
No data available	11

Fig. 12b **Indicators related to unemployment**

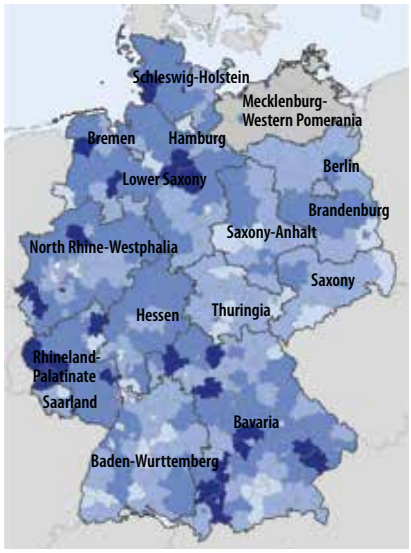
Rate of registered unemployed 2011
Administrative districts and towns not attached to an administrative district.
5 classes, equal intervals

	Number
1.4% to under 4.5%	131
4.5% to under 7.5%	134
7.5% to under 10.6%	78
10.6% to under 13.6%	42
13.6% to under 16.7%	11
No data available	6

Fig. 12c **Indicators related to unemployment**

Share of youth unemployment (aged 15 to 24) in total unemployment 2011,
Administrative districts and towns not attached to an administrative district.
5 classes, equal intervals

	Number
3.4% to under 5.5%	3
5.5% to under 7.7%	39
7.7% to under 9.8%	164
9.8% to under 12.0%	162
12.0% to under 14.1%	28
No data available	6



Among other things, the OECD long-term indicator serves as an indicator of social exclusion. For Germany, in reveals that such a risk is apparent in virtually all administrative districts, except for regions in the south-east (figure 12a). At 57.4%, the highest level of long-term unemployment in 2011 was recorded in the administratively independent town of Hamm, followed by Odenwaldkreis (55.2%) and the towns of Mülheim an der Ruhr (54.3%) and Oberhausen (50.3%), neither of which is attached to an administrative district. In a further 52 administrative districts and towns not attached to an administrative district, long-term unemployment as a share of total unemployment ranged between 40% and 49%. However, if unemployment in Germany as a whole is considered (figure 12b), i.e. all employees subject to social insurance and registered with the Federal Employment Agency as unemployed, measured against the total labour force, it is primarily rural districts in Germany that are worst affected. Of the ten rural districts most severely affected by unemployment, eight are in eastern Germany.

If intergenerational trends are also considered, and youth unemployment included, eight of the aforementioned administrative districts particularly affected by unemployment also had especially high levels of youth unemployment, the two worst being Uckermark (15.6%) and Bremerhaven (14.9%).

Comparing the informational content of the various indicators on unemployment – based on "How's Life" – long-term unemployment is the indicator most likely to be associated with the risk of social exclusion. From an intergenerational perspective, a combination of analyses, especially of long-term and youth unemployment, would be the minimum requirement.

3.2.4 Formal education and training

Education and training have a major influence on the quality of life. They open up opportunities for people and enable them to achieve a better standard of living while at the same time bringing a wide range of benefits to society as a whole, including higher economic growth, stronger social cohesion and less crime [14, p. 145]. One of the OECD's headline indicators for this dimension is the percentage of the population aged 25-64 who have completed at least an upper-secondary degree. Similar indicators apply to Germany's national sustainability strategy "Sustainable Development in Germany" and the European strategy "Europa 2020". In the German strategy, which relates to 2012, the number of 30- to 34-year olds with a tertiary or post-secondary non-tertiary level of education as a share of all 30-34-year-olds, as well as 18- to 24-year olds without a leaving certificate from post-16 education and not in training as a share of all 18- to 24-year-olds is used [7, p. 28]. A similar indicator is adopted for "Europa 2020" [32], (figures 13a and 13b).

Given that the proportion of 25- to 64-year-olds with a tertiary level of education is only available on an aggregated basis for Germany and not on a local basis, the number of graduates with a general higher education entrance as a share of total graduates is used below as an indicator of the level of education. In 2010, this figure was highest in Hamburg, at almost 60%. Overall, i.e. with regard to the largest and smallest towns not attached to an administrative district, the figures ranged between 26.2% for Kaufbeuren and 41.2% for Berlin. Based on the definition given at the start, the value reported by the OECD for 2009 was around 27% for 2009[22]. Germany's national sustainability strategy, "Sustainable Development in Germany", also includes indicators on the level of education, even though the parameters of the indicators in terms of their content are different. Here a distinction is drawn based on a number of different levels of aggregation of tertiary and post-secondary, non-tertiary educational qualification. There are also differences in terms of age group. As a result, the data used for Germany for this education indicator related to those persons in the 30-34 year age bracket. For Germany, this figure stands at 29.8% based on the EU definition [7, p. 28 et seq.].

Variation in terms of school drop-outs – i.e. 18- to 24-year-olds without a qualification (Germany), as used in the national sustainability strategy, "Sustainable Development in Germany" and in "Europa 2020" – is shown by the wide margin in terms of school leavers without a general school leaving certificate (figure 14b).

If the survey is extended to cover Germany, the result obtained at the level of the administrative districts provides a more comprehensive picture than is permitted by only considering the largest and smallest administratively independent towns, as above.

Fig. 13a **Graduates with a general higher education entrance qualification (% of total graduates) 2010 … … in the largest towns[1]**

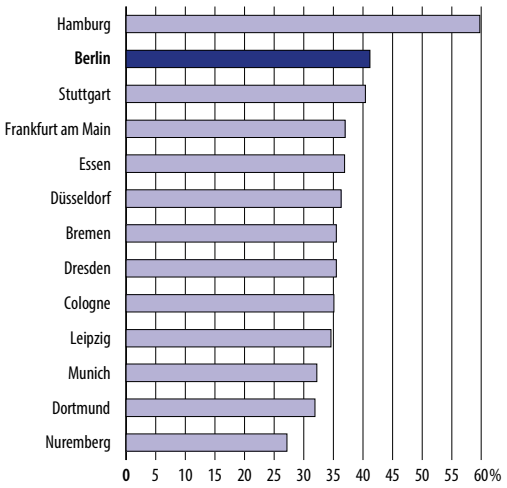
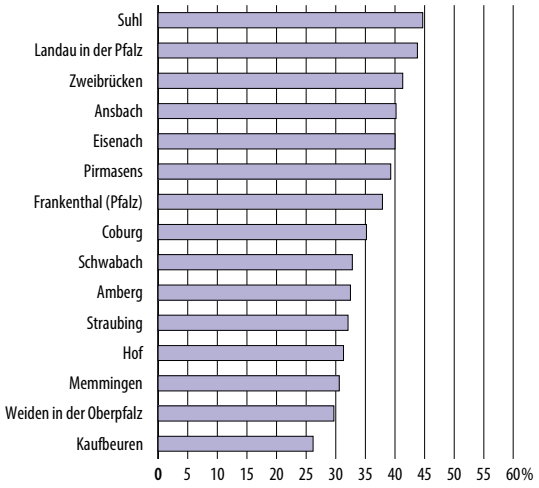


Fig. 13b **… in the smallest towns[1]**



1 not attached to an administrative district

The proportion of school leavers with a general higher education entrance qualification is particularly high. Potsdam leads the field, with 60.9%, followed – as already mentioned – by Hamburg with 59.8% and Neustadt an der Weinstraße with 57.9%. With the exception of the rural district of Spree-Neiße, the top 10 list features six towns not attached to an administrative district in Länder in the eastern part of the country. Hamburg aside, these are all medium-sized towns. The map also shows some rural districts in Bavaria where this share was below 12%; for the town lying at the centre of these districts (e.g. for Würzburg, Bamberg, Schwabach or Regensburg), the figure is between 32.8% and 52.9% and is therefore much greater than in the surrounding (rural) districts. A similar situation can be found in the rural district of Südwestpfalz which surrounds a town not attached to an administrative district, namely Pirmasens.

As far as the share of school leavers without a general school leaving certificate is concerned, this

22 [14] "Figure 7.2. Population that has attained a tertiary degree", p. 152. No reference is made to the national source.

Fig. 14a **Regional atlas Germany**
Indicators relating to education

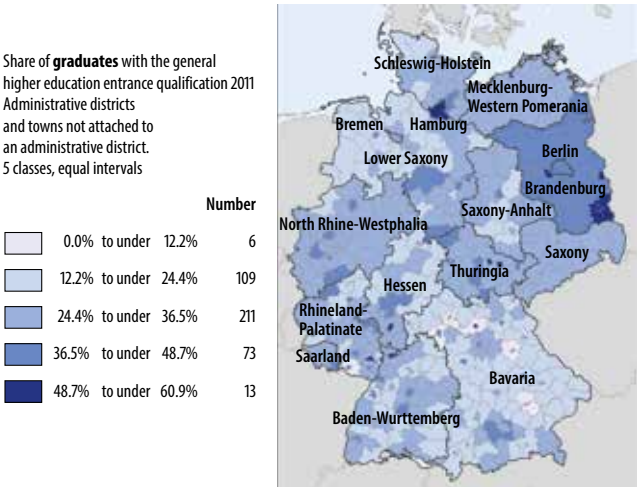
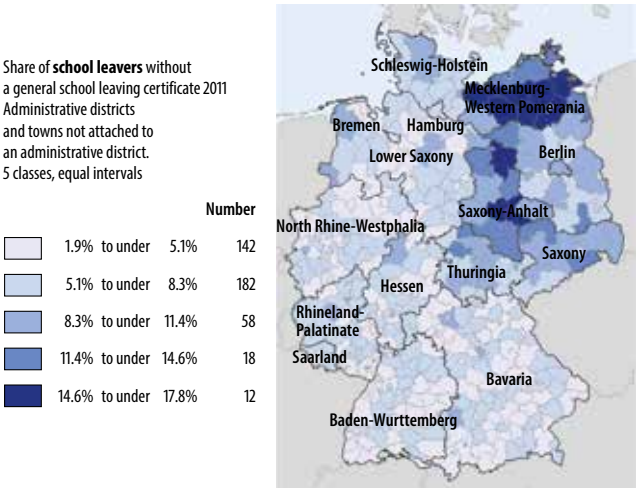


Fig. 14b **Indicators relating to education**



is particularly high in Schwerin at 17.8%, followed by Wismar at 17.7%. Neither town is attached to administrative district. All administrative districts with a school drop-out ratio above 11% are located in Länder in eastern Germany, with Mecklenburg-Western Pomerania and Saxony-Anhalt particularly affected. Administrative districts with a high school drop-out ratio can also be found in Länder in the west and south of the country, although the figure in these cases is below 11%. In descending order, these were the administratively independent town of Gelsenkirchen (10.2%), followed by Offenbach am Main (10.0%), Grafschaft Bentheim (9.8%), the rural district of Günzburg (9.5%) as well as Fürth (9.4%) and Nuremberg (9.4%).

Even though the figures at national level are high (e.g. the share of the population with a general higher education entrance qualification), the evaluations reveal a varied picture at local level. The trend shows that the smaller the geographical units under consideration, the greater the differences may be in terms of material living conditions and quality of life.

4. Cross-dimensional considerations

The material living conditions for Germany based on the OECD's report, "How's Life", can be summarised as follows: A large part of the German population lives in large towns and their surrounding areas. The relatively high population density in large towns means that green spaces and recreation areas are particularly important

Almost all large towns have green spaces or recreation areas, which in most cases account for more 3% of the total area. As far as housing is concerned, the living area – measured first and foremost by the living floor space in m^2 per person – for the densely populated and medium-density towns considered is relatively similar. If the dwelling stock per 1,000 inhabitants is taken as an indicator, the cartographic presentation for the Länder shows that – statistically at least – in the north and east of the country, as well as in the Länder of Bremen and Saarland, 500 out of 1,000 inhabitants, i.e. every second inhabitant, have their own dwelling. This is different to Länder in the south and west, where there are fewer than 490 dwellings per 1,000 inhabitants. These data provide an insight into the housing situation in Germany. A regional analysis requires cartographic presentations at the level of the administrative districts; the requisite data can be retrieved from the regional database for Germany and could be incorporated into the regional atlas relatively easily.

With disposable income per inhabitant of more than EUR 17,320, income – an important indicator of material living conditions – in western Germany, except for some administrative districts in the north-west and the south-east, sometimes considerably higher than in eastern Germany. In the east, a comparable average income is only achieved for Berlin and the immediate surrounding area.

The labour market situation, in particular employment and unemployment, shows quite a heterogeneous picture for Germany. Whereas the working-age population (i.e. the share of the population of working age (15-64 years) in the resident population) in the majority of administrative districts in western Germany is more than 67%, such figures are lower for administrative districts in eastern Germany. These results are most likely due to an unfavourable age structure of the resident population there. Overall, i.e. for all of the 412 administrative districts in Germany in 2009, the working-age population stands at less than 67% for 186 administrative districts and above 67% for the remaining districts. If these figures are compared with the actual numbers of people in gainful activity (measured by employees subject to social insurance at the place of residence in proportion to the population aged 15 to 65), then the employment rate for eastern and southern Germany is higher than that for the west of the country, with a figure of below 52.8%. As regards unemployment, there are three different strands to the trend. At less than 4.9%, the overall rate of registered unemployed in 2011 was lowest in administrative districts in southern Germany. Figures for western Germany are much higher, at between 4.9% and 8.3% for most administrative districts. Districts in the east oft the country have even higher rates of registered unemployed,

ranging from above 8.3% to 18.3%. The way in which long-term unemployment as based on the German definition (i.e. the number of persons in long-term unemployment as a share of the total number of unemployed) is distributed geographically differs from the above. In the majority of administrative districts, long-term unemployment accounts for 23.6% or more of total unemployment. Higher figures may be recorded in structurally weak regions as well as in the Ruhr area or the Rhine-Main region, which are close to conurbations. Further analyses are required in order to show whether and to what extent long-term unemployment poses a risk of exclusion.

The level of education in Germany, measured in terms of graduates with a general higher education entrance qualification, reveals a considerable degree of dispersion at the level of administrative districts, from which no clear geographic pattern can be identified.

5. Outlook

The study of material living conditions based on selected indicators from official statistics for the OECD's "How's Life" approach as well as additional indicators from the national sustainability strategy "Sustainable Development in Germany" and "Europa 2020" reveals the following findings.

It is possible to carry out a geographically varied study using federal statistical data for different regional units, selected rural districts and towns not attached to an administrative district. This in turn can help to refine the overall results for Germany as a whole. The material living conditions based on the OECD approach in "How's Life" were adopted as the starting point for the study, together with the components of the spatial situation in the broad sense, income and employment, and unemployment. Since employment and level of education are generally closely associated, in objective terms education was reclassified from the OECD's quality of life dimension to material living conditions. Closely related to this, employment, and in particular unemployment among young people, was included in the study. Here it is evident that even though the level of education, measured in terms of the graduates with a university degree, is relatively high at national level, there are regional variations. In this regard, relationships of the towns under review, in particular with their surrounding areas, become manifest, at least implicitly. Corresponding hypotheses can be the starting point for further analyses, as shown for example by the statements regarding employment based on employees subject to social insurance, or unemployment.

Federal statistics provide a broad range of statistical data, procedures and methods which enable the interested party to get an idea even of complex subjects, both at national level as well as in a regional context, relatively easily. The content and technical analysis of these data are available to potential users free of charge; the range of federal statistics therefore corresponds to the principles of "open data". The various forms of presentation and visualisation – in tables, histographs and maps – in this case for the largest and smallest towns not attached to an administrative district as well as for all administrative districts in Germany, show that their inherent informational content varies. Whereas the first two methods allow the selected towns to be studied in isolation, cartographic representations also provide indications as to interrelationships, not only in geographical but also in substantive terms. Greater geographical accuracy could yet be achieved if so-called grid based data – such as for the European Union, for example – were to replace the administrative regional units used to date could. The requisite change to the law, within the framework of the E-Government Act, is still expected to be made during this legislative period.

Official statistics offer a whole array of indicators for assessing living conditions in the broad sense at national level, as well as at supranational and international level, even if they are not always ideally suited to the purpose in question. The fact that approximate solutions may also point in a similar direction is shown, for example, not only by the comparison of the "at-risk-of-poverty rate" and "disposable income" indicators but also by various indicators for assessing the tertiary level of education in society as a whole. From a statistical viewpoint, however, a restriction to just a few indicators and an agreement on, or at least a convergence of definitions and methods would be desirable. The various nuances in some indicators, especially at supranational and international level, suggest a degree of accuracy which seems questionable considering the purpose of statistical indicators. The more complex the actual phenomenon and/or the more dynamic its development, the more difficult it is likely to be to represent this with a sufficient degree of accuracy. Indicators ultimately display what the status of something is at a particular time and are designed to show how and whether the actual results that are trying to be achieved will develop as wished. Their suitability can only be proven over time. Even then, a regular review of the informational value they bring in terms of the real situations being examined and the desired goals is necessary. If an indicator proves to be unsuitable, another indicator must be found, as was the case on several occasions with the national sustainability strategy "Sustainable Development in Germany".

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