

Overview of Rural and Mountain Connectivity Greece

The mountainous regions of Greece lag significantly in broadband connectivity. According to the 2011 census of the Hellenic Statistical Authority (ELSTAT), in the mountainous regions of Greece, only 24% of households had an internet connection. In comparison, lowland areas and semi-mountainous areas had respective rates of around 50% and 40% (Table 1).

Table 1. Population, age group over 65, households, and households without an internet connection by mountainous geographical groups based on the 2011 census (source of data: ELSTAT)

areas	Non mountainous		Semi mountainous		Mountainous	
	N	%	N	%	N	%
population	7861415	74.4	1961039	18.6	746127	7.1
age group 65+	1490072	19.0	404395	20.6	214173	28.7
households	2843932	77.5*	622601	17.0*	204233	5.6*
households without internet connection	1518905	53.4*	356794	57.3*	155403	76.1*

*Percentage of total geographic group

From 2011 until today, there has been a strong consolidation of household internet connections across Europe. However, Greece has taken the smallest steps and is still among the last places when it comes to households' internet connectivity. For 2022, while the average in the European Union was almost 93% (households connected to the internet), in Greece that percentage was 85%, according to Eurostat (Table 2).

Table 2. Percentage of households with internet connection for some EU countries in 2011 and 2022 (source of data: Eurostat)

Country	2011	2022
Norway	92.24	99.01
Ireland	78.12	93.66
Euro area (EA11-1999, EA12-2001, EA13-2007, EA15-2008, EA16-2009, EA17-2011, EA18-2014, EA19-2015, EA20-2023)	73.58	92.67
European Union - 27 countries (from 2020)	71.55	92.48
Italy	61.57	91.45
Germany (until 1990 former territory of the FRG)	83.25	91.41
Bulgaria	45	87.31
Croatia	61.41	85.52
Greece	50.17	85.49

There are a few reasons why the phenomenon may be due. Firstly, mountainous areas are characterized by an aging population, of which most people are not familiar with the use of the internet. According to the ELSTAT census of 2011, almost 30% of the population in the mountainous regions was over 65 years old (Table 1), while in the lowlands this percentage was below 20%. Also, as can be seen from figure 1, in general, the age distribution in the mountainous areas of Greece is weighted towards the older ages, which suggests an increase in the aging population is more likely in the future. Also, given the general population decline in mountainous areas in recent years, the proportion of elderly people is expected to increase further.

Figure 1. Age distribution of the population in the mountainous regions of Greece (source of data: ELSTAT)

Another reason may be the lower household income in the mountainous regions of Greece. Research has shown that a household is more likely to 'go online' as household income increases, both in rural and urban areas (Michailidis et al, 2011). In Greece, the vast majority of mountainous areas are rural areas. As a result, household income is relatively lower compared to the national average. Panagiotopoulos (2021) report that household income in mountainous areas of Greece is about 10% lower than that of non-mountainous areas.

Finally, the telecommunication infrastructure lags significantly in the rural areas of Greece (Anastasiou et al., 2021) and by extension in most mountainous areas. Telecom companies are reluctant to invest in areas with low demand, resulting in poor quality internet service in most mountainous areas. This phenomenon in turn prevents users from investing in Internet services for their businesses and possibly prevents businesses where the Internet is necessary from setting up in mountainous areas.