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Session 3: Hedonic methods for HPIs

An evaluation of the hedonic methods used by European National Statistical Institutes to compute their official House Price Indices

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Since 2012 Eurostat requires the national statistical institutes (NSIs) in all European Union (EU) countries to compute official House Price Indices (HPIs) at a quarterly frequency. Furthermore, Eurostat recommends computing the HPI using a hedonic method. Most NSIs have followed this advice, although they differ in their choice of hedonic method as follows:

(i)   Repricing: used by Austria, Finland, Hungary, Italy, Latvia, Luxembourg, Norway, Slovenia;
(ii) Average characteristics: used by Romania, Spain;
(iii) Hedonic imputation: used by Germany, UK;
(iv) Rolling time dummy (RTD): used by Croatia, Cyprus, France, Ireland, Malta, Portugal.

We evaluate the theoretical and empirical properties of these hedonic methods. Our empirical comparisons use detailed micro-level data sets for Sydney and Tokyo, containing about 850 000 actual housing transactions. Our main findings are that the results are generally quite robust to the choice of hedonic method. However, the repricing method becomes unreliable over longer time horizons. This is a concern given that it is the mostly widely used hedonic method by NSIs in Europe. We recommend that NSIs using repricing switch to one of the other three hedonic methods.