

ABSTRACT

This study tries to show that housing prices in Catalonia can be deduced from the equation we obtained, with the only variable being the population pyramid.

The variable we introduce in the equation is called potential demand. This demand can be obtained multiplying the number of inhabitants from each age period by a factor, which is different for every age. This factor also gives more weight to those ages in which young people usually leave home. The sum of all this numbers from 0 to 100 years old is the demand.

For obtaining this equation we did a linear regression between population data and prices data, having previously tested that the other economic variables didn't have too much weight on the price. The correlation coefficient obtained from the regression population-prices is very similar to one ($r^2=0,9995$).

We obtained the population data from Catalonia's population census that exist since year 1900.

And for prices data, we used two origins. The first one has been the official house prices existing since 1987. And the second one, the sales prices obtained from the well-known catalan newspaper La Vanguardia. This last prices have been useful because they provided us with information for house prices since 1920, and that allowed us to avoid the economical cycles related to shorter periods of data.

We think that two important ideas make the difference from previous studies: the sales factor per age, and to use data from 1920.

Once we demonstrate the relation between demography and prices, we can perfectly explain the high rise in housing prices in the period 1998-2007, with its origin in the 70's babyboom.

And we could have stopped our study right here, but while working with our population pyramid, we observed that apart from the babyboom phenomenon there was another more important phenomenon: the babybust, which shows us that is very probable a slowing down in house building activity. In short and medium view (10-20 years), nothing shows us that construction activity will recover the levels from the last 20-30 years. The immigration can make this effect not so accentuate, but it's not reasonable to think that it could neglect the effects, once seen our population pyramid. We also have to say that we haven't find any other pyramid as irregular as Catalan one in any other country.

Mankiw and Weil (1987) demonstrated this relations between demography and house prices twenty years ago, for the United States. For a long time, not too many people heard them, but with the housing crisis their country is actually having, it looks that their theory is being confirmed.