2 Demographic and digitalisation trends

Introduction

The region of Alentejo is one of Portugal's seven TL2 regions. The region has five inter-municipal communities (CIM) and 58 municipalities, including its main city, Évora (Alentejo Central). The region borders Extremadura and Andalucía (Spain) on the East, the Atlantic Ocean and Metropolitan Area of: Lisbon on the West, Algarve in the South and Centro Region in the North. With 704 934 inhabitants, Alentejo is the fourth Portuguese TL2 region in terms of population. With 31 605 km^2 corresponding to about one third of the national surface, Alentejo is the largest Portuguese TL2 region in terms of surface. The population density of Alentejo (23 inhabitants per km^2) is five times lower than the national level (113 inhabitants per km^2) and is the lowest across Portugal's TL2 regions (Table 2.1).

This chapter outlines the main demographic trends framing service provision in Alentejo at the large region (TL2), small region (TL3) and degree of urbanisation levels. This last typology classifies settlements into sparse rural areas, villages, towns and suburbs and cities in an internationally comparable way (see Annex A for more details). The chapter starts by outlining the distribution of population across regions and human settlement types. In the second section, it analyses available population projections at different levels of territorial aggregation. In the third and last section, it gives an overview of digital divides across regions and degrees of urbanisation.

Population distribution and demographic trends

Alentejo has five TL3 regions, including one non-metropolitan region close to a small/medium city (Lezíria do Tejo, comprising 33.5% of the population) and four remote regions (Alentejo Central (where Évora is located), 21.6%; Alentejo Litoral, 13.6%; Baixo Alentejo, 16.3% and Alto Alentejo, 14.9%) (Figure 2.1). By degree of urbanisation, the population of the region is split rather evenly between towns and suburbs (39%), villages (32%) and sparse rural areas (29%) (Table 2.1). Meanwhile, Portugal has a smaller share of population in villages (9%) and sparse rural areas (23%), and most of the population concentrated in towns and suburbs (35%) and cities (33%). Unlike most OECD TL3 regions, Alentejo does not have any urban clusters that fall under the "cities" category.

Population size varies widely across the 58 municipalities in Alentejo. According to the preliminary results from the latest census, in 2021 population levels ranged from 1 435 inhabitants in Barrancos (Baixo Alentejo) (also the least populated municipality in Portugal mainland) to 58 770 inhabitants in Santarém (Lezíria do Tejo). In 2021, 16 out of 58 municipalities (28%) had 5 000 inhabitants or less, a higher share compared to 47 out of 308 (15%) at the national level.

Figure 2.1. Typology of regions and human settlements in Alentejo (NUTS3)
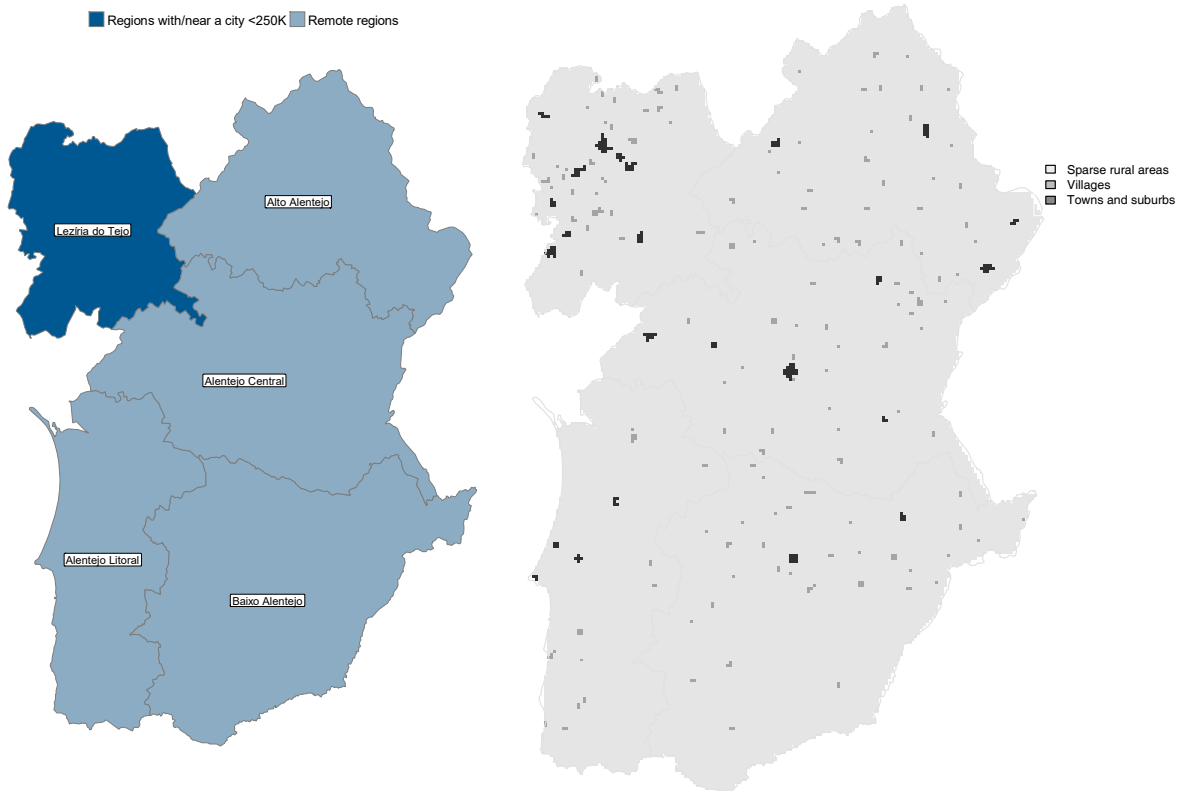
Note: See Annex A for a definition of degree of urbanisation areas.
Source: Authors' elaboration based on the GHSL database (accessed on May 2021).

According to the preliminary 2021 census data, Alentejo's population shrank at a rate of 0.72% annually between 2011 and 2021, four times faster than the national average (0.17%) (Table 2.1). While all Portuguese TL2 regions, except Lisbon Metropolitan Area and Algarve, experienced population decline in the last decade, Alentejo's population decline was the fastest across regions, followed by R.A da Madeira (0.4%) and Centro (0.44%). Four municipalities in Alentejo where among the top 10 municipalities in Portugal in terms of population decline (Barrancos, 1st, Nisa 4th, Gavião, 7th and Mora, 9th).

As in the rest of Portugal, a decreasing share of young people, an increasing share of the elderly and low in-migration drive depopulation in Alentejo. Alentejo is the Portuguese TL2 region with the highest share of elderly, with over one-quarter (26%) of the population above 65 years old (3.4 percentage points above the national level). Alentejo is also the peninsular Portuguese TL2 region with the lowest share of foreign-born population (4%).

Table 2.1. Summary of demographic indicators

	Pop. Density (per km²) (2020)	Annual % Pop. Growth (2011-2021)	Share of Elderly (65+) in total Pop. (%) (2020)	Share of Foreign-born Pop. (%) (2015)
Alentejo	22.1	-0.72	25.6	4.0
Portugal	111.7	-.0.17	22.2	6.8
OECD	38.4	0.51	13.1	10.0

Note: The OECD share of elderly calculations is based on 2019 values and the annual population growth rate on 2011-2020 values. The share of foreign-born population for OECD is an average of the values of 295 TL2 regions in 27 OECD countries.
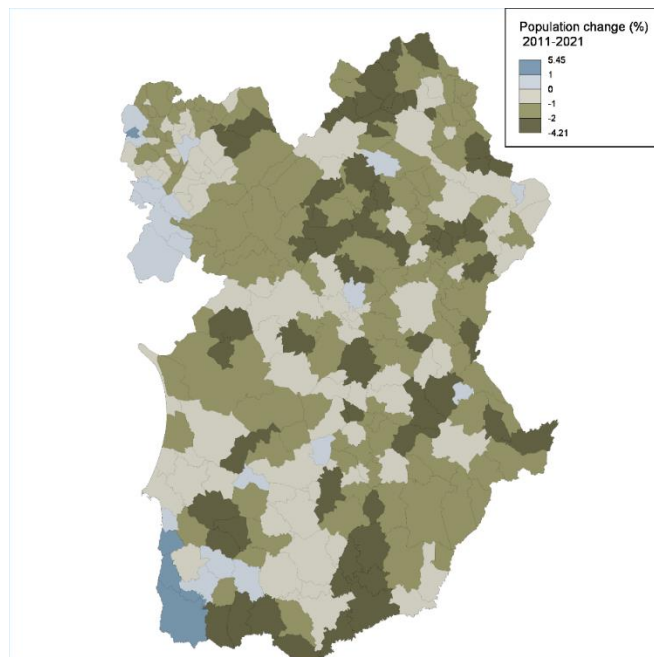Source: (OECD, 2021[1]) and (Statistics Portugal, 2021[2])

In Alentejo, a handful of municipalities with good access to Lisbon and Algarve have been gaining population in the last five decades, while more than half of the municipalities of the region have faced sustained and strong population decline. In 1960-2011, population growth ranged from -2.4% annually in Mértola (Baixo Alentejo) to 1.78% in Benavente, a municipality from the Lezíria do Tejo region located close to Lisbon. In fact, in the period 1960-2011 only 9 out of 58 municipalities, mostly located near Lisbon, registered positive population growth. Meanwhile, 29 municipalities sustained population decrease of at least 1% annually, and 6 municipalities including Mértola, Odemira (Alentejo Litoral), Serpa and Moura (Baixo Alentejo), Montemor-o-Novo (Alentejo Central) and Nisa (Alto Alentejo) lost at least 10 thousand inhabitants in those five decades.

Recent data from the 2021 Census at the Parish level further clarifies the spillover effect of Portugal's growing regions (Algarve and Lisbon Metropolitan Area) on Alentejo's settlement trends. In 2021, 20% of Parishes (65 out of 324) experienced population decreases of at least 2% annually (Figure 2.2). These Parishes concentrated in inland and Central areas of the region. Meanwhile, only 8% of Parishes (27) showed population growth. The parishes that grew or maintained population in the last decade where mostly located in Coastal areas and near Lisbon Metropolitan Region and Algarve.

Figure 2.2. Population change in Alentejo, by parishes

2011-2021

Note: Population change calculated as annual growth rate.
Source: (Statistics Portugal, 2021[2]) and (Agência para a Modernização Administrativa, 2021[3]) for the boundaries.

Future population projections

According to the Resident Population Projections 2020-2080 of the Portuguese National Statistics Institute (INE), the population of Alentejo could fall by almost 30% between 2020 and 2080, from around 704 000 inhabitants to around 495 000 inhabitants (INE, 2020[4]). In this scenario, the young population (0-14 years) of Alentejo would fall by 33% and the older population (65 years and over) would grow by around 4.4%.

Figure 2.3. Population projection, Alentejo, 2020-2080

By age groups
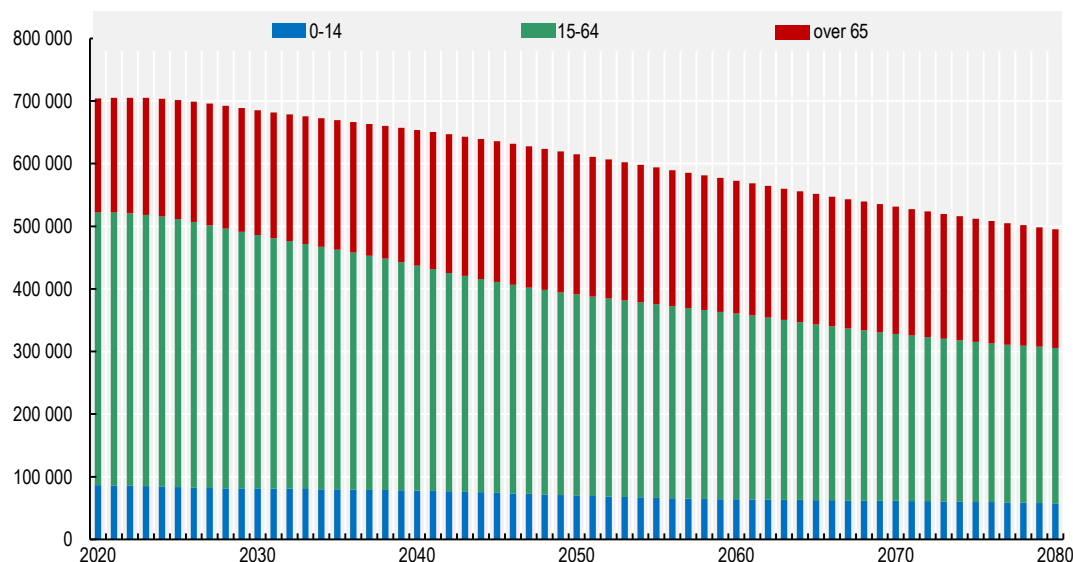
Note: Resident population in Alentejo tends to decrease until 2080 in any of the projected scenarios. The results presented are based on the central scenario of evolution for resident population. In terms of fertility, this scenario expects a moderate recovery of future fertility levels until 2080, with the Total Fertility Rate (TFR) reaching 1.59 children per woman in 2080. In terms of mortality, the gains in life expectancy observed over the last recent years are expected to persist, with life expectancy at birth reaching 87.92 years for men and 93.30 years for women in 2080. In terms of international migrations, trends in immigration and emigration are expected to continue in this central scenario, with the maintenance of positive annual international net migration over the projection period, reaching a net migration of 14 020 in 2080 (11 570 in 2018).
Source: (INE, 2020[4]), Resident population projections 2018-2080, 31 March 2020, https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaques&DESTAQUESdest_boui=406534255&DESTAQUESmodo=2.

Population shrinking and ageing will be a particular challenge in remote regions, which already have an elderly dependency ratio 10 percentage points higher than in other types of regions in Portugal (OECD, 2020[5]). The four remote TL3 regions in Alentejo are projected to shrink about three times faster in 2011-2035 (0.8% annually) compared to the TL3 region close to a small/medium city (0.27% annually), in line with national trends (0.89% versus 0.2%).

Furthermore, Alentejo is projected to have a significantly higher proportion of dependent-to-working persons over a 40-year horizon. The dependency rate is projected to increase from 6 dependent persons for every 10 working-age persons in 2020 to above 9 dependent persons for every 10 working-age persons after 2045. This dependency rate is comparable to Norte and Centro regions but is considerably above Lisbon, Algarve, R.A. Açores and R.A. Madeira (Figure 2.4).

**Figure 2.4. Projected dependency ratios, Portugal, TL2 regions, 2020-2060**
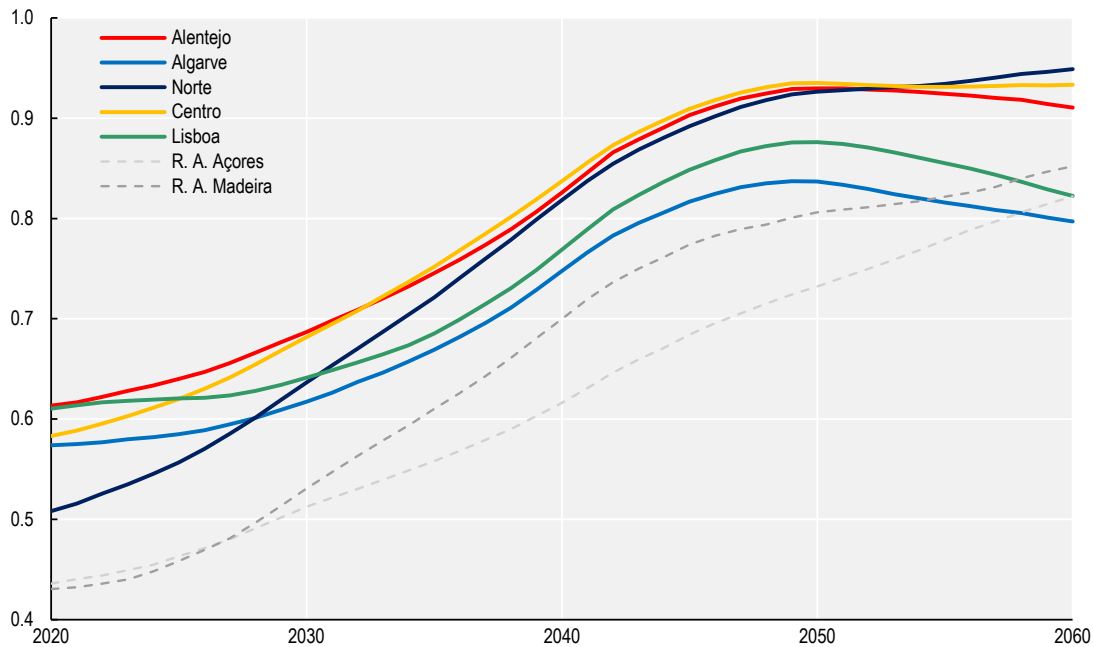
Note: The dependency ratio is the ratio between the total population aged 0-14 inclusive and 65+ inclusive over the total population aged between 14 and 65 exclusive.

Source: (INE, 2014[6]) Resident population projections 2012-2060, 28 March 2014, http://www.ine.pt/ngt_server/attachfileu.jsp?look_parentBoui=215593961&att_display=n&att_download=y.

By 2035, only three municipalities are projected to grow, while 14 municipalities will sustain population decreases of 1% annually over 2011-2035, with the largest decreases expected in Alandroal (Alentejo Central) (2.57% annually), Vendas Novas (Alentejo Central) (1.79%) and Nisa (1.78%). Compared to 1960, only a few small municipalities mostly located in Lezíria do Tejo are expected to have higher population in 2035, while all the largest municipalities including Santarém and Évora and all the municipalities of Baixo Alentejo are expected to be smaller in 2035 compared to 1960 (Figure 2.5).

Figure 2.5. Population in 1960 versus projected population in 2035 by municipality
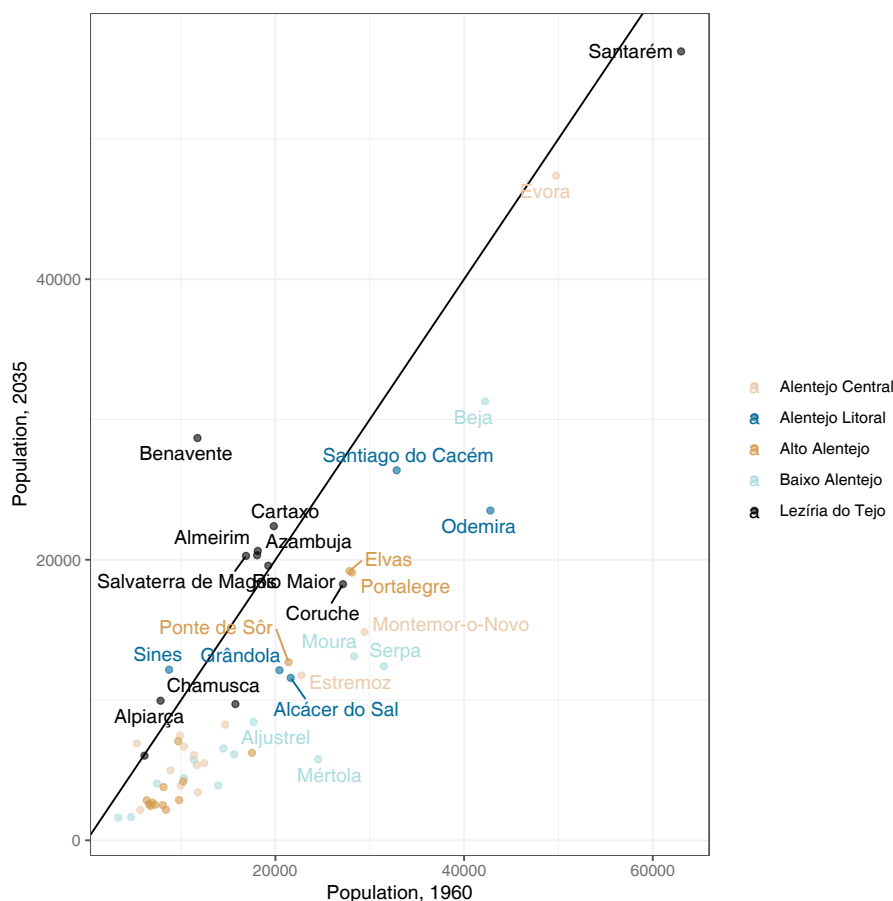
Source: Authors' elaboration based on (Goujon A., Jacobs-Crisioni C., Natale F., Lavalle C. (Eds), 2021[7]) and (Jacobs-Crisioni, C., C. Perpiña Castillo, J.-P. Aurambout, C. Lavalle, C. Baranzelli, and F. Batista e Silva, (nd)[8]).

Across degrees of urbanisation, towns and suburbs are projected to shrink faster than other areas between 2011 and 2035 (0.7% annually versus 0.6% in villages and 0.5% in sparse rural areas). Given that towns and suburbs have the highest initial birth rates and the lowest initial death rates across categories (Table 2.2), the faster rate of decline may be due to higher out-migration of working-age people compared to other areas.

Table 2.2. Summary of demographic indicators by degree of urbanisation, Alentejo

2011-2035

Degree of urbanisation	Population 2011	Share 2011	Population 2035	Share 2035	Annual pop. Growth 2011-2035	Birth rate 2011	Birth rate 2035	Death Rate 2011	Death Rate 2035
Sparse rural	220 292	29%	194 224	30%	-0.5	6.5	6.7	16.0	16.1
Villages	243 241	32%	212 748	33%	-0.6	6.7	6.7	15.8	15.5
Towns and suburbs	291 189	39%	243 627	37%	-0.7	7.7	7.3	11.5	13.0
Total	754 722		650 600						

Note: Death rates per 100 thousand inhabitants. Annual growth is calculated using compound growth rates.
Source: Authors' elaboration based on (Goujon A., Jacobs-Crisioni C., Natale F., Lavalle C. (Eds), 2021[7]) and (Jacobs-Crisioni, C., C. Perpiña Castillo, J.-P. Aurambout, C. Lavalle, C. Baranzelli, and F. Batista e Silva, (nd)[8]).

Digital divides

Speed broadband data[1] at the TL2 regional level shows that inhabitants in Alentejo experience, on average, speeds that are over 26% below the national average (Figure 2.6). In contrast, inhabitants of Lisbon's metropolitan area experience, on average, fixed download speeds that are over 17% above the national average. Across Portuguese TL2 regions, the digital gap in Alentejo is only surpassed by the Algarve region, with speeds that are over 40% below the national average.

Download speeds also differ across TL3 regions within Alentejo: while inhabitants of Alto Alentejo and Lezíria do Tejo experience, on average, fixed download speeds that are 22% and 23% below the national average, inhabitants in Baixo Alentejo and Alentejo Central experience, on average, speeds that are over 30% below the national average (Figure 2.6).

Figure 2.6. Gaps in download speeds experienced by users in Portugal TL2 regions and Alentejo TL3 regions

Ookla tests on fixed download speed, gaps estimated as percentage deviation from national averages (2020Q4)
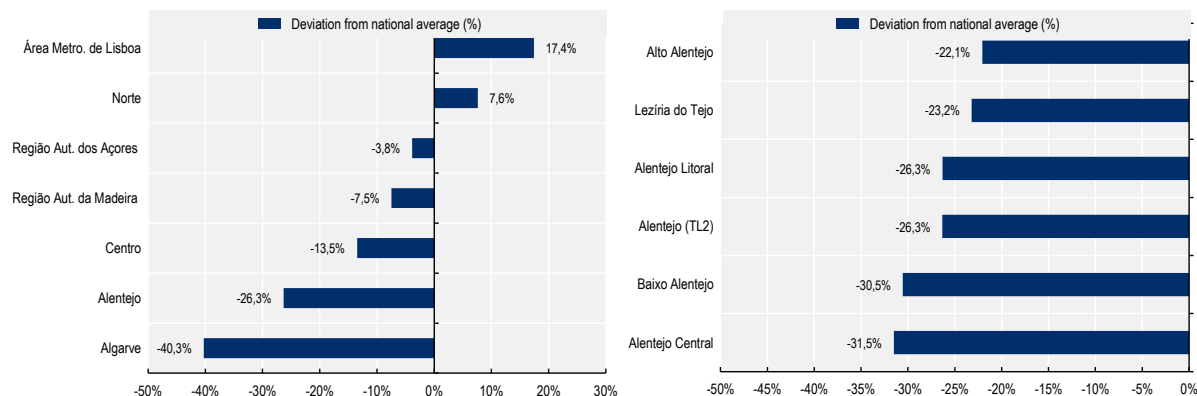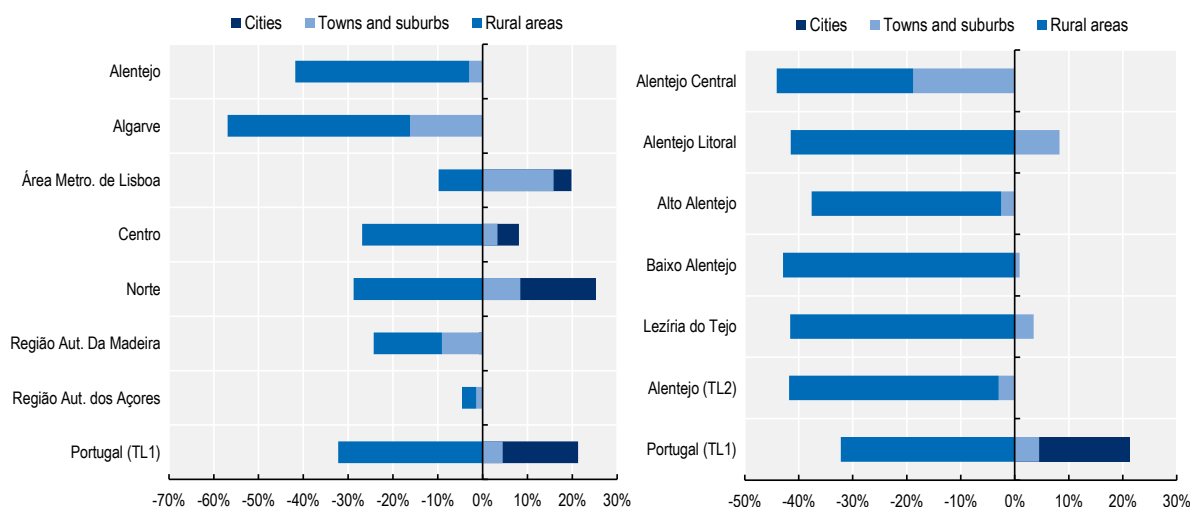

Note: Speedtest data corresponds to 2020Q4. The data for average fixed broadband download Speedtests reported by Ookla measures the sustained peak throughput achieved by users of the network. Measurements are based on self-administered tests by users, carried over iOS and mobile devices. The figure presents average peak speed tests, weighted by the number of tests.
Source: OECD calculations based on Speedtest® by Ookla® Global Fixed and Mobile Network Performance Maps. Based on analysis by Ookla of Speedtest Intelligence® data for 2020Q4. Provided by Ookla and accessed 2021-01-27. Ookla trademarks used under license and reprinted with permission.

Moreover, people living outside urban areas in Alentejo – especially those living in Alentejo Central – experience, on average, worse connection speeds. In Alentejo, while people living in towns and suburbs experience speeds that are close to the national average (3% below), rural inhabitants experience much slower speeds than the national average (42% below) (Figure 2.7). While residents of towns and suburbs in Alentejo Litoral experience speeds that are over 8% the national average, residents of rural areas in Alentejo Central experience download speeds 44% below the national average. In comparison, national level rural-urban gaps go in the same direction but are smaller (32% below).

Figure 2.7. Gaps in download speeds experienced by users in Portugal and Alentejo by degree of urbanisation

Ookla tests on fixed download speed, gaps estimated as percentage deviation from national averages (2020Q4)

Note: Speedtest data corresponds to 2020Q4. The data for average fixed broadband download Speedtests reported by Ookla measures the sustained peak throughput achieved by users of the network. Measurements are based on self-administered tests by users, carried over iOS and mobile devices. Aggregation according to the degree of urbanisation was based on GHS Settlement Model (GHS-SMOD) layer grids. The figure presents average peak speed tests, weighted by the number of tests.
Source: OECD calculations based on Speedtest® by Ookla® Global Fixed and Mobile Network Performance Maps. Based on analysis by Ookla of Speedtest Intelligence® data for 2020Q4. Provided by Ookla and accessed 2021-01-27. Ookla trademarks used under license and reprinted with permission.

Data on digital skills gap is unfortunately not available at the regional level. Available data at the national level for 2020 reveals that only 22% of people living in rural areas in Portugal have basic or above digital skills, compared to 60% in cities (OECD, 2021[9]). However, Portugal's rural-urban gap in digital skills aligns with EU levels.
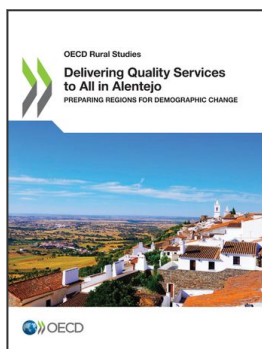
References

Agência para a Modernização Administrativa (2021), "Portal de dados abertos da Administração Pública", *Freguesias de Portugal*, https://dados.gov.pt/en/datasets/freguesias-de-portugal/ (accessed on 22 September 2021). [3]

Goujon A., Jacobs-Crisioni C., Natale F., Lavalle C. (Eds) (2021), *The demographic landscape of EU territories: challenges and opportunities in diversely ageing regions*, EUR 30498 EN, Publications Office of the European Union, Luxembourg. [7]

INE (2020), *Resident population projections 2018-2080*, 31 March 2020, https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_destaques&DESTAQUESdest_boui=406534255&DESTAQUESmodo=2. [4]

INE (2014), *Resident population projections 2012-2060*, 28 March 2014, http://www.ine.pt/ngt_server/attachfileu.jsp?look_parentBoui=215593961&att_display=n&att_download=y (accessed on May 2021).   [6]

Jacobs-Crisioni, C., C. Perpiña Castillo, J.-P. Aurambout, C. Lavalle, C. Baranzelli, and F. Batista e Silva ((nd)), *Development of the LUISA Reference Scenario 2020 and Production of Fine-Resolution Population Projections by 5 Year Age Group*.   [8]

OECD (2021), *Delivering Quality Education and Health Care to All: Preparing Regions for Demographic Change*, OECD Rural Studies, OECD Publishing, Paris, https://dx.doi.org/10.1787/83025c02-en.   [9]

OECD (2021), *OECD Regional Statistics*, https://www.oecd.org/regional/regional-statistics/ (accessed on May 2021).   [1]

OECD (2020), *Decentralisation and Regionalisation in Portugal*, OECD, https://doi.org/10.1787/fea62108-en (accessed on May 2021).   [5]

Statistics Portugal (2021), "Censos 2021", *Preliminary results*, https://censos.ine.pt/xportal/xmain?xpgid=censos21_main&xpid=CENSOS21&xlang=pt (accessed on 22 September 2021).   [2]

Note

[1] Data from self-administered speed tests by Ookla is presented as deviations from the national average to highlight within-country differences in the quality of broadband connections.