Project 1: Interpret Data Visualizations

BY
CHAMOK BISWAS

For This Project I have Decided To GO For Madrid In Detail

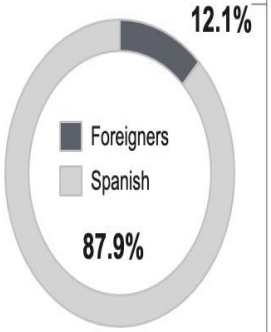
I decided to examine the map by District to identify three insights and explain them in this report.

Madrid key metrics

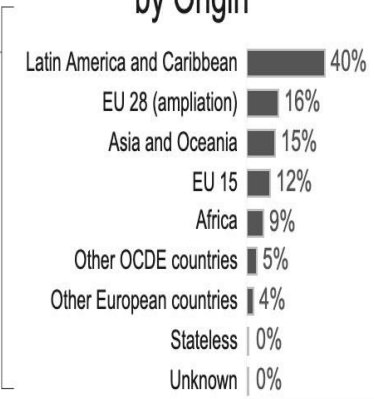
Total Population	Districts	Neighbourhoods
3.18M	21	128

Births	Deaths	Natural Increase
29,737	27,757	1,980

Nationality Distribution



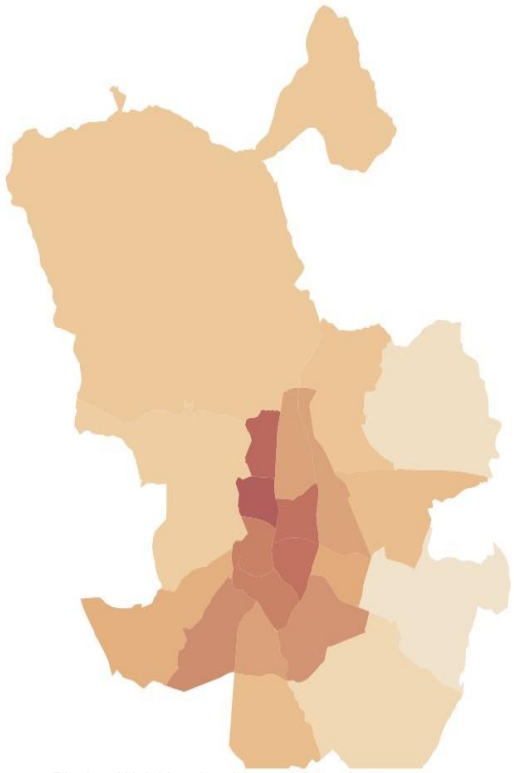
Foreign Population by Origin



Passenger cars	Cars per 100 inhabitants
1.26M	39.6

City Map

Districts of Madrid, coloured by population density.



Districts / Neighbourhoods

District

Population Density

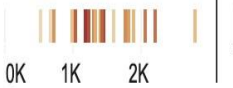
46 inhab. per hectare — 322 inhab. per hectare

By District

Population

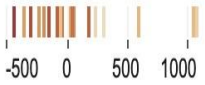
Carabanchel, Fuencarral-El Pardo and Latina are the most populated districts, whilst Barajas and Vicálvaro are the least populated districts and the ones with lower population density. The districts in the city centre are the ones with higher population density.

Births



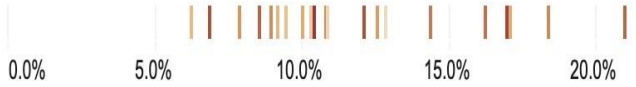
Deaths

Natural Increase



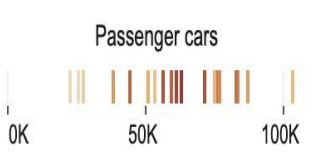
Villa de Vallecas and Fuencarral-El Pardo are the districts with higher natural population increase. The first one due to it´s lower number of deaths and the second due specially to it´s higher number of births. Whilst Chamberí, Latina and Salamanca have a negative population increase.

% foreigners

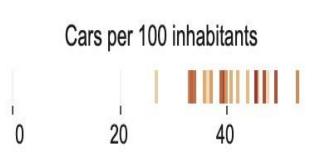


By district, Fuencarral-El Pardo and Retiro are the ones with lower percentage of foreigner population (around 6%), whilst others like Usera, and specially Centro, have a total foreigner population around the 20%.

Passenger cars

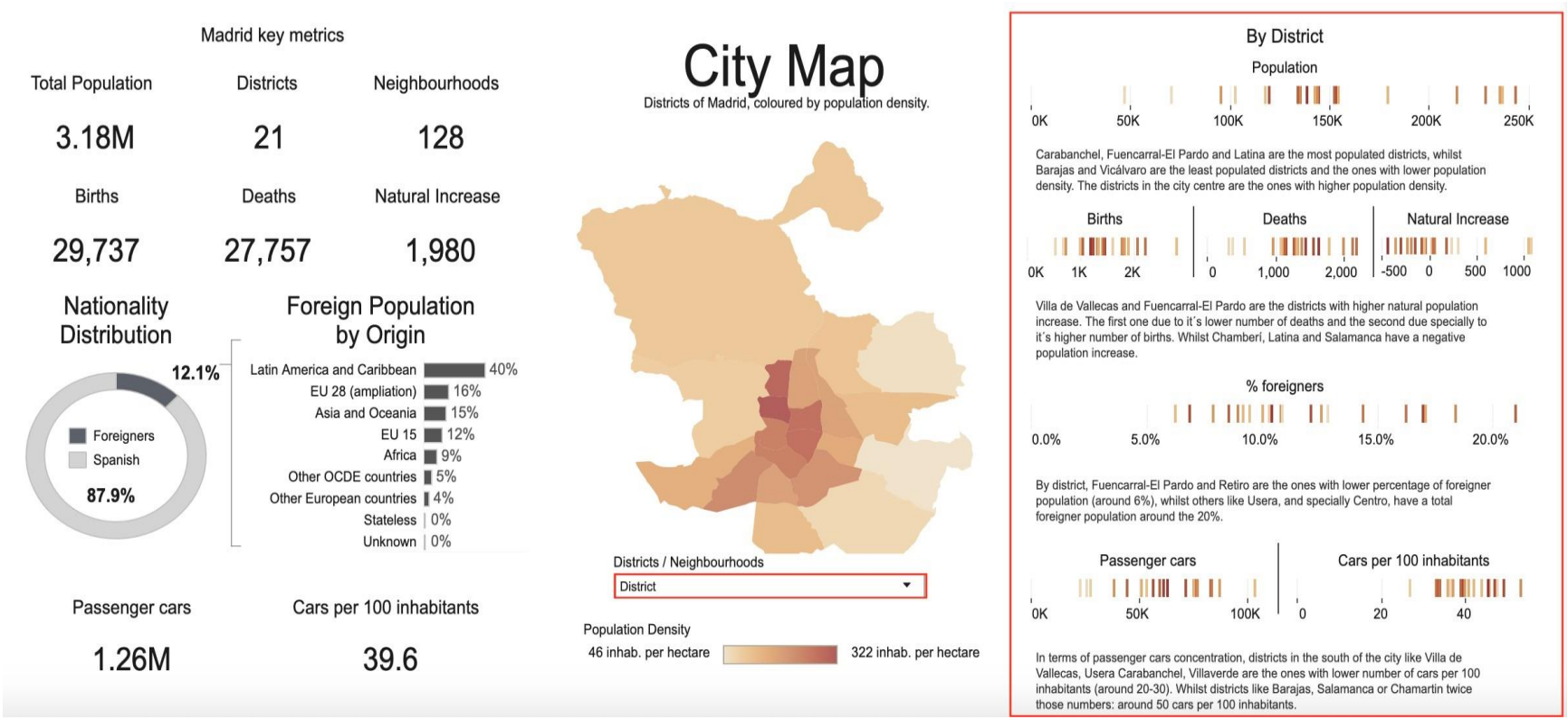


Cars per 100 inhabitants

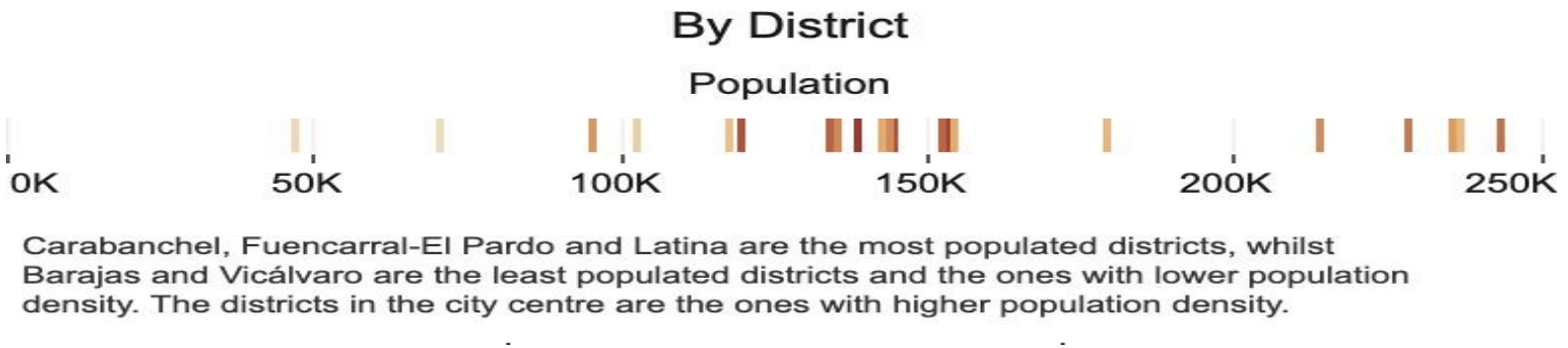


In terms of passenger cars concentration, districts in the south of the city like Villa de Vallecas, Usera Carabanchel, Villaverde are the ones with lower number of cars per 100 inhabitants (around 20-30). Whilst districts like Barajas, Salamanca or Chamartin twice those numbers: around 50 cars per 100 inhabitants.

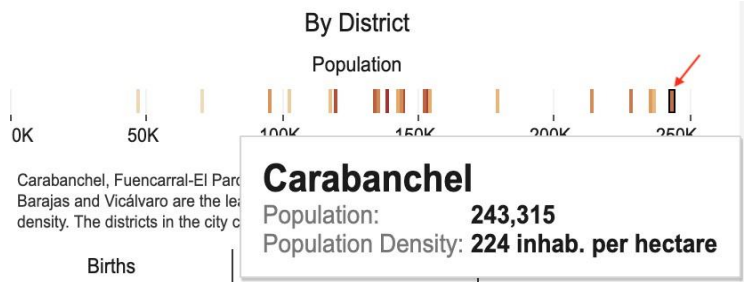
Insight 1: Population By District

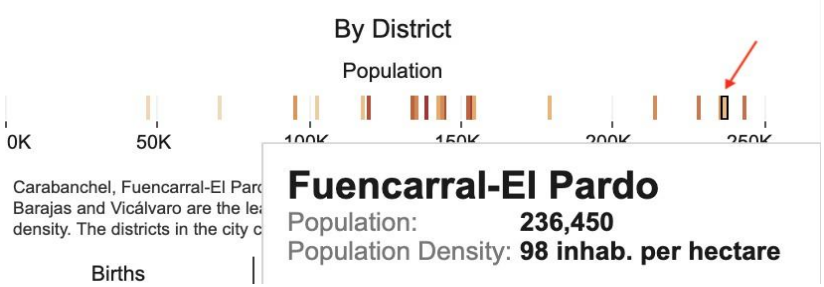


The dashboard has the following published metrics:

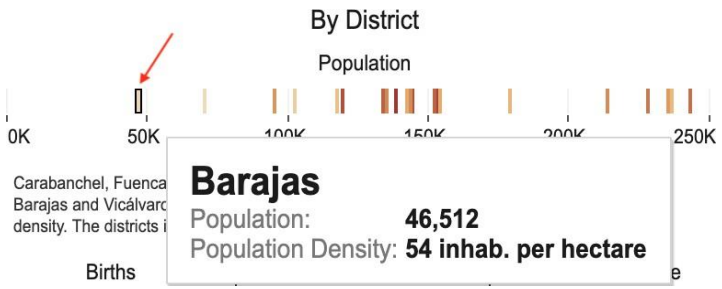


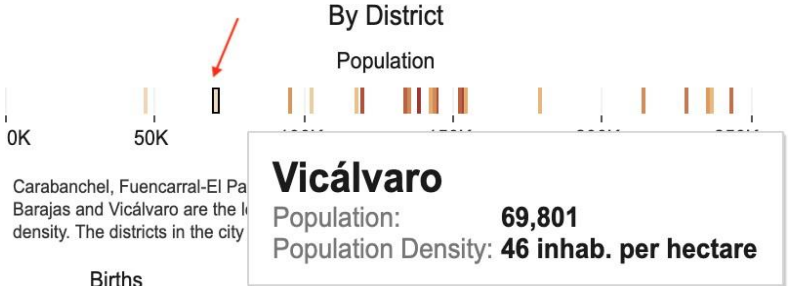
To examine this insight, I go through 250K tickmark and one preceding it to see details of the two most populated districts:



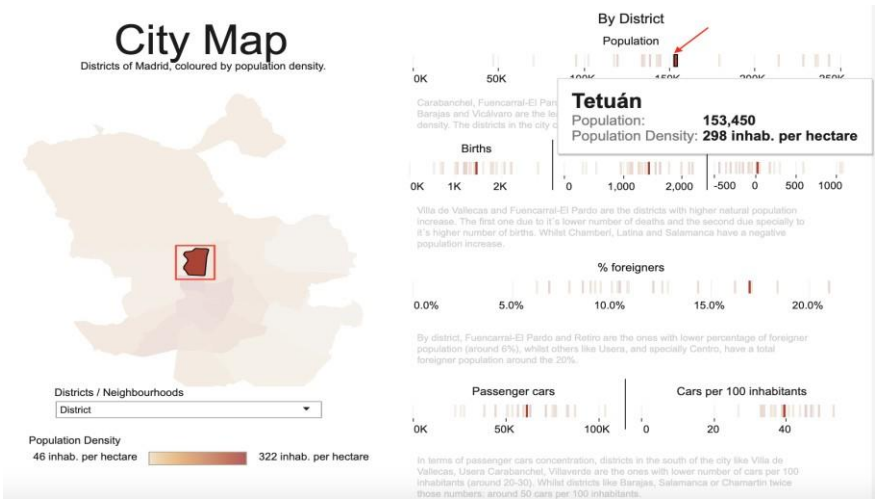


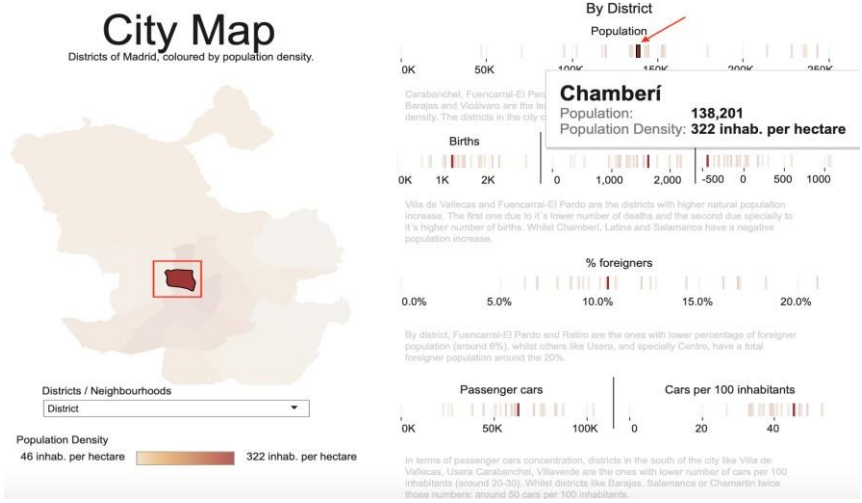
Next, I moused over the 50K tickmark, and the one after it to see details of the two least populated districts:





I then moused over the two darkest tickmarks near 150K. This showed the two districts with highest population density are in the city centre:

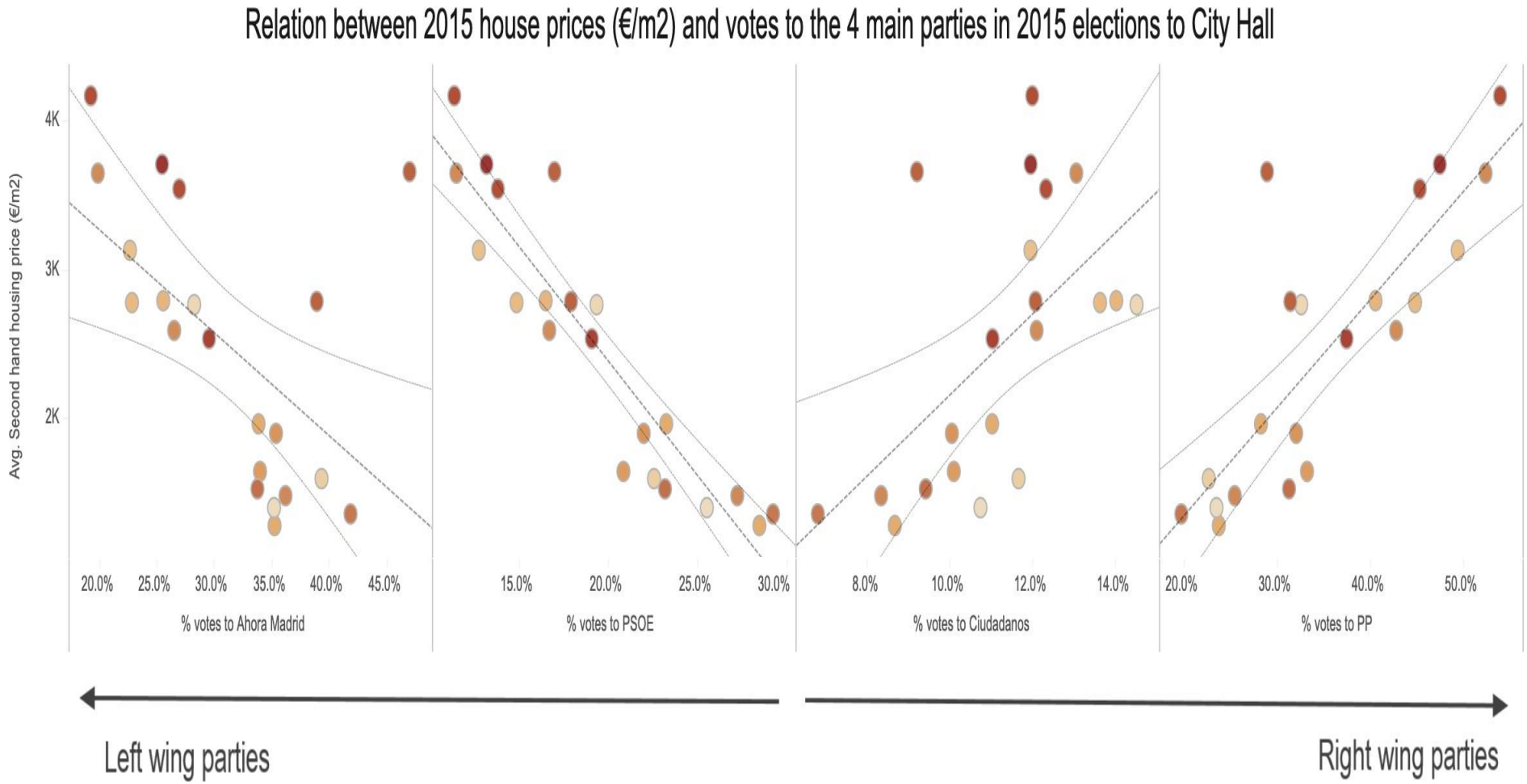




Conclusion: the details examined agree with Insight 1 observed.

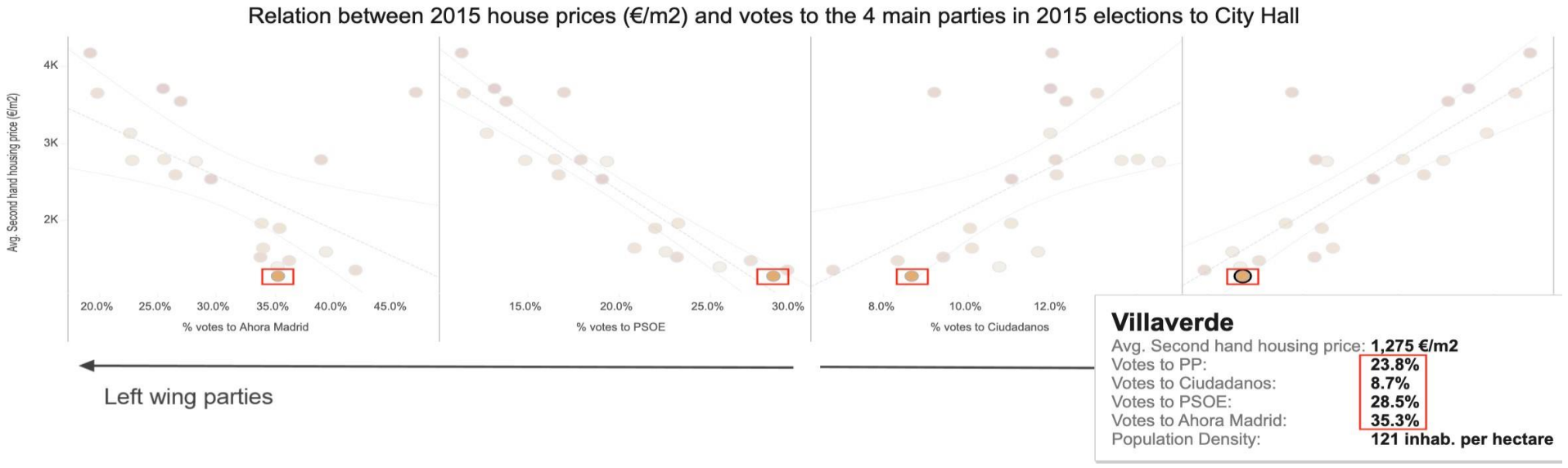
Insight 2: House prices (€/m2) and votes to 4 main parties in 2015 City Hall elections

.

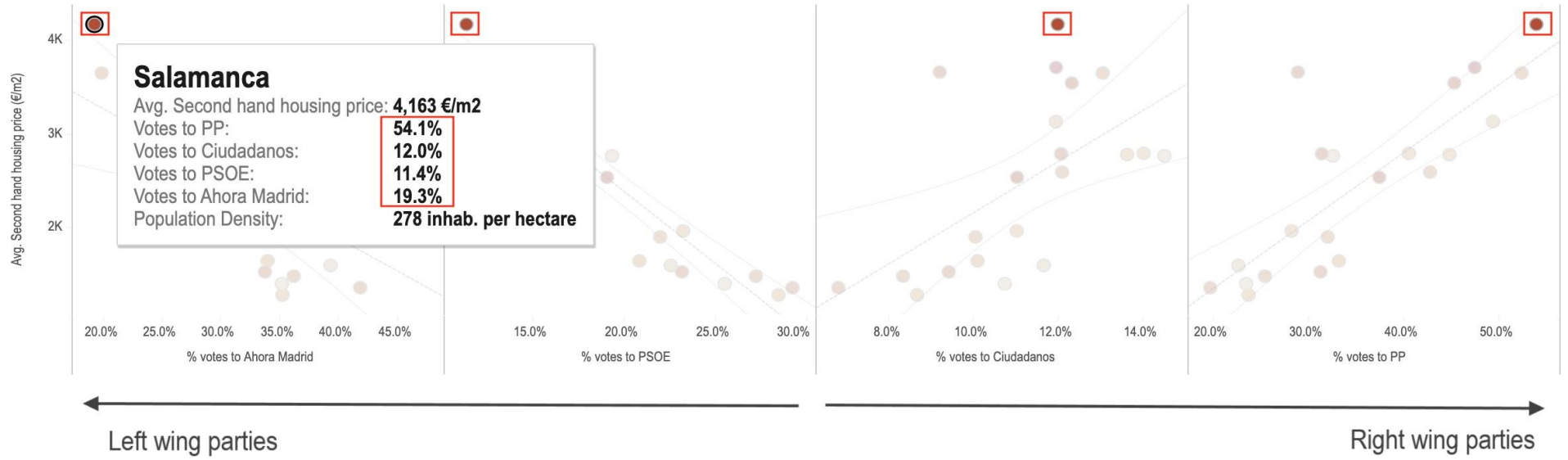


The four scatterplots show the two variables have a negative relationship on left wing parties, and a positive one on right wing parties.

To examine this insight, I clicked on the lowest house price point on the plots, the details support the observation:

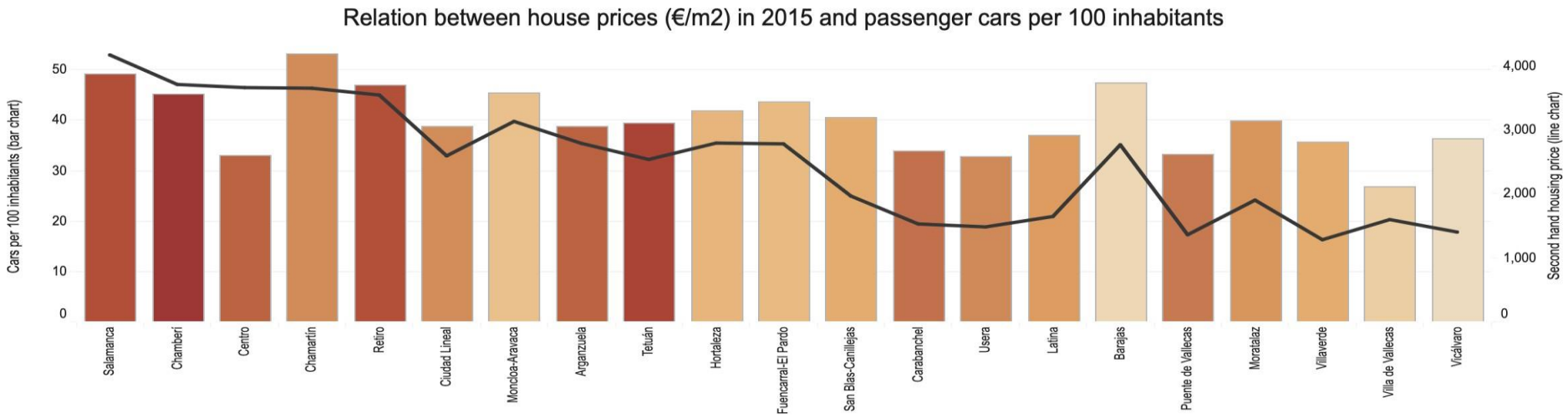


Likewise, the highest house price point on the plots show right wing parties received more votes in districts of higher house prices:



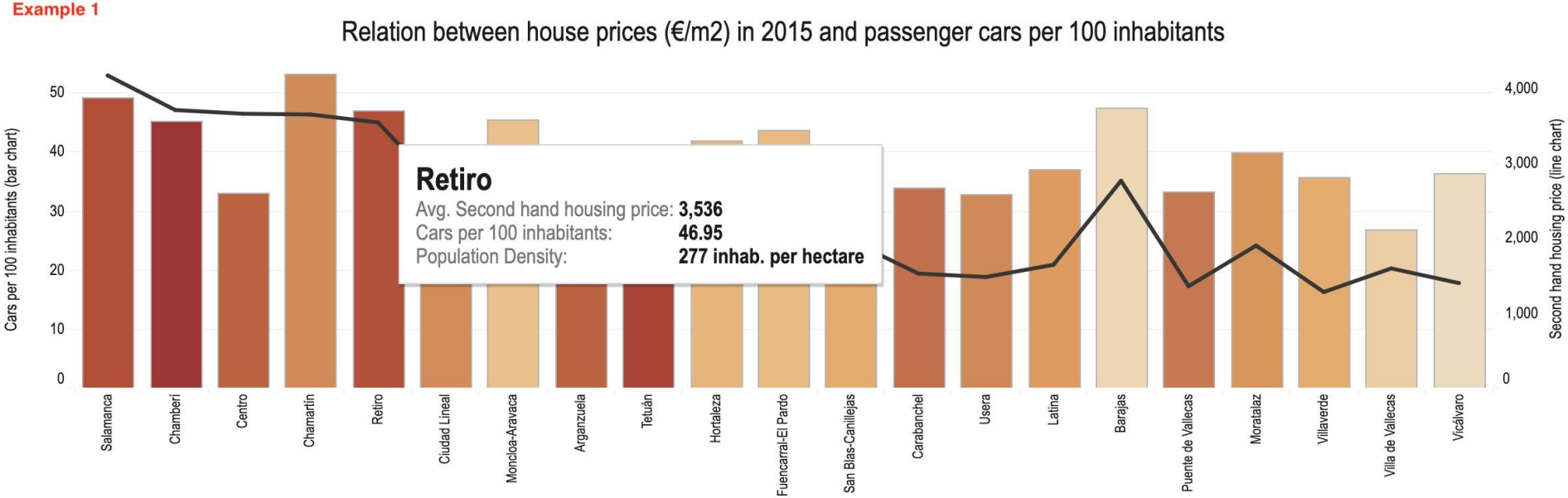
Conclusion: the details examined by support Insight 2 for observation.

Insight 3: Relation between 2015 house prices (€/m2) and passenger cars per 100 inhabitants

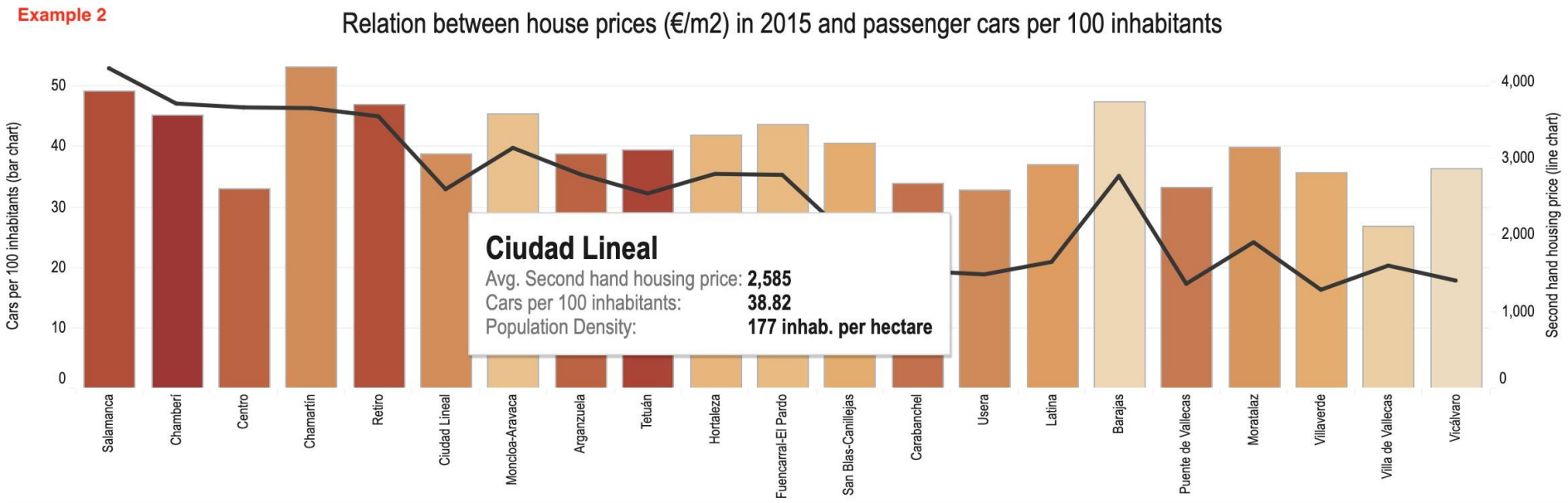


The house price line chart and car count bar chart show the two variables moved in tandem with each other: the higher the house prices, the higher the car counts per 100 inhabitants, and vice versa. This is evident by the following three examples.

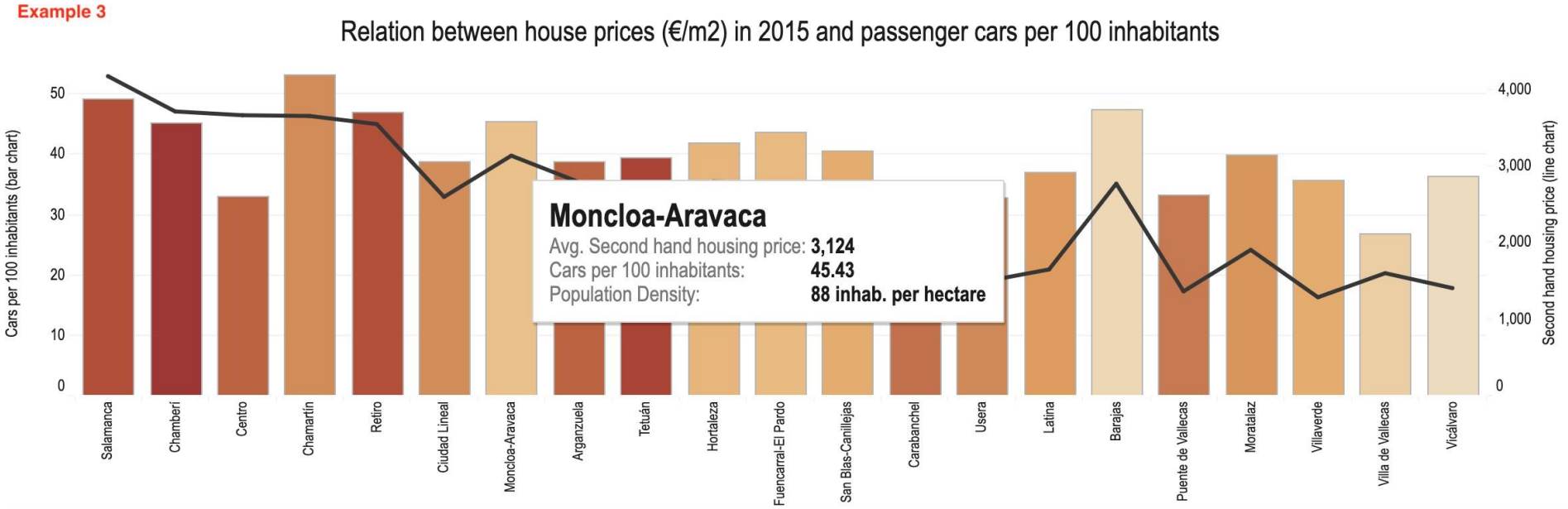
Example 1



Example 2



Example 3



Conclusion: the details examined agree with Insight 3 observed.