

The Housing Price Index for Chile: Methodology and Results

- For a household economy, the house or apartment usually represents the most important asset.
- Banking system and other financial agents have a high exposure to the real estate sector.
- Variation of housing prices affect household economy and banking system.
- Adequate system for monitoring the real estate sector and housing price dynamics is crucial for the analysis of financial stability (e.g. subprime crisis 2008).
- The main goal of this document is to describe the estimation methodology of Housing Price Index for Chile, which it is useful to measure the variability of housing price and their effects in the business cycle.

Methodology

- According to international best practices and our information (Handbook on Residential Property Price Indices, 2013).
- Stratification or mix adjustment method :

- $$P^t = \sum_{m=1}^M w_m P_m^t \quad (1)$$

- Where P^t is the stratification price in time t , w_m is weight of stratum m and P_m^t is the mean price of stratum m in time t .
- There are 14 strata; 7 areas and 2 types of properties (houses and apartments). The weights are the sum of square meters built.
- Finally, we use Chained Price Index.



Database

- The data are obtained from Chilean Internal Revenue Service (IRS), with a national coverage and 3.5 million transaction from 2002 to 2013.
- The prices come from effective price trading between sellers and buyers.
- Variables are related to: Geographic location, date of transaction, property characteristics (square meters of construction and land), value of the transaction and amount of bank financing.

Results

After depurating the data, the main results are:

Figure 1. Real National Housing Prices (fixed-base index: 2008 = 100).

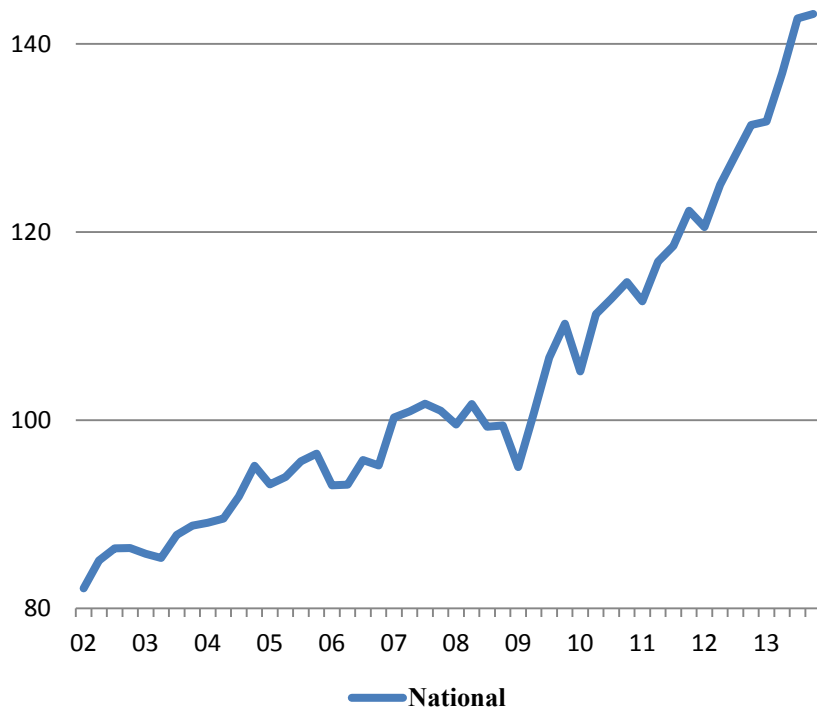
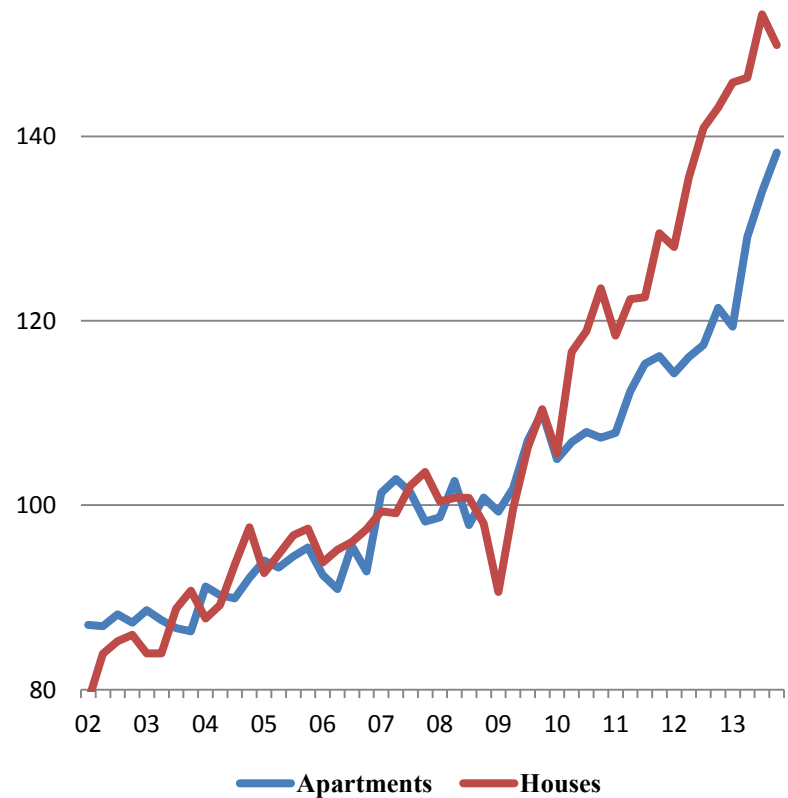


Figure 2. Housing Prices Index by Type of Property (fixed-base index: 2008 = 100).



Results: By geographic areas

Figure 3. Y/Y contribution of Housing Price Index by Geographic Areas

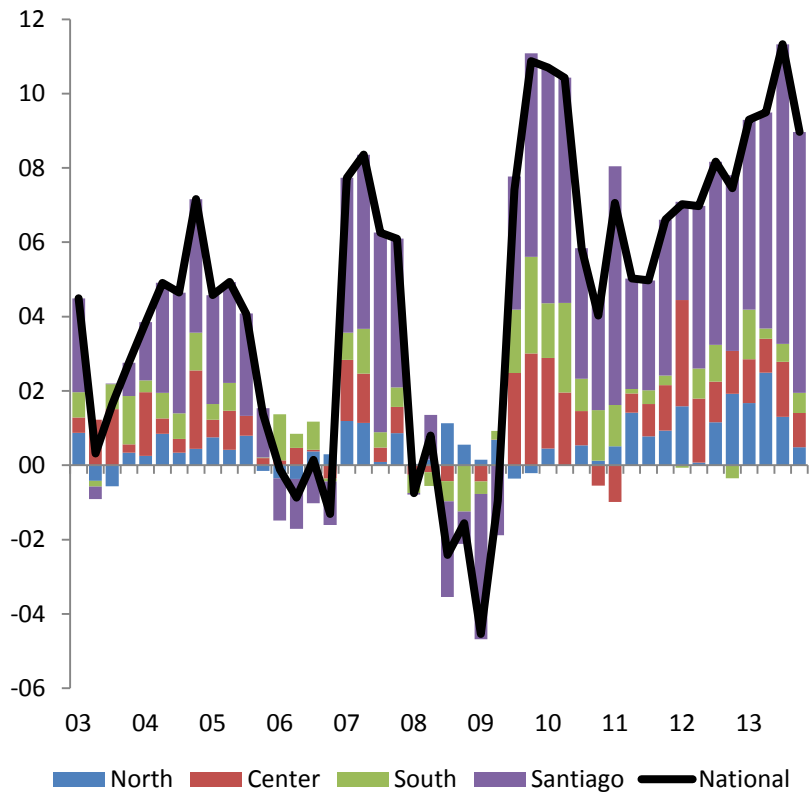
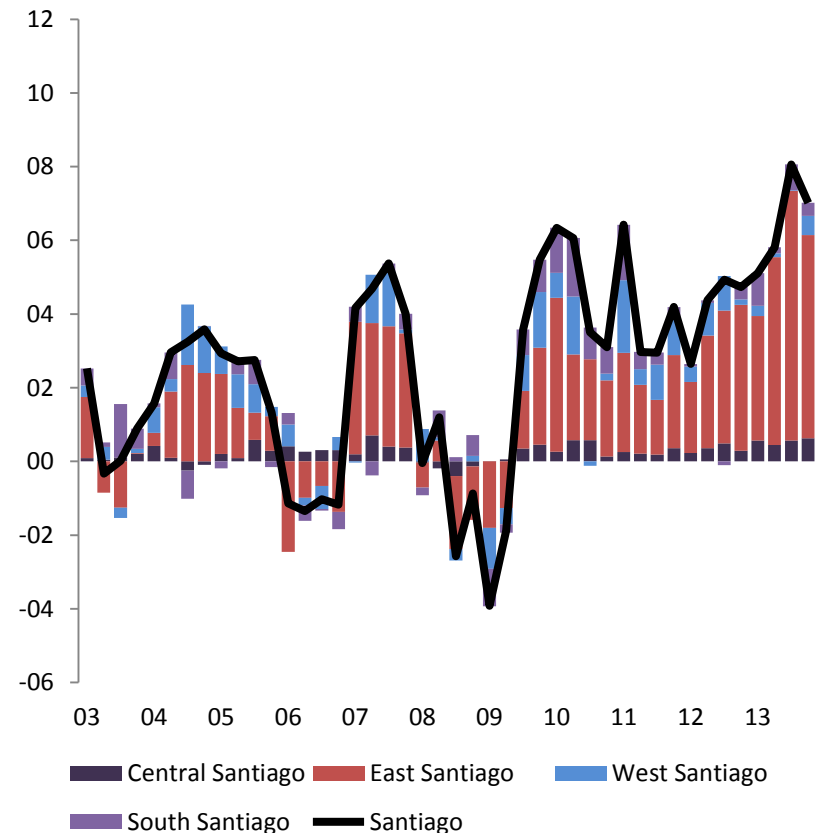


Figure 4. Y/Y contribution of Housing Price Index of Santiago





Extensions

- Legal status of the buyer of a housing property (identify investors)
- The income segment of the buyer (which is very useful when combined with credit information).
- Newly-built and existing housing.