

# Location analytics in administrative data to produce House Price Statistics in Portugal

**VALA, Francisco; SOARES, Elsa; FONTES, Inês; CALDEIRA, Francisco**

Providing relevant statistical information to society increasingly requires to take advantage of administrative data that citizens and organizations share with the Public Administration, thus allowing efficiency gains for the National Statistical Systems and reducing response burden. The importance of using administrative sources has been recognised at the highest level and is included in the key area “new data sources” of the ESS Vision 2020.

In Portugal, house price statistics at local level may be derived from the combination of two different administrative tax data sources: the Municipal Property Transfer Tax (IMT) and the Municipal Property Tax (IMI). The former provides information on all transaction prices, including the identification of parishes where the dwellings are located. The latter comprises information about the characteristics of dwellings (e.g., XY coordinates, area, typology, age). The IMT and IMI data sources are merged using a property (cadastral) register identification number, which is used as the key variable for matching prices and characteristics of each individual property. The dwelling XY coordinates provided by IMI data source are essential to produce statistical information for detailed geographical levels.

Within this context, Statistics Portugal is developing a statistical project on house prices for small areas based on georeferenced administrative data. Indicators will be produced on a regular basis and data will be disseminated by different house type (apartments/houses), as well as by new/existing property. Additionally, a web based application to map average house prices for Portuguese largest cities is presented with the ultimate goal of providing people and enterprises with a statistical tool to make better informed decisions based on spatial detailed data.

Building on the experience gained with this project, the presentation will discuss: i) possibilities of deriving new relevant statistical information based on the integration of statistical and geospatial information; ii) constraints underlying the integration of geospatial data from administrative sources with Statistics Portugal data infrastructure; iii) the particular methodological aspect of dealing with data for small areas, such as data variability; and iv) the potential of webGIS application to explore this type of data.

## **PALAVRAS-CHAVE**

House Prices, Administrative data, geospatial information.

## **AUTORES**

**Francisco VALA**  
francisco.vala@ine.pt  
INE  
GET

**Elsa SOARES**  
elsa.soares@ine.pt  
INE  
GET

**Inês FONTES**  
ines.fontes@ine.pt  
INE  
GET

**Francisco CALDEIRA**  
francisco.caldeira@ine.pt  
INE  
DMSI/GEO