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Delegations will find attached document SWD(2024) 79 final - PART 10/23.

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on the 9th Cohesion Report

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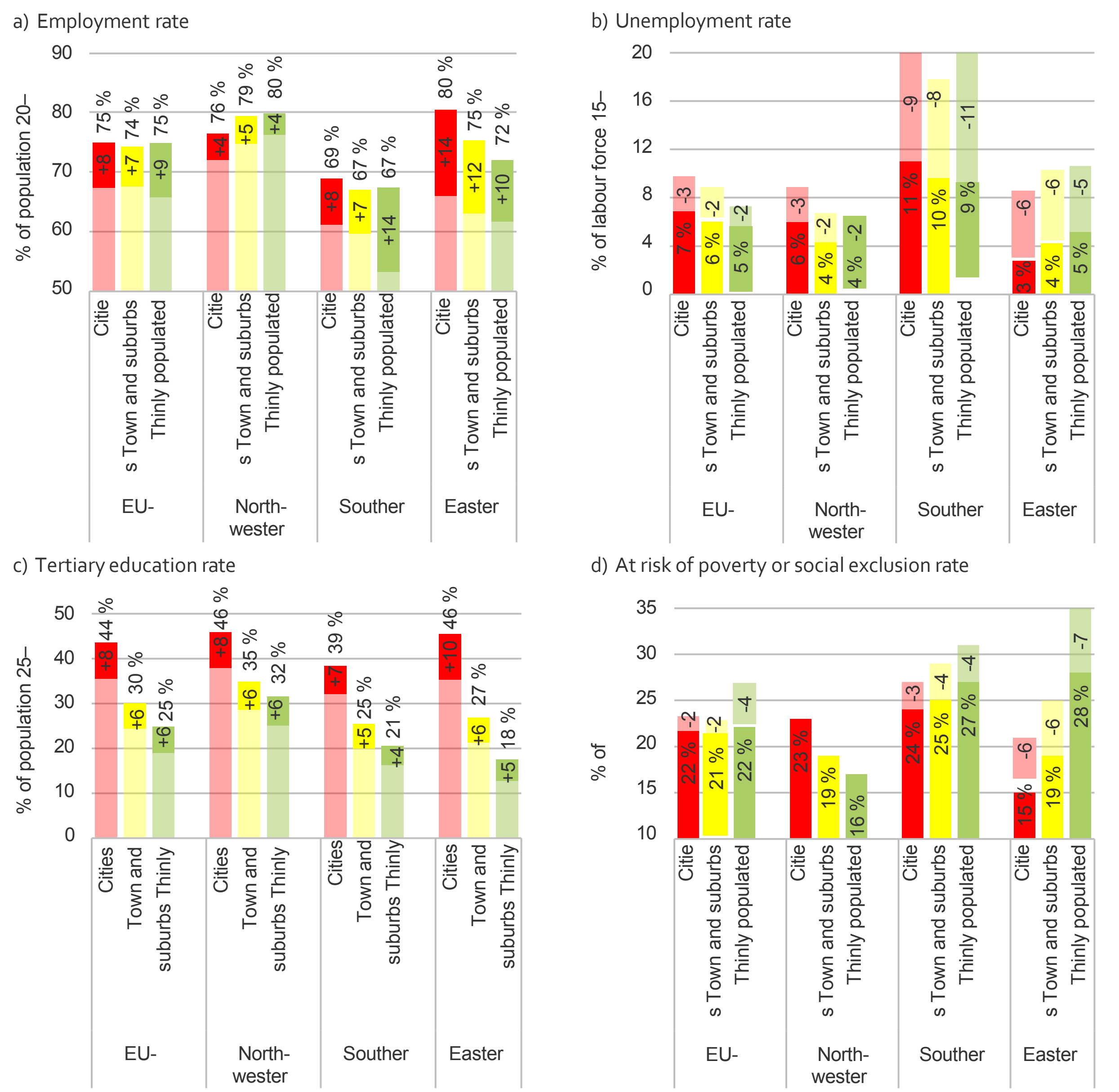
EN EN

2.1 Employment rates are higher in cities in southern and eastern Member States, and in thinly populated areas in north-western ones

As noted above, in the EU as a whole, employ- ment rates in cities, towns and suburbs, and thin- ly populated areas are similar – around 75 % in 2022. There are, however, marked differences be- tween different geographical areas (Figure 3.1a).

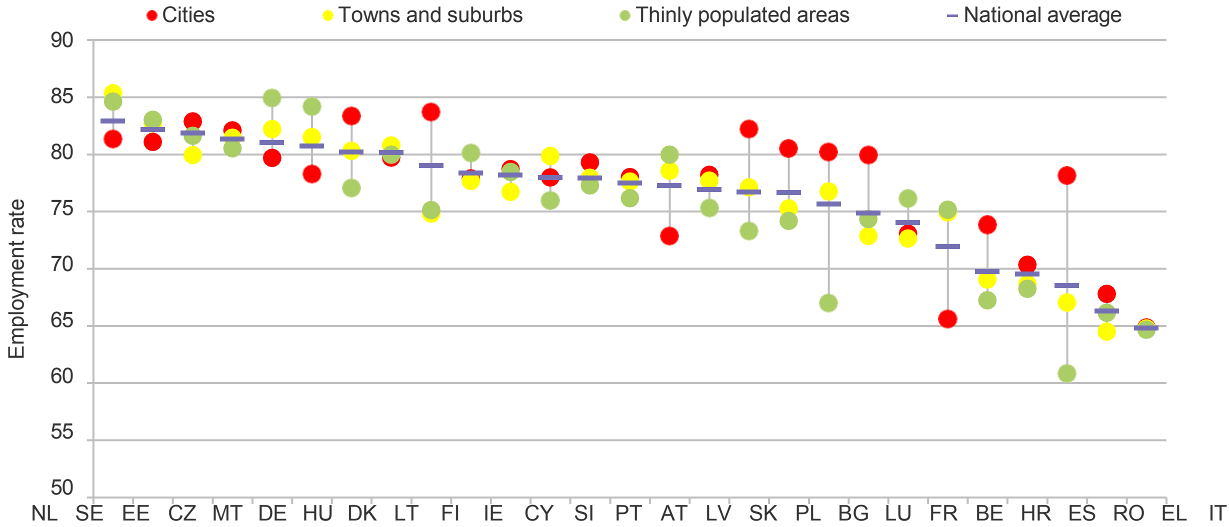
In north-western Member States, the employment rate for those aged 20 to 64 was 80 % in thinly populated areas and towns and suburbs in 2022, as opposed to 76 % in cities. The difference largely reflects differences in Germany, Austria, France and especially Belgium (of 10 percentage points – pp) (Figure 3.2). In southern countries, the employment rate in thinly populated areas increased markedly between 2013 and 2022 (by 14 pp) to almost the same level as in cities (to 67 % as against 69 %).

Figure 3.1 Employment, education and social indicators in regions by degree of urbanisation, 2013 (2015 for AROPE) and 2022



Note: For employment and tertiary education rates: lighter parts of bars are for 2013, darker parts for the increase in 2013–2022, bar heights show the % for 2022. For unemployment and AROPE rates: the heights of bars denote % for 2013 (2015 for AROPE), lighter parts of bars show the reduction 2013–2022 (2015–2022 for AROPE), darker parts and % figures are for 2022. 2021 break in LFS series, 2020 break in EU-SILC series. Source: Eurostat [lfst_r_pgauwsc, edat_lfs_9915, ilc_peps13n] and DG REGIO calculations.

Figure 3.2 Employment rate by degree of urbanisation in EU Member States, 2022



Source: Eurostat [lfst_r_ergau].

In eastern countries, the employment rate in rural areas also increased over the period (by 10 pp to 72 %) but by less than in cities (by 14 pp to 80 %), so the gap between the two widened (to 8 pp from 4 pp). In Bulgaria and Romania, the employment rate in cities was higher than the EU average and much higher than in thinly populated areas (13 pp higher in Bulgaria, 17 pp in Romania).

Unemployment rates to a large extent mirror these differences. In north-western and southern Mem- ber States, rates are lower in thinly populated ar- eas than in cities, while the opposite is the case in eastern Member States (Figure 3.1b).

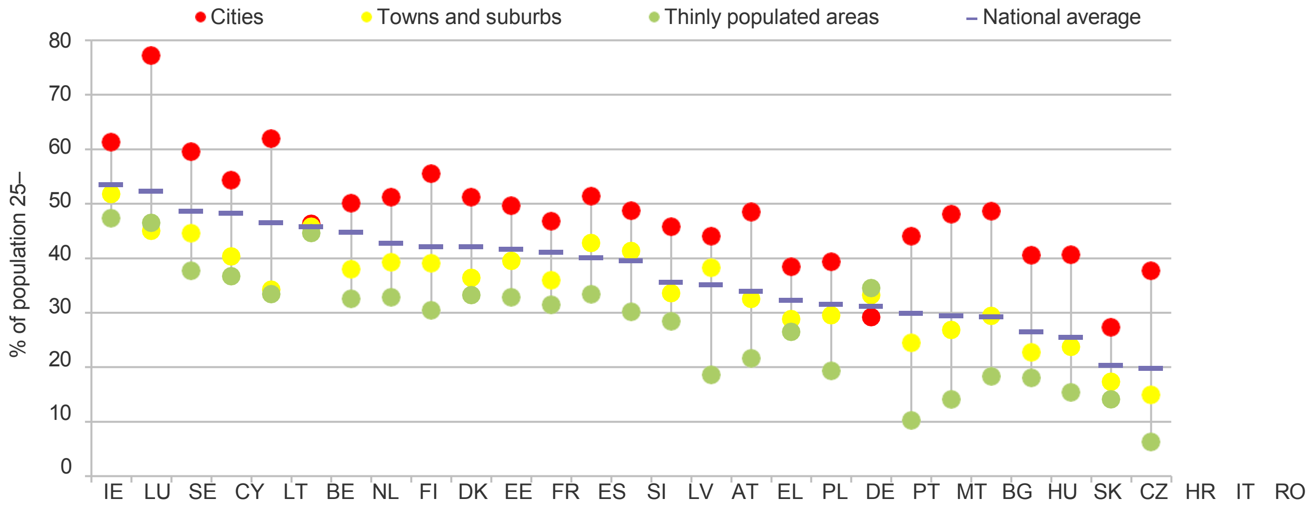
2.2 Tertiary education favours cities, especially in eastern Member States

Around 34 % of people aged 25 to 64 in the EU had tertiary education in 2022. However, there are substantial differences between different types of regions. The proportion was much higher in cities (44 %) than in towns and suburbs (30 %) and thinly populated areas (25 %), reflecting the strong demand for workers with tertiary education there. The average difference, moreover, widened between 2013 and 2022 (from 11 to 14 pp in towns and suburbs, and from 17 to 19 pp in thinly populated areas). The difference was substantial- ly wider in eastern Member States (46 % in cities against 18 % in rural areas), giving rise to a large difference in employment and social outcomes (Figure 3.1c).

This pattern of difference was common across all Member States. In 10 EU Member States, over 50 % of the population aged 25 to 64 in cities – and over 60 % in Luxembourg, Lithuania, Ireland and Sweden – had tertiary education. Conversely, the proportion was below 20 % in thinly populat- ed areas in 10 Member States and around 10 % or below in Bulgaria and Romania. The disparities between cities and thinly populated areas were particularly pronounced in these two countries, as well as in Hungary, Luxembourg and Slovakia (Fig- ure 3.3). To some degree, these disparities reflect the difference in the structure of economic activity and the consequent difference in the mix of skills demanded, though they also act as a constraint on the extent to which activity can shift into higher value-added sectors in rural areas.

Vocational education and training (VET) comple- ments tertiary education and equips the economy with high skills that are essential to address la- bour shortages and deliver on the green and dig- ital transitions (see Chapter 2). Its contribution is evident in thinly populated areas, where those with VET qualifications accounted for 46 % of the pop-

Figure 3.3 Tertiary education attainment by degree of urbanisation in EU Member States, 2022



Source: Eurostat [edat_lfs_9915].

ulation aged 25–64, compared with 27 % in cities and 38 % in towns and suburbs.

A low level of tertiary education coupled with a limited increase in this between 2015 and 2020 and an accelerating decline in the working-age population are features of regions in a 'talent de- velopment' trap, as discussed in Chapter 5. This affects 16 % of the population in the EU, main- ly in eastern Member States, especially Bulgaria, Romania, Hungary and Croatia, as well as in the south of Italy, eastern Germany and the north-east of France.

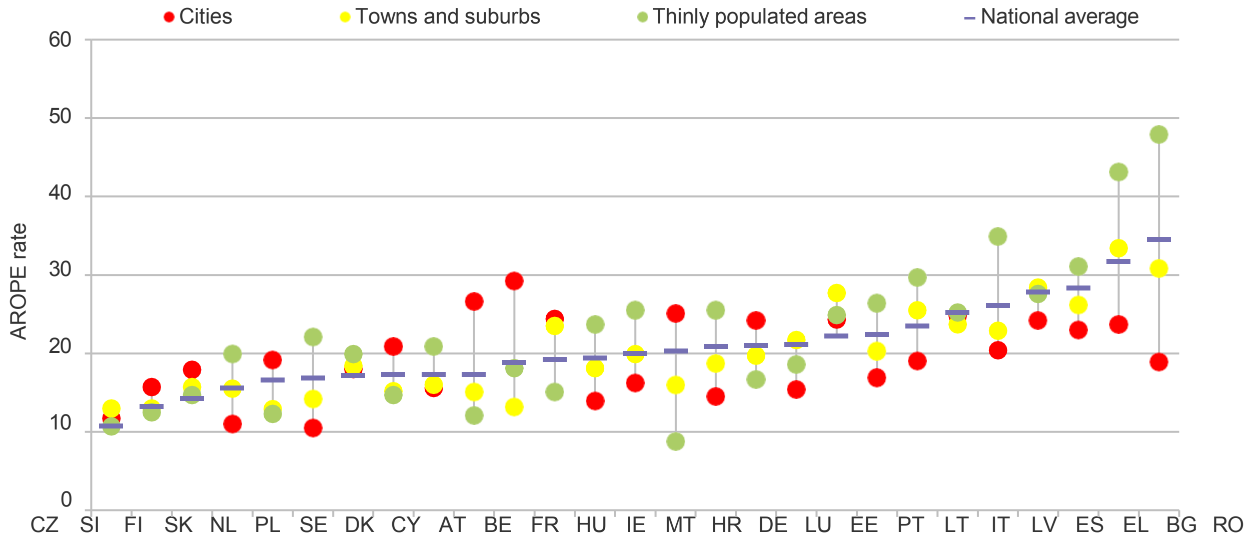
2.3 Poverty and social exclusion are more prevalent in thinly populated areas of eastern and southern Member States and in cities in north-western ones

The AROPE rate declined in the EU over the period 2015–2019 and remained unchanged from then until 2022 in cities, towns and suburbs, and thinly populated areas alike. The reduction in the rate, down on average by 2.4 pp to 22 % over the seven years to 2022, was especially large in rural are- as (4.3 pp), particularly in eastern Member States (7.4 pp).

At EU level, the difference between cities, towns and suburbs, and thinly populated areas is nota- bly smaller than between more developed and less developed regions (11 pp) or between north-west- ern and southern Member States (5 pp) (as de- scribed in Chapter 2). Indeed, the difference in the rate between cities, towns and suburbs, and thinly populated areas in the EU narrowed over the pe- riod, largely as a result of the reduction in rural areas (of 4 pp to 22 %) (Figure 3.1d).

The geographical breakdown highlights the rela- tively high AROPE rates in thinly populated areas in eastern Member States, despite a large reduction over the 2015–2022 period (of 7 pp to 28 %). In Romania and Bulgaria in particular, the difference in the AROPE rate between thinly populated areas and cities was especially wide (29 pp in the for- mer, 19 pp in the latter). In Austria and Belgium, by contrast, the difference was especially wide in the opposite direction (15 pp and 11 pp, respectively) (Figure 3.4).

Figure 3.4 AROPE rates by degree of urbanisation in EU Member States, 2022



Source: Eurostat [ilc_peps13n].

1. Connecting territories

Mobility is important for both the economy and social life. Cohesion Policy is aimed at improving links between Member States and regions in the EU, in part by supporting the development of the trans-European transport network (TEN-T), espe- cially in regions where transport infrastructure remains under-developed[7]. Promoting sustainable transport and removing transport bottlenecks was one of 11 thematic objectives for Cohesion Policy in the 2014–2020 period and is part of one of the five Policy Objectives for the 2021–2027 period.

Well targeted infrastructure investment and net- work design are crucial for a transport system that provides accessibility to people and businesses and reduces regional disparities in connectivity. Public transport (especially railways) tends to be less developed outside cities in terms of network density and service frequency. Distances travelled are typically too great to use a bicycle or to walk. As a result, dependency on road transport tends to be higher.

1.1 Road networks are sparser in eastern Member States and infrastructure needs per head are higher in thinly populated areas regions[8]

Road accessibility depends on a sufficiently dense and fast road network that connects places and people. Various other factors also affect accessibil- ity, including the distribution of the population, the efficiency of the layout of the road network, and geophysical features such as mountains, rivers and lakes. Nevertheless, all other things being equal, greater road length per head and more roads that are motorways can be expected to result in greater accessibility and better road performance.

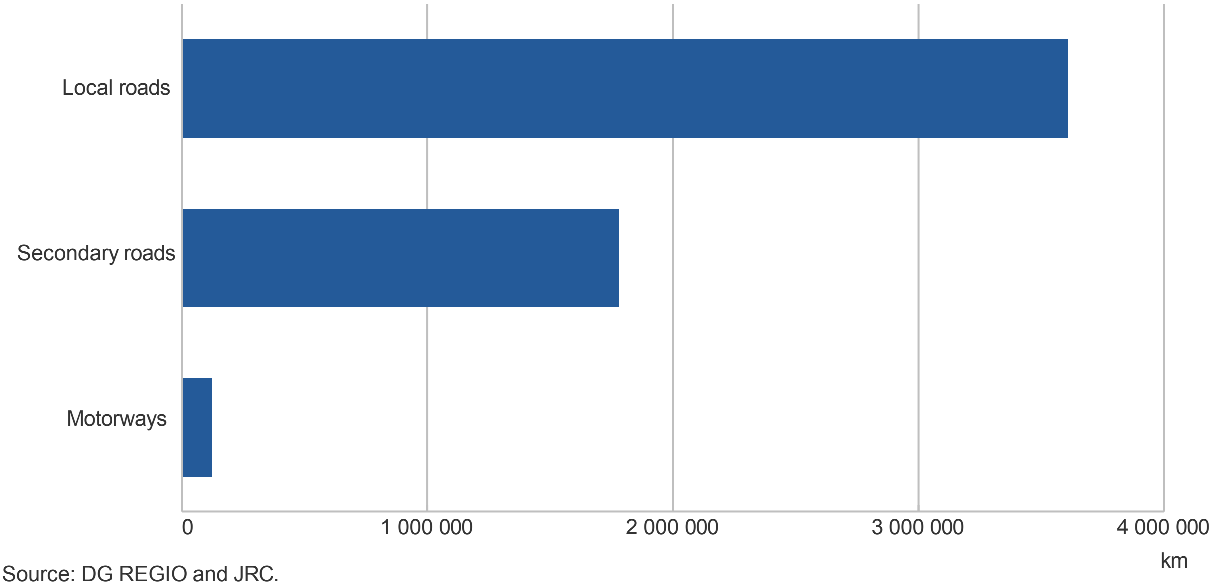
Over the past decade, public investment in trans- port amounted to around EUR 112 billion a year, accounting for roughly a quarter of total public in- vestment[9]. According to data from the Internation- al Transport Forum, the greater part of this went on roads.

2 European Commission (2021).

3 This sub-section is largely based on Brons et al. (2022).

4 This concerns total gross fixed capital formation (Eurostat GOV_10A_EXP).

Figure 3.5 Total road length by road class in the EU (km), 2019



Source: DG REGIO and JRC.

Two thirds of the road network in the EU consists of local roads in terms of length, just under a third of secondary roads, and only 2 % of motorways (Figure 3.5). This breakdown is much the same in all Member States.

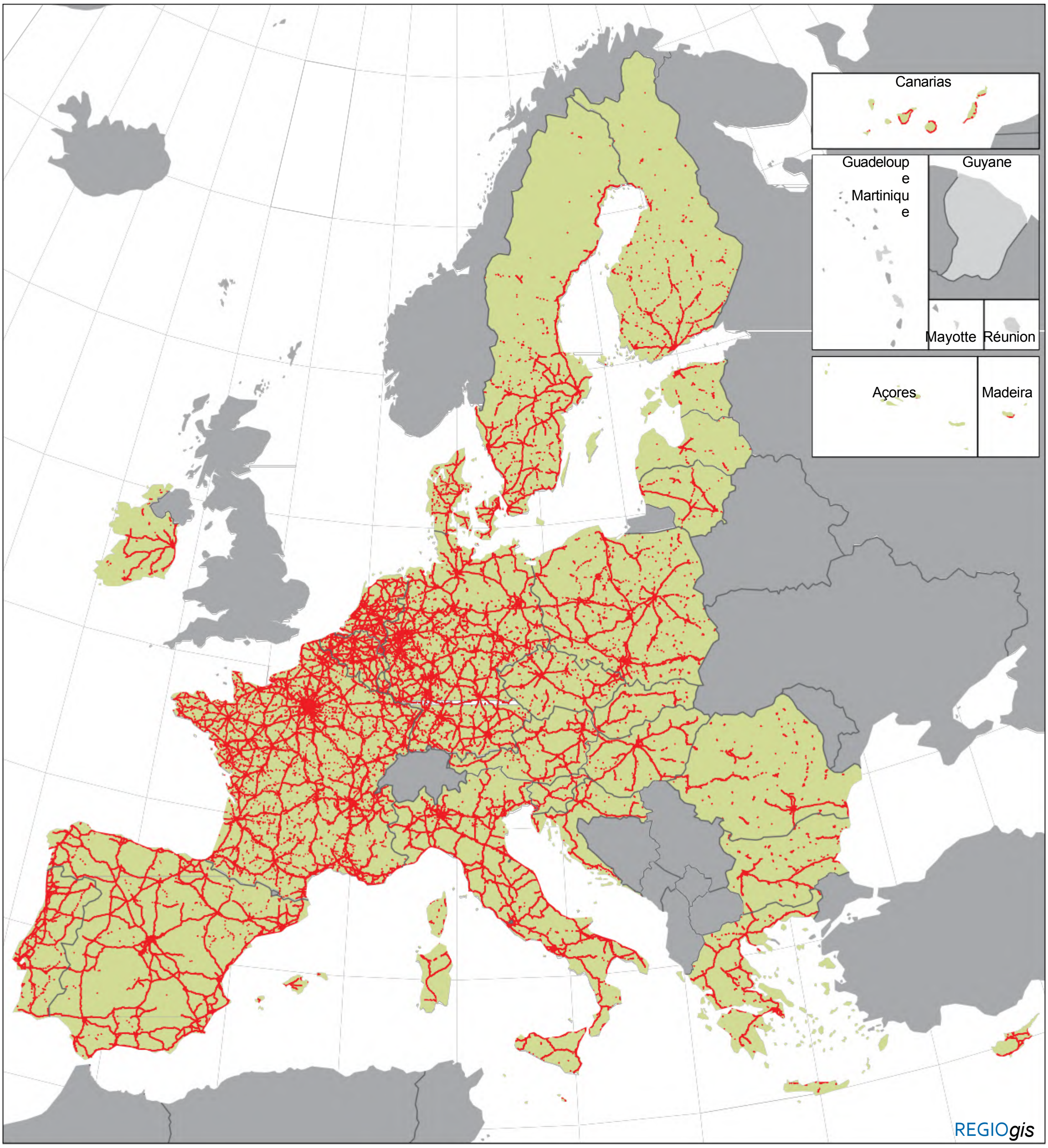
Despite the very small part of the network made up of motorways, they are important in providing fast road connections, particularly for intermediate and long-distance journeys. The motorway net- work is well developed in most north-western and southern Member States, but much less developed in Romania, Bulgaria, Estonia and Latvia, especial- ly in the more rural parts (Map 3.3). Although these areas are served by secondary and local roads, the lack of motorways tends to imply lower speeds and so lower accessibility.

The length of roads per head differs according to the degree of urbanisation. Because of the dis- persed nature of the settlements in thinly populat- ed areas, much greater road lengths per head are required to connect them (Table 3.2). For example, local road length per head is 10 times greater in thinly populated areas than in cities (19 versus 1.8 km per inh), with towns and suburbs in an in- termediate position (just under 3 times the length per head in cities, but a quarter of the length in ru- ral areas). The length of motorways and secondary roads per head is also greater in thinly populated areas (though these roads are frequently used by people living outside these areas).

Table 3.2 Road length per inhabitant by road class and degree of urbanisation, 2018

	Thinly populated areas	Towns/suburbs	Cities
All roads (m/inh)	31.0	5.5	2.1
Motorways (m/inh)	0.78	0.10	0.07
Secondary roads (m/inh)	11.3	1.00	0.3
Local roads (m/inh)	19.1	4.4	1.8

Note: Data presented here are based on grid-level classification by degree of urbanisation.
Source: DG REGIO, JRC.



Map 3.3 Motorways and major roads

Roads

No data

Source: JRC based on Tom Tom data.

0 500 km

1.2 Road performance remains low in some eastern Member States and thinly populated areas

Transport performance by car, defined here as the share of population within 120 km that can be reached within 90 minutes[10], varied substantially between Member States in 2021. It is highest in Cyprus and only slightly lower in Malta, both rela- tively small islands, where most destinations can be reached within 90 minutes. It is also high in Belgium and the Netherlands, countries that are also relatively small and highly urbanised, with dense road networks. In Portugal and Spain, where there have been several decades of substan- tial investment in transport infrastructure[11], road performance has increased markedly as a result and is now above the EU average and higher than Germany and France. Road performance is lowest in Slovakia and Romania, where road networks remain underdeveloped, and mountainous areas make road construction difficult and costly.

Road performance by car also varies substantial- ly between regions within Member States, both in less developed (especially in Greece, Bulgaria and Slovakia), moderately developed (Portugal) and more developed (Austria) ones (Map 3.4).

Road performance tends to be low in thinly popu- lated areas, especially in eastern Europe, and high in more densely populated regions, particularly in the Netherlands and Belgium, but also in many Spanish regions. In several of the latter, the pop- ulation is concentrated in densely populated cit- ies – decent road networks, accordingly, providing access to large populations within 90 minutes of driving. Most of the capital city regions have high road transport performance, including in Bulgaria, Croatia, Romania and Slovakia, where overall road performance is low.

1.3 Passenger rail performance is poor compared with road, particularly in thinly populated areas

For journeys between urban areas, trains tend to be the main alternative to cars, provided there is a railway station within easy reach and the journey is affordable. As a sustainable means of transport, rail is pivotal in the design and construction of the TEN-T, because it is integral to EU climate policy. Besides the costs involved, the extent to which trav- ellers are willing to consider using trains depends in large measure on the time journeys take as com- pared with using a car. It also depends on the ease of reaching the departure station and of reaching the final destination from the arrival station[12].

Box 3.3 Measuring transport performance based on accessibility and proximity indicators

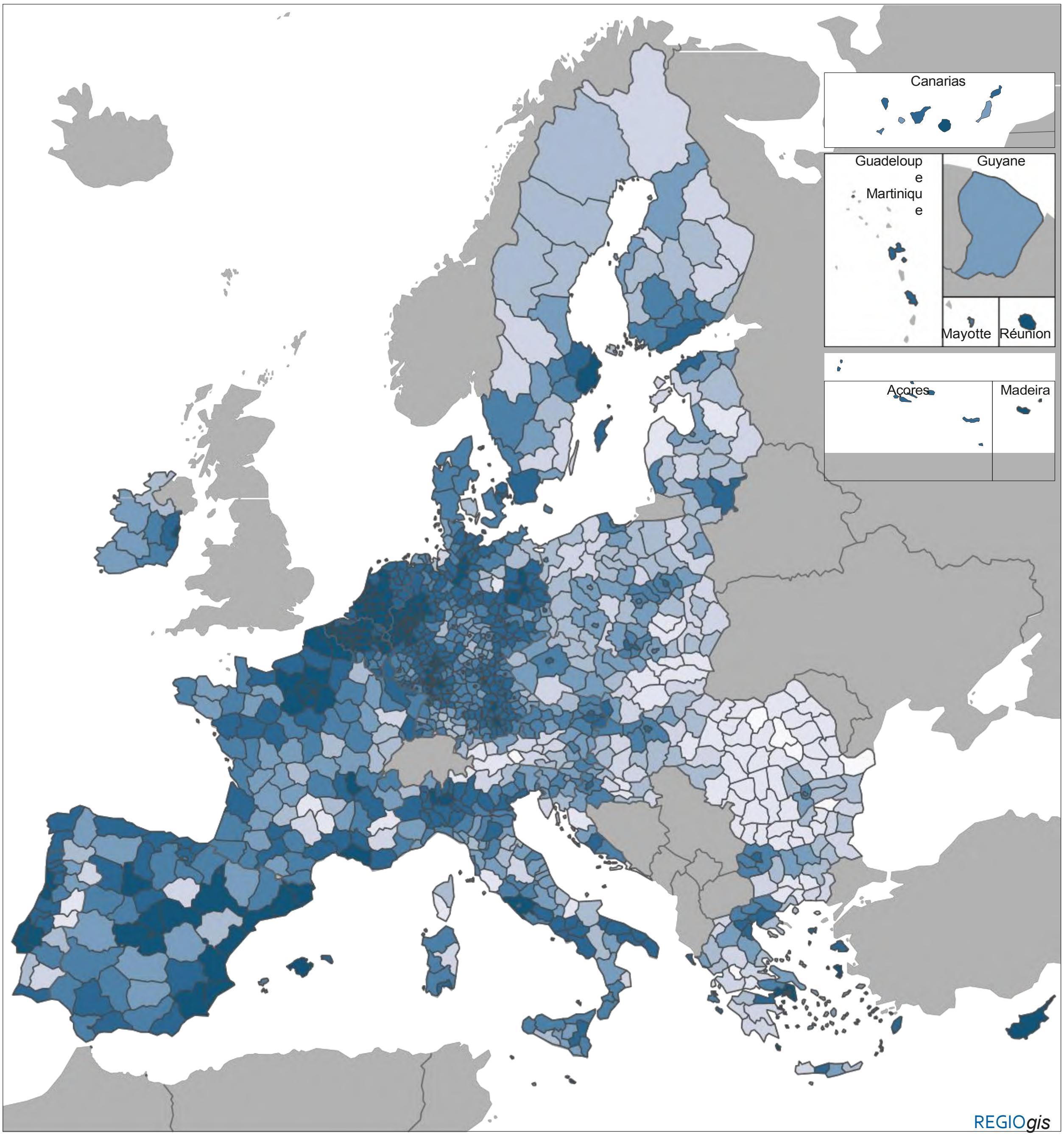
Transport performance is measured here based on a methodology developed by the International Transport Forum together with the European Commission and the OECD. The indicators used and their precise opera- tionalisation in this analysis are as defined in the following table.

Indicator	Description
Proximity	Total population within 120 km (i.e. ‘nearby’ population).
Absolute accessibility	Population within 120 km that can be reached within 90 minutes by either road or rail (i.e. accessible population).
Transport	Ratio of accessibility to proximity, or the share of population within 120 km that can be reached within 90 minutes.

5 For a description of the transport performance indicator see Box 3.3.

6 European Commission (2016); cohesion open data platform (https://cohesiondata.ec.europa.eu/).

7 The focus of the analysis here is on accessibility and travel times and does not take account of other factors determining travel choice, including the cost – i.e. ticket price – safety and comfort.



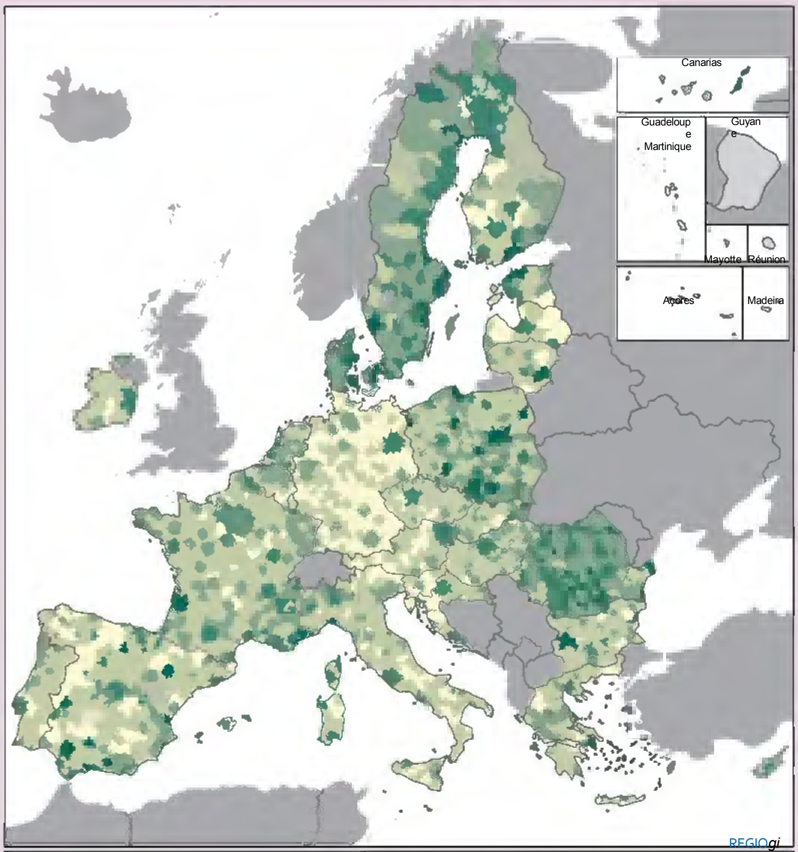
Map 3.4 Road transport performance (% of population within a 120-km radius that can be reached in 90 minutes) by NUTS 3, 2021

%	
0 – 20	60 – 70
20 – 40	70 – 80
40 – 50	80 – 90
50 – 60	90 – 100

EU-27 = 77.2
Share of population within a 120-km radius that can be reached within 90 minutes by car.
Source: DG REGIO, based on Eurostat and TomTom data (FR (RUP): JRC and IGN-F).

0 500 km

Box 3.4 Estimating the impact of traffic congestion on car travel time in the EU



Map 3.5 Estimated average free-flow travel speed by functional urban and rural area (km/h)

km/h
- <= 50
- 50 – 55
- 55 – 60
- 60 – 65
- > 65
- no data

Source: JRC based on TomTom

0 500 km

A recent analysis by the JRC estimates the reduction in speed and increase in travel time on the European road network due to congestion. As a first step, the approach[1] uses an ‘origin-constrained spatial interaction model’, which produces a distribution of passenger car trips from every inhabited 1-km origin grid cell to all inhabited grid cells that are:

(i) within national borders; and
(ii) within 60 minutes driving in free-flow conditions, i.e. without congestion. As a next step, the free-flow speed[2] and travel time on the quickest routes from an origin to all destinations are considered. In order to track changes in speed and travel time in the morning commute, the analysis calculates the travel time on the same route when the network speeds reflect those of a regular weekday at 8:30 in the morning[3].

Map 3.5 and Map 3.6 show, for FRAs and FUAs[4], the estimated average speed of travelling in free-flow conditions and the loss in average travel speeds in weekday 8:30 am driving conditions. Free-flow speeds depend inter alia on national regulations, which explains the fact that some of the variation shows up at the country level (Map 3.5).

For example, in areas of Germany, Italy, Spain and Latvia speeds tend to be higher than in most other Member States. Nevertheless, there are significant regional variations in most countries, indicating in particular lower free-flow speeds in urban areas. The loss in travel speed in morning peak conditions is largest in FUAs in Spain, Germany, Finland and Latvia (Map 3.6). As a general rule, reductions in speed tend to be larger in areas where the free-flow speed is higher.

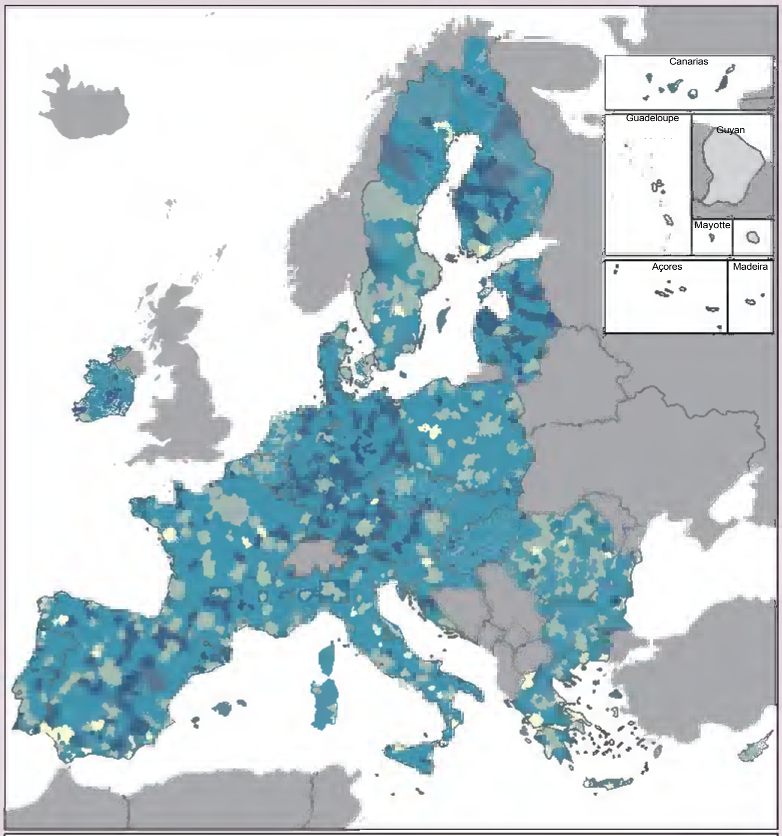
1 The approach is based on Jacobs-Crisioni et al. (2015), using data from Batista e Silva et al. (2021).

2 Travel speeds are obtained from speed profiles recorded in the TomTom data.

3 8:30 in the morning is selected because, across Europe, this is when most time is lost (Christodoulou et al., 2020).

4 FUAs are defined using the provisional boundaries of the 2021 Geostat grid. The specification of FRAs is an ongoing task.

The defi- nition used here is the currently preferred one but is provisional.



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Map 3.6 Estimated average loss in travel speed with 8:30 am driving conditions by functional urban and rural areas (km/h)

km/h
<= 5.0
5.0 – 7.5
7.5 – 10.0
> 10.0
no data

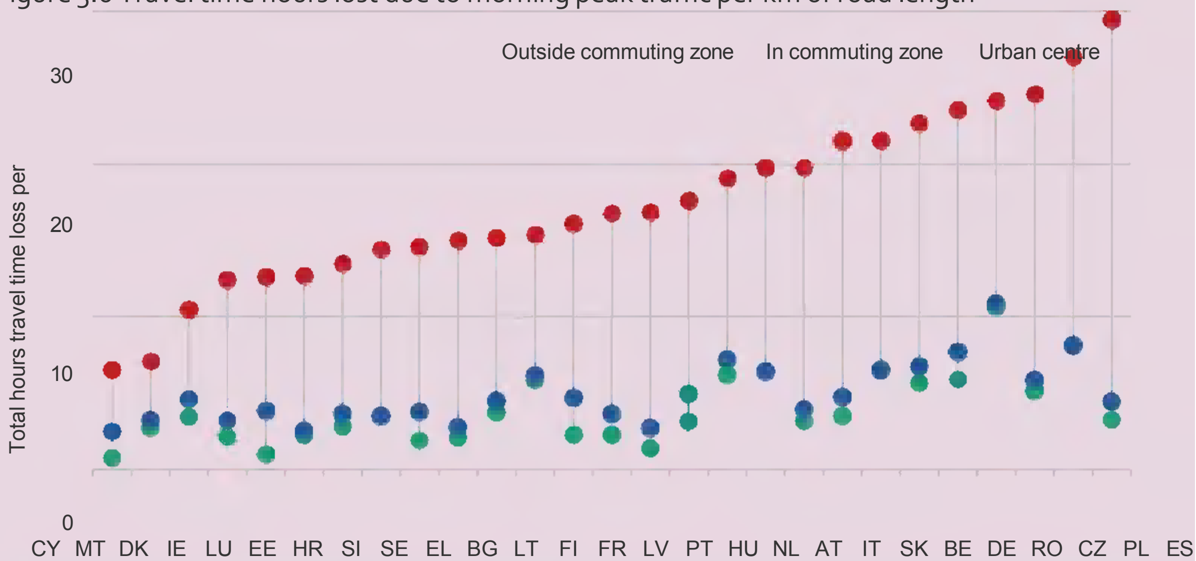
Averages in functional urban and rural areas
Source: JRC based on TomTom

0 500 km

Lower car travel speeds during the morning rush hour lead to losses in travel time[5]. Figure 3.6 shows, by Member State and ur- ban audit zone, the amount of travel time lost. This is calculated as the total estimated amount of time residents would lose when travelling their modelled jour- neys at 8:30 am travel speeds instead of free-flow speeds, rel- ative to the kilometres of road in a specific zone. In all Member States, the impact of traffic con- gestion on travel time is much greater in urban centres than in other areas. Outside urban cen- tres, the impact of congestion in commuting zones is only slightly higher than in non-commuting ones.

5 Time losses need to be measured appropriately, as they depend among other things on factors such as av- erage travel speeds and lengths of travel, which vary considerably across the EU. To indicate the territorial scale of time loss, hours lost are therefore normalised by road lengths per urban audit zone.

Figure 3.6 Travel time hours lost due to morning peak traffic per km of road length



Source: Batista e Silva and Dijkstra (2024), JRC based on TomTom.

Rail performance is defined here as the proportion of the population living within a 120-km radius that can be reached by rail within 90 minutes (see also Box 3.3). This proportion lies between 0 and 100 % but has positive values only for people liv- ing in locations where they have access to a rail station (see Box 3.5).

In all NUTS 3 regions, transport performance by rail remains lower than by road, which hardly en- courages people to travel by train, especially if they need to travel frequently or quickly.

At the EU level the average rail performance is 15.7, which means that, on average, around just under 16 % of the population living within a 120-km radius can be reached within 90 min- utes by rail. However, there is substantial variation across EU regions (Map 3.7). Around a quarter of people in the EU have access to a reasonable rail service (rail performance indicator above 20). Most of these live in urban areas. Only some 6 % of peo- ple, all living in capital city or other metro regions, can reach over half of the population living in a 120-km radius within 90 minutes. The top-per- forming regions include Paris and surrounding re- gions, Berlin, Copenhagen and the surrounding re- gion, and Barcelona, where more people live close to a station and where there are more, and faster, train connections. In thinly populated areas, rail performance tends to be lower because the pop- ulation is more dispersed and stations are fewer

Box 3.5 Determining who has access to a rail station

To assess whether or not a person has access to a rail station, the approach followed is, first, to determine the area that can be reached within 15 minutes by:

- walking at a moderate speed;
- a bike ride at a realistic speed;
- a car ride, including time for parking and allow- ing for possible congestion; or
- a short trip by public transport.

All people living in a 200 x 200 m grid cell that has its centre in the area reachable within 15 minutes are considered to have access to the station for the purpose of this analysis.

and farther between. Indeed, many people in rural regions do not have access to a rail station at all.

Rail performance also tends to be lower in eastern EU regions, particularly in Lithuania and Romania. This is partly linked to the fact that eastern re- gions tend to be less densely populated and have a larger proportion of people living in rural regions. However, rail performance is also low in urban regions as compared with urban regions in other parts of the EU, which reflects the low investment in the rail network before EU accession.

Table 3.3 Access to primary schools (2018), universities (2020) and healthcare centres (2021–2022) by urban-rural typology including closeness to a city

	Primary school < 15 min walking	University < 45 min driving	Distance to nearest healthcare centre
Urban	77.9	98.6	6.4
Intermediate	58.0	89.8	10.3
Intermediate – close	58.6	91.7	10.1
Intermediate – remote	48.6	61.9	13.6
Rural	45.3	69.1	14.0
Rural – close	44.7	73.9	13.0
Rural – remote	47.3	55.6	16.8

Source: DG REGIO calculations based on data from Eurostat, JRC and TomTom.