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Title: Timely Rental Price Indices for thin markets: Revisiting a chained property fixed-effects estimator

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Abstract

The ‘rentals for housing’ class of New Zealand’s CPI is estimated using a non-revisable property fixed-effects estimator – the FEMS(8y): Fixed-Effects, Mean-Splice, 8 year rolling window – on stock-imputed administrative microdata. The term *fixed effects index* was introduced by Krsinich (2016), the approach is also known as the Time Product Dummy (TPD) method. Applying the same estimator to raw flow-based administrative data, creates a statistic to track changes in the market price of new tenancies. Monthly series are published around 9 working days after the end of the reference period, using administrative data processed within the reference period. This represents a preference for timeliness over precision given less than half the final data will be available in time for inclusion. The indices are used for near real-time monitoring of the rental market.

In this paper we investigate a potential enhancement that uses more of the data by revisiting the FEMC (Fixed-Effects, Mean-Chain) estimator introduced by Bentley (2018) (2022). The flow series are not a direct input into the CPI, so a publication revisions policy that accommodates revisions to historical estimates is proposed. For revisable timeseries, window *chained* series may be preferable to *spliced* series since any revisions, resulting from new data or improved parameter estimates, will be allocated to the correct time period. Benefits are observed empirically during New Zealand’s COVID-19 pandemic recession of 2020, which concurrently disrupted administrative data collection and reduced rental price inflation. In retrospect, a shorter, sharper, impact is observed during the first national lockdown, compared with the more gradual deceleration in inflation recorded in real-time. More generally, chained series were found to be less volatile than splice series. This property is especially useful for estimating rental price indices for small geographic regions.

This paper uses the FEMC estimator and proposes a coherent practical approach to publication of timely rental price indices for national and broad regions, alongside small regions with thin rental markets. The strategy includes using a ‘flash data subset’ for provisional estimates to minimise potential revisions bias, whilst maximising the use of data once this becomes available. Differential reporting lags and rolling up monthly data are also proposed for some regions, dependent on the size of the rental market.

REFERENCES

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