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The spatial distribution of short-term rental listings in Greece: a regional graphic

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ABSTRACT

The home-sharing economy is growing on a global scale, enabling homeowners to short-term lease through online platforms such as Airbnb. These practices bear both positive and negative externalities at both regional and national levels. Positive externalities include job creation, rises in income and in the dwelling supply for touristic purposes, as well as increase in tax revenues. Negative externalities involve disruptions to local communities by raising rental prices and crowding-out long-term tenants, implying income redistribution from homeowners to renters, and the overall ‘touristification’ of traditional neighbourhoods [Gurran, N. (2018). Global home-sharing, local communities and the Airbnb debate: A planning research agenda. *Planning Theory & Practice Planning Theory & Practice*, 19(2), 298–304]. The regional graphic in this paper illustrates the fact that short-term listings in Greece are unevenly distributed, mainly concentrated in touristic regions and the capital city, but not in continental areas.

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KEYWORDS

regional development; regional housing market; spatial distribution; housing affordability; tourism; inequality


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Online short-term rentals in Greece have witnessed a remarkably rapid growth in the last few years, mainly due to the country’s touristic appeal,¹ and has thus drawn the attention of urban planners, economists, and government authorities (see, for example, Gurran (2018), Gurran and Phibbs (2017), Colomb and Novy (2016) and Schäfer and Braun (2016)). Relevant studies investigating short-term rentals include Balampanidis, Maloutas, Papatzani, and Pettas (2019) and Prontzas, Papadopoulos, Zafropoulou, and Kamenaki (2019), which focus solely on Athens and some key touristic regions. The contribution of this regional graphic illustrates the spatial

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distribution of Airbnb listings² and prices in Greece in a given point in time, February 2019, linking them to population statistics.

The Airbnb listings data were collected by using an open-source Airbnb scraper in February 2019.³ We collected the data by running the scraper over a bounding box including the full geographical area of Greece. Data were further processed by filtering out entries that did not explicitly include ‘Greece’ in the listing’s address field (which was expected as the rectangular bounding box naturally included listings from neighbouring countries). The final data set comprises of full property listings (86.5% of the sample) and private rooms (13.3%). Shared rooms capture only a tiny fraction of the data (0.2%) and were dropped from the sample. The NUTS and municipality fields were added by checking whether the geographical coordinates of each listing lay within the polygon of each region.⁴ For this purpose, we used Python’s Shapely library⁵ and the official NUTS boundaries data set provided by Eurostat and by the Greek Statistical Authority.⁶ Lastly, we linked the data with the latest population estimates provided⁷ to obtain a measure of Airbnb listings per 10,000 residents. A similar methodology was applied for the case of New Zealand by Campbell, McNair, Mackay, and Perkins (2019).

Figure 1 shows the density of Airbnb listings per 10,000 residents at both NUTS-3 (bold lines) and municipality level (thin lines). Evidence from this regional graphic suggests that the distribution of short-term rentals is highly uneven, mainly concentrated in touristic regions and the capital city (Athens), but not as much in continental areas. Table 1 ranks NUTS-3 regions according to the number of listings. Moreover, rankings with respect to the ratio of listings per 10,000 residents are shown. Traditional touristic destinations dominate in the rankings,

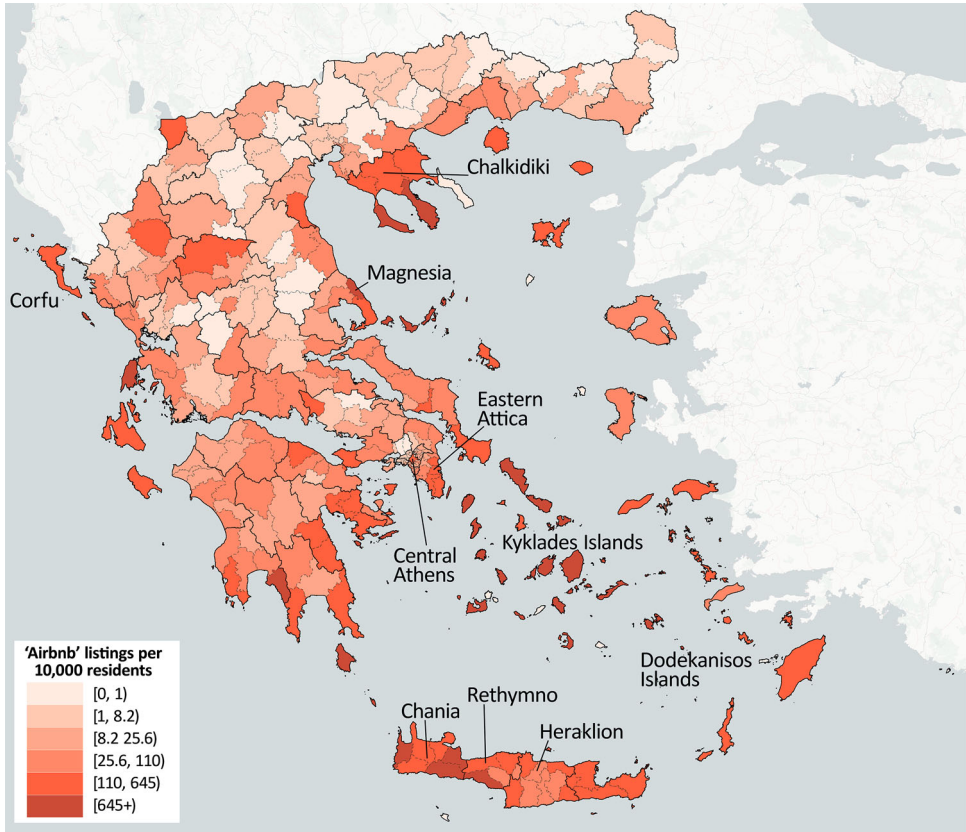


Figure 1. Airbnb listings in Greece, February 2019.

Table 1. Census area units with the most Airbnb listings (NUTS-3 regional classification) in Greece, February 2019.

NUTS-3 regional classification	NUTS-2 regional classification	Population (n)	Listings (n)	Rank	Listings per 10,000 residents	Rank	Median price (€)
Kyklades Islands	South Aegean	126,857	14,952	1	1,178.6	1	289
Central Athens	Attica	918,834	9187	2	100.0	17	70
Chania	Crete	159,272	6839	3	429.4	6	141
Corfu	Ionian Islands	102,052	5021	4	492.0	5	131
Chalkidiki	Central Macedonia	110,587	4709	5	425.8	7	138
Dodekanisos Islands	South Aegean	214,013	4441	6	207.5	10	139
Heraklion	Crete	312,514	3316	7	106.1	16	111
Eastern Attica	Attica	564,457	3135	8	55.5	23	170
Rethymno	Crete	87,510	3036	9	346.9	8	133
Magnesia	Thessaly	203,972	2854	10	139.9	12	132

especially the Kyklades islands (Mykonos, Santorini, Paros), Corfu island, Central and Eastern Athens, the prefectures of Crete island, and Chalkidiki.

Future research may include a thorough exploration of the relationship between short-term rentals and local population crowding-out. Specific occupational groups (e.g., teachers, medical personnel, employees in the tourism industry) that relocate to highly touristic regions face serious affordability and availability issues regarding their accommodation owing to the large concentration of short-term rentals in these areas. This may pose concerns for policy-makers towards the planning and regulation of the specific market.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors. The views expressed here are those of the authors and do not necessarily reflect those of the Council of Economic Advisors or the Hellenic Ministry of Finance.

NOTES

¹ The tourism industry in Greece accounts for > 20% of the country's gross domestic product (GDP), while the corresponding global statistic is around 10% (WTTC, 2019).

² Listings are strictly defined as any full or shared property advertised on the Airbnb website for rentals up to a maximum of one year.

³ See <https://github.com/tomslee/airbnb-data-collection/>. For a general description of the scraper's methodology, see Tom Slee's website at <http://tomslee.net/airbnb-data-collection-methodology-and-accuracy>.

⁴ NUTS = Nomenclature of Territorial Units for Statistics.

⁵ See <https://github.com/Toblerity/Shapely>.

⁶ The NUTS classification is a hierarchical system for dividing up the economic territory of the European Union. NUTS-3 refers to the smallest classification unit, corresponding to a population range between 150,000 and 800,000 residents. For the shape file of the municipality classification, see <https://tinyurl.com/y2znnkb8>. See also <https://ec.europa.eu/eurostat/web/gisco/geodata/>; and <https://ec.europa.eu/eurostat/web/gisco/geodata/reference-data/administrative-units-statistical-units/nuts>.

⁷ See <http://www.statistics.gr/el/statistics/pop>.

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