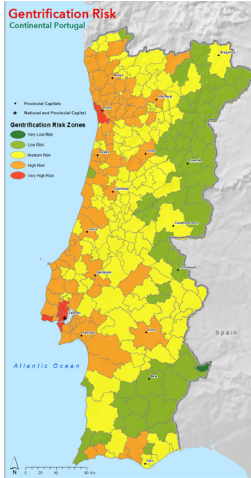# Priced Out

A Gentfriciation Index of Continental Portugal

Introduction

Housing and rental prices have skyrocketed in Portugal in recent years. Hikes in house values and rental prices have coincided with a boom in tourism and foreign real estate investment, promoted by the Portuguese government as it looked to revitalize its economy and overcome the country's latest debt crisis. In 2017 alone foreigners comprised 25% of home buyers in Portugal. As Airbnb and other offerings for tourists proliferate while a housing bubble forms, locals are experiencing a shortage of affordable housing options both for rent and for purchase. As more upward pressure is put on house and rental prices, locals will continue to be pushed outward. Ultimately, this trend will increase the vulnerability of locals within and outside urban centers. This projects seeks to elucidate the extent to which the unfettered expansion of the tourism industry has made and will continue to make renting or buying a home for less well-off locals more difficult, as well as how many are most vulnerable to this instance of gentrification.

Spatial Questions

1. What municipalities in Portugal have the highest and lowest house sale and rental prices today?
2. Where have house sale values risen and fallen most in recent years and by how much?
3. Where are the most homes being sold and at what median sale price?
4. Where are most tourist accomodations located and what areas have seen the largest increase in such offerings?
5. What municipalities are most at risk of gentrification and, by extension, how many inhabitants?

Gentrification Risk
Continental Portugal

Total Resident Population by Risk Zone	
Risk Level	Number of Residents
Very Low Risk	1,768
Low Risk	516,861
Medium Risk	1,992,943
High Risk	5,261,383
Very High Risk	2,125,338

Methodology

To create the base maps, data on various census indicators were sourced from Statistics Portugal (INE), including average monthly earnings, unemployed population, resident population, median rental and sale values per square meter, number of new buildings approved for construction, number and value of purchase and sale contracts. This tabular data was joined to boundaries sourced from DGTerritório. Vector point data on airports, roads, train stations, UNESCO World Heritage Sites, and private tourist accommodations from the National Tourism Registry (RNT) were also merged to their corresponding municipal boundaries. Proximity to key features (airports, roads, etc.) was calculated using raster methods (Euclidean Distance) before converting the data back to vector data for final analysis (Zonal Statistics as Table).

Results & Limitations

The choice to focus on continental Portugal exclusively and to gather RNT data was governed by time constraints; the latter was would have been better served with web-scraped Airbnb listing data. Because some data is more dated than others (e.g. 2011 Census data versus median sale and rental prices from 2016 and 2017) there are inherent discrepancies in this analysis. However, put together, the analysis of the data from these years is not without merit. In addition, the analysis on changes in house prices was more limited as this data has only recently been collected and published by INE.

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Credits

Design & Cartography: Claudia Cruz Leo
Projected Coordinate System: ETRS 1989 TM06-Portugal
Projection: Transverse Mercator
Sources: INE, DGTerritório, RNT, CI, HDX HOT, MapCruzin, UNESCO, M Drive Natural Earth

Change in Number of Tourist Lodgings
2011-2017

Change in Median Sale Value
2016-2017

Median Rental Price
2017

Median Sale Price
2017

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