



European
Commission

SCIENCE FOR POLICY BRIEF

The Future of Cities Series



Accessibility to services in Europe's Member States – an evaluation by degree of urbanisation and remoteness

HIGHLIGHTS

- This policy brief outlines present-day challenges to service accessibility across the EU, with particular focus on rural and remote rural areas.
- It provides information on the accessibility of selected Services of General Interest (SeGI) including retailers, banks, pharmacies, hospitals, cinemas, primary and secondary schools.
- The results of the analysis suggest that service accessibility shows substantial differences among member states, and between urban and rural areas. More specifically,
 - Urban areas in the EU provide better opportunities in terms of accessibility to services compared to rural areas.
 - In rural areas, it is harder to provide necessary conditions for economic viability of a service. Hence, service accessibility in these areas is lower and people have to travel larger distances to reach a service area or facility.
 - Unfortunately, expected changes in demographic factors might exacerbate this separation of service accessibility between urban and rural areas.
- New technologies in digitalisation, smarter consolidation, collaboration, and management policies of service provision, together with innovative solutions in the transportation sector, might allow rural and sparsely populated regions to mitigate this undesired trend in the face of ongoing demographic challenges.

MOTIVATION AND POLICY RELEVANCE

The sustenance of access to services is a key concern for Europe's regions. There is a growing challenge in terms of providing services in regions and localities that are sparsely populated, scattered and difficult to access. Poor access to services reduces quality of life; worsens economic disparities with urban areas; increases dependency on unsustainable transport modes; and forms an additional hardship for mobility-impaired citizens.

Territorial disparities in access to services is widening with demographic changes – i.e., depopulation has a direct impact on public service provision and availability. In Europe, service accessibility shows substantial differences among member states, and between urban and rural areas. Providing and enabling a fair and balanced accessibility to services in Europe is seen as an important element of sustainable territorial development policy. The importance of this issue is also highlighted in the strategic policy documents of the Commission covering the Cohesion Policy (EC, 2022), A Long-Term Vision for the EU's Rural Areas (EC, 2021) and Sustainable and Smart Mobility Strategy (EC, 2020).

This policy brief outlines present-day challenges to service accessibility across the EU, with special focus on rural and remote rural areas. It has been produced in pair with the staff working document for the A Long-Term Vision for the EU's Rural Areas (EC, 2021) and the 8th Cohesion Report (EC, 2022). With this policy brief it is intended to provide more descriptive and technical detail on the analyses shared in those policy documents.

More generally, this report is part of a broader effort by DG REGIO, OECD and the JRC to assess challenges in the sustenance of service accessibility, which has been designed to assist in identifying sound cohesion and social policies – i.e., OECD/EC-JRC (2021), which sketched the cost and access implications of service provision against expected demographic changes; and where JRC (New perspectives on territorial disparities, forthcoming) examines the local accessibility implications of population changes that occurred recently, between 2011 and 2018, and the relationship between regional settlement structures and school service provision.

INTRODUCTION

Accessibility is an important component of integrated land-use and transportation systems. In broad terms, it measures ease of reaching economic opportunities and/or service areas using proper transport infrastructure and means. It is a key instrument for regional policy in monitoring sustainable urban and rural development. Accessibility measurements are given particular importance for the evaluation of the European Union's cohesion and territorial policy. They are seen as a key element to provide useful information on the fair and balanced distribution of services among regions, as well as on the adequacy of transportation infrastructure.

Several studies have recently been conducted to measure accessibility to services in Europe. For instance, Kompil et al. (2019) used simulated stylised service patterns to explore spatial patterns of service accessibility across the EU, highlighting urban-rural differences in terms of accessibility to services at different levels. An EU-wide ESPON project explored to what extent varying levels of Services of General Interest (SeGI) contribute to competitiveness, economic development and job growth (Rauhut et al. 2015; Breuer et al., 2013; Fassmann et al., 2015). Marques da Costa et al. (2015) discussed regional disparities of SeGI provision including education and health. Rauhut and Komornicki (2015) analysed SeGI provision in rural areas and explored centrality of services in rural and urban contexts. Milbert et al. (2013) explored accessibility to primary schools, railway stations and airports using high-resolution spatial data. In the PROFECY project (ESPO, 2017a; 2017b) accessibility measurements were used to identify inner peripheries, i.e. national territories facing challenges of access to basic SeGI (Kompil et al., 2019).

DATA AND METHODS

This policy brief provides information on the accessibility of selected SeGI, including retailers (supermarkets and convenient stores), banks, pharmacies, hospitals, cinemas, primary and secondary schools in Europe. Standout elements of the adapted method are the very fine resolution at which accessibility is measured, thus capturing access differences in detail; and the usage of ESPON's real-world data on the locations of multiple service types, which have become available only very recently. The spatial accessibility indicator developed for this brief is based on the service location data collected in the PROFECY project¹ (ESPO, 2017a; 2017b), a 1-km² population grid developed by GEOSTAT (2011) and a road network from TELEATLAS MultiNet 2014. Results are given per degree of urbanisation (European Commission, 2020b), and additionally by remoteness², which is instrumental here to discern results from places that are close to cities, and results from places that are more than 45 minutes driving away from a city.

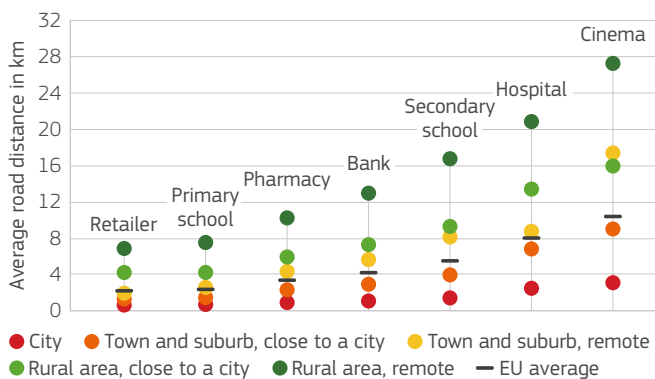
ACCESSIBILITY TO SERVICES IS LOWER IN RURAL AREAS

Figure 1 shows, by means of EU-wide averages, the existing pattern of accessibility to SeGI per degree of urbanisation with and additional classification of remote locations. According to this, on average, everyday services such as

- 1 Location data for facilities is primarily based on the Open Street Map database, which might be missing information related to specific services and/or regions. This might cause reporting lower accessibility levels for some regions or countries.
- 2 The criterion to capture the 'remoteness' is defined by DG REGIO as following: if the majority of the population in an area or a region live more than a 45-minutes driving distance from the nearest city, it is classified as remote. Other areas and regions are classified as 'close to a city'.

retailers, primary schools and pharmacies can be accessed within 0.5 to 4.5 kilometres in cities, towns and suburbs, and within 4 to 11 kilometres in rural areas. Less frequently visited services such as hospitals and cinemas require longer travel distances to reach them, from 3 to 18 kilometres in cities, towns and suburbs, and from 11 to 27 kilometres in rural areas. These results reflect that, in rural areas, where the resident population is sparsely distributed, it is harder to provide the necessary conditions for the economic viability of a service. Hence, service accessibility in these areas is lower and people have to travel larger distances to reach a service area or facility.

Figure 1: Average road distance to the nearest SeGI, per inhabitant and per degree of urbanisation with remoteness, in km.



Source: Facility data – ESPON PROFECY Project (ESPON, 2017a; 2017b); grid-based accessibility computations – Joint Research Centre, Territorial Development Unit (JRC – B.3).

However, there is quite some variation within areas considered rural. Rural areas close to a city often benefit from the urban service offer; while remote rural areas need to rely on the services that can be supported locally. In service accessibility analysis, remoteness is therefore also an important factor to be considered together with rurality. Although the urban-rural divergence is the dominant character in Figure 1, it is important to see that the values of remote urban clusters and rural areas close to a city are similar and move hand in hand; additionally, remote rural areas have the lowest level

of accessibility to all type of services. This confirms that the remoteness to a city is an important factor for accessibility to services in a settlement.

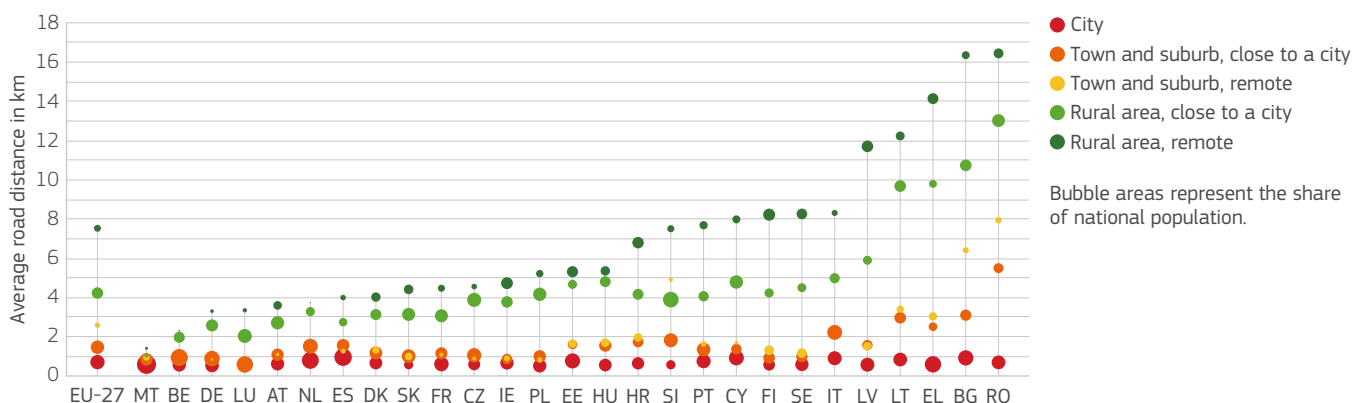
ACCESS TO SERVICES IN RURAL AREAS VARIES CONSIDERABLY BETWEEN MEMBER STATES

Each of the above-mentioned services' accessibility per member state and degree of urbanisation were individually analysed. Figure 2 and Figure 3 provide information on the territorial differences in service accessibility among countries using average road distance to the nearest primary and secondary schools as an example. The size of the various territories, in terms of population, are given by the bubble sizes. The EU-wide average distance to the nearest primary school per person is 2.5 km, whereas it is 5.5 km for secondary schools. In remote rural areas, average distance to the nearest facility becomes 7.5 km for primary schools and 16.8 km for secondary schools.

However, these averages do not represent the considerable variation that the EU's member states manifest. In general, the difference between urban and rural areas in terms of service accessibility is less in more urbanised countries, and more in countries with a high share of rural / remote rural areas.

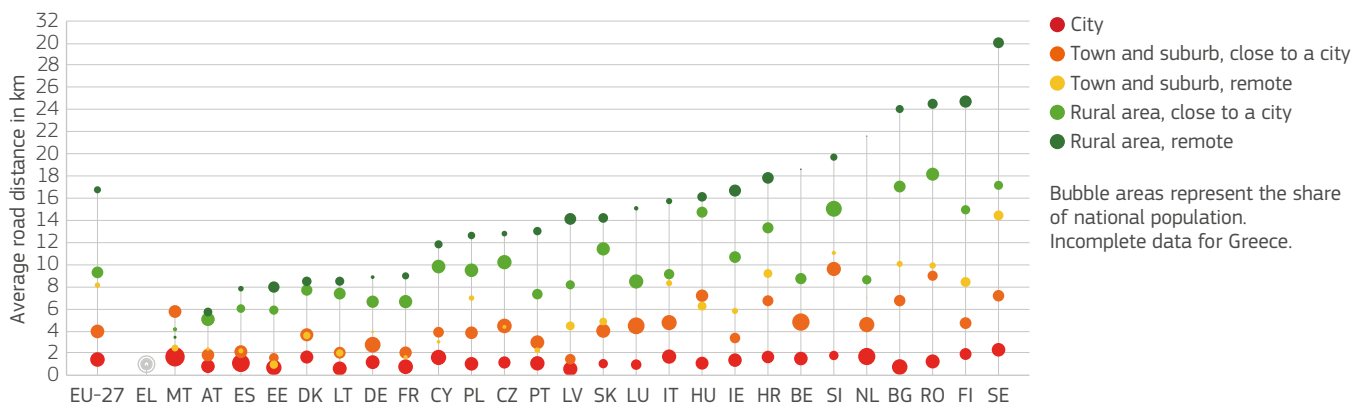
Countries that have extensive sparsely populated rural areas such as the Nordic and Baltic countries as well as Bulgaria, Greece and Romania show the longest travelled distances to primary schools. For secondary schools, the accessibility picture is more mixed, with sparsely populated areas in very urbanised countries such as Belgium and the Netherlands having surprisingly poor access to secondary education. Both countries have a very small portion of the population in such sparse rural areas. The relatively poor access of these areas is presumably related to physical isolation, for instance on the Wadden Sea Islands in the north of the Netherlands.

Figure 2: Average road distance to the nearest primary school, per inhabitant and per degree of urbanisation with remoteness.



Source: Facility data – ESPON PROFECY Project (ESPON, 2017a; 2017b); grid-based accessibility computations – Joint Research Centre, Territorial Development Unit (JRC – B.3).

Figure 3: Average road distance to the nearest secondary school, per inhabitant and per degree of urbanisation with remoteness.



Source: Facility data¹ – ESPON PROFECY Project (ESPON, 2017a; 2017b); degree of urbanisation with remoteness – DG REGIO & REGIOgis; grid-based accessibility computations – Joint Research Centre, Urban and Territorial Development Unit (JRC – B.3).

CHALLENGES, EXPECTATIONS AND OPPORTUNITIES FOR RURAL AREAS

Particularly in rural and remote rural areas, access to services is challenged by loss of service providers. The reasons why service provision is in decline in rural areas are threefold.

First, for the sake of cost cuts or increased profitability, public and private services are increasing in scale through for instance school consolidation or ‘mall-ization’ (Barakat, 2015; Christiaanse, 2020; Stockdale, 1993). Service provision benefits from returns to scale, so that larger service providers are typically more budget-efficient. Small service providers can be found primarily in areas with low population densities. Due to lack of returns to scale, those small providers are relatively costly to maintain, meaning that they are more prone to forced closure, affecting rural areas disproportionately.

Second, public service provision in the EU has been affected profoundly by austerity measures in the wake of the 2008 financial crisis (Agasisti, 2014; López-Torres & Prior, 2020) which without doubt has primarily affected the relatively costliest services, namely the small providers in rural areas.

Lastly, depopulation and ageing in rural areas (EC, 2020c; European Parliamentary Research Service, 2020) are reducing the user base for services, further increasing the costs of service provision in those areas. Considering demographic change and conceivable future pressure on public spending, achieving fair and equal service provision and accessibility, especially in sparsely populated and remote areas, may become very challenging.

Unfortunately, expected changes in demographic factors may exacerbate the separation of service accessibility levels between urban and rural areas, putting stress on the access to services principle of the European social rights pillar³.

New technologies in digitalisation, smarter consolidation, collaboration, and management policies of service provision, together with innovative solutions in the transport sector, might allow rural and sparsely populated regions to mitigate this undesired trend while facing demographic challenges. Financial incentives may also be helpful to enable proximity to services, for example, to food retail using itinerant trade where a lack of profitability deters such activities.

For education and health services, OECD (2021) has recently discussed interventions that can be used to limit the impacts of demographic change on service provision. One possibly useful addition to ameliorate service access decline in rural areas may be the digitalisation of services using Information and Communication Technologies (ICT), which currently constitutes the most promising alternative to traditional service providing. Applications such as distance learning and telematic health consultation are already considered and experimented within the rural parts of some countries. Online platforms, including those organised on a local basis, may also help increase the availability of retail offers and provide alternatives for local producers to reach the market. As the current COVID pandemic highlights, possible barriers include limited digital skills and poor broadband connections. Ongoing experiments with digital service provision may indicate to what degree telematic service provision may provide a substitute for long travels to reach a service provider.

While future access to services is worrying for many rural areas, its consequences can be mitigated. For instance, Sweden and Finland score very well consistently in international comparisons of the quality of education, despite the considerable distances that rural students need to travel there. Clearly, political action is needed to sustain access and ensure that disparities between cities and rural areas are not worsened by ongoing demographic change.

³ The European Pillar of Social Rights in 20 principles. https://ec.europa.eu/info/european-pillar-social-rights/european-pillar-social-rights-20-principles_en

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DISCLAIMER

The views expressed are purely those of the authors and may not in any circumstances be regarded as stating an official position of the European Commission.

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