



Comment on “ Weekly Hedonic House Price Indices and the Rolling Time Dummy Method ”

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1. Overview of H-S-S Paper

Objectives

- The timely and appropriate policy making has enhanced the need for higher frequency house price indexes.
- This paper attempts to accurately construct weekly hedonic house indexes by utilizing the Rolling Time Dummy (RTD) method with efficient and robust properties for constructing hedonic price indexes.
- This paper also compares the performance of competing indexes by using some criteria to identify the optimal window length and linking method crucial for the RTD method.

Main Results (1)

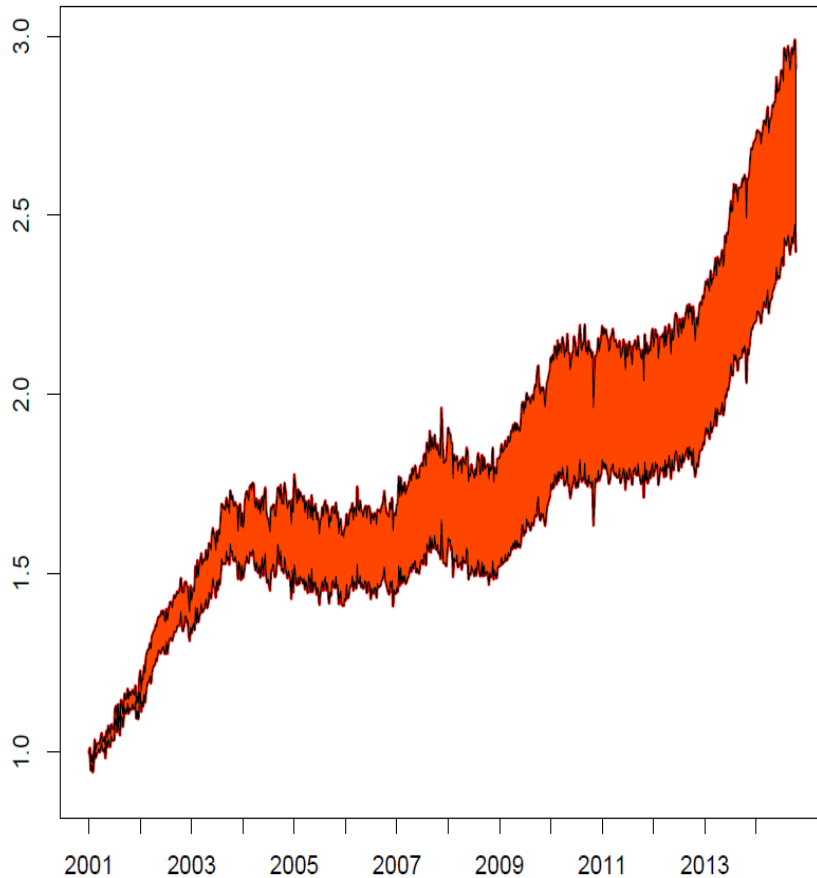
(1) Using the micro data sets for Tokyo and Sydney, this paper finds that the weekly indexes are highly sensitive to the choice of window length, but the monthly and quarterly indexes are not.

(Weekly RTD indexes)

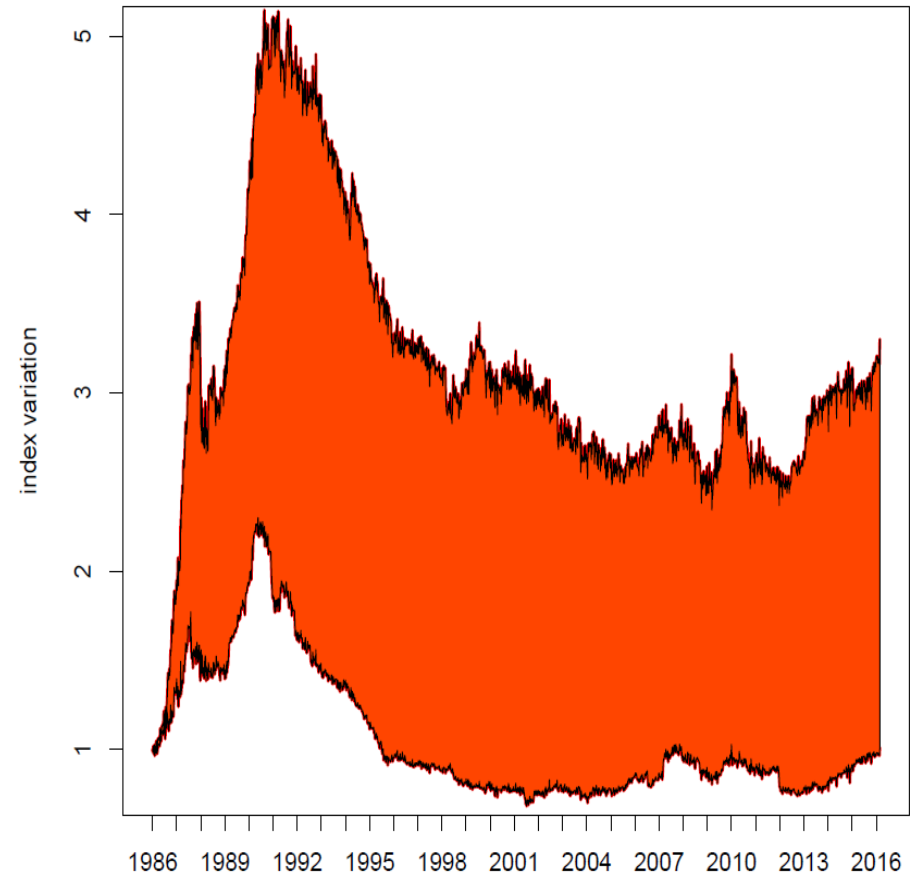
- In Sydney, the cumulative price increase ranges between 240 and 290 percent (the spread is 50 percent), depending on the window length.
- In Tokyo, the spread of price indexes reached 300 percent in 1990 and maintains 200 percent at the present, depending on the window length.

(Figure1) Spread of Weekly Indexes as the window length varies between 2 and 53 weeks

Sydney



Tokyo



Main Results (2)

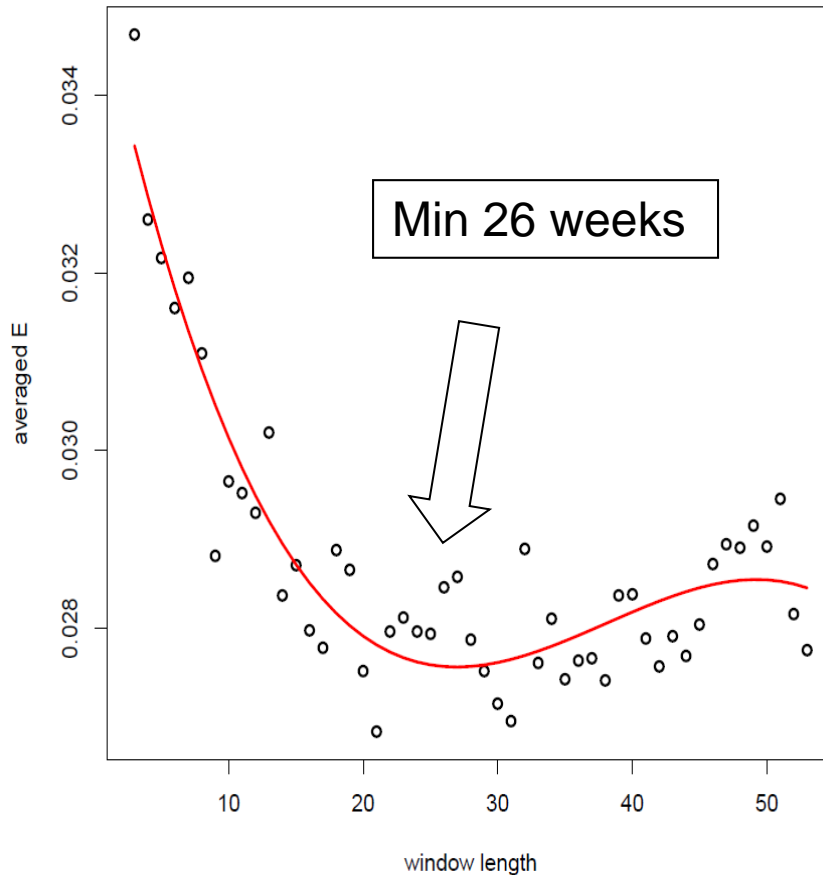
- (2) This paper finds that the weekly indexes are also quite sensitive to the choice of linking method (the way the price for the most recent period is linked to the price for the earlier periods), although less so than to the choice of window length.
- (3) This paper proposes a number of criteria for comparing the performance of alternative indexes. Based on the preferred criteria, the optimal window length for the weekly indexes is about 26 weeks for Sydney, while about 18 weeks for Tokyo.

(Figure 2) E Statistics

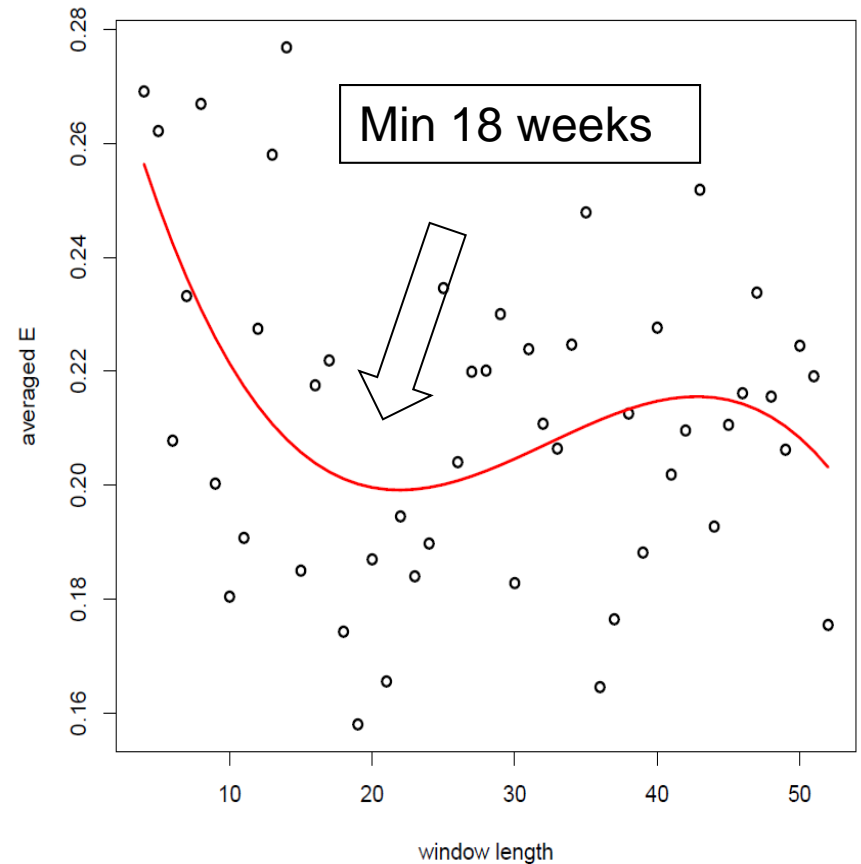
$$E = \sum_{t=1}^{T-25} \left[\ln \left(\frac{P_{t+19}^w}{P_{t+6}^w} \right) - \ln \left(\frac{P_{(t+13,t+25)}^q}{P_{(t,t+12)}^q} \right) \right]^2$$

= Difference between weekly indexes and quarterly indexes

Sydney



Tokyo



Contributions

- This paper has made good contributions in constructing the weekly house price indexes for Sydney and Tokyo under the strict limitations of number of data sets by utilizing the RTD method.
- However, this attempt is sure to pose challenges to be overcome and issues to be dealt with, before higher frequency house price indexes will become useful leading indicators.
- Next, some comments related to these challenges and issues will follow.



2. Comments

(1) Are the weekly indexes possibly leading indicators for the benchmark ?

- If the weekly indexes have prediction power or they are leading indicators for benchmark indexes, the weekly indexes will be much useful.
- Figure 1 shows **the weekly indexes greatly fluctuated with being apart from the quarterly benchmark indexes**, especially in Tokyo.
- Figure 2 shows that it is difficult to decide the optimal window length for the Tokyo index **because of the huge dispersion of E statistics.**

(Cont) Are the weekly indexes possibly leading indicators for the benchmark ?

- The optimal window length may not be steady, but greatly vary during the long period, especially in Tokyo.
- It implies that the weekly indexes may not be function well as leading indicators at the present.
- E statistics is one of good criterion, but should not be used only for calculating the optimal window length. E statistics also offers information on levels and dispersion.

(2) Need more analysis of factors to understand empirical results of the optimal window length

- The optimal window length in RTD method is determined by two separate factors as follows:
 - (a) The hedonic estimation factors; How much the length of the data are needed** for the robust and accurate estimation of each hedonic function.
 - (b) The chain linking factors for indexes; How long time intervals for chain linking should be set** between the most recent period and the earlier period.

(3) Important to know the properties of factors that may make the optimal window length time-varying

- **The hedonic estimation factors:** their performance is influenced by **1) the number of data samples** (seasonal variation of the number of samples), **2) variations (biases) of data samples** (in prices and property characteristics), and **3) structural changes in prices and qualities**
- **The chain linking factors for indexes;** their performance are influenced by **1) the price fluctuations that bring chain drifts;** and **2) structural changes in prices**

(Questions)

- (1) Do you have ideas about the performance of the weekly indexes with fixed window length (e.g. if they can follow the benchmark) ?
Are the indexes with varying window length better ?**
- (2) Have you checked if the weekly indexes have prediction power for the quarterly benchmark indexes?**
- (3) Do you have comments about some above-mentioned factors to influence the performance of the Tokyo weekly indexes?**

Thanks for your attention!



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