Housing Careers Briefing Note 4

Rental markets

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Harnessing consumer data to understand the dynamics of private rental markets

**EXECUTIVE SUMMARY**

- Although a large share of the British population now lives in the Private Rental Sector (PRS), high levels of turnover and the ‘cottage industry’ structure of the tenure mean we have a relatively poor knowledge of PRS dynamics.
- Rental listings information available from listing websites such as Zoopla offers a novel and potentially rich resource for studying the PRS.
- Initial analysis suggests that trends in listed rental prices and turnover rates visible in the Zoopla/WhenFresh data held by the ESRC Consumer Data Research Centre (CDRC) align well with estimates derived from more traditional sources.
- With their high frequency of updates, consumer data provide a promising source of information about private renting that could supplement but probably not replace more traditional census and survey estimates.

**INTRODUCTION**

A far greater share of British households rent privately than was the case just twenty years ago. Private tenants are also one of the most mobile segments of the population. Around half of all household moves take place in the Private Rental Sector (PRS), despite the tenure housing only a fifth of households.

However, while the Land Registry and Registers of Scotland record address-level details of all housing transactions in Great Britain, very little in the way of robust administrative information exists about PRS dynamics such as residential moves, rental vacancies or rental prices. Census and survey data provide only occasional snapshots of the sector which either date quickly (the census) or lack the sample size to examine PRS dynamics at highly localized scales (social surveys).

Consumer data offer a potential supplementary source of PRS data. The ESRC Consumer Data Research Centre (CDRC) has acquired a WhenFresh/Zoopla database as part of its secure data collections ([https://data.cdrc.ac.uk/](https://data.cdrc.ac.uk/)) and this note profiles the quality and potential value of this resource for PRS analysis.

**THE DATASET**

The WhenFresh/Zoopla dataset contains 3.5 million listings of dwellings advertised for rent in England and Wales between 2014 and 2019. Listed attributes include: address, type and number of bedrooms/bathrooms/living rooms, weekly rent asked, and three dates related to each advertisement. These are: (i) the date a listing was created, (ii) the date it was listed as rented, and (iii) the date of the last change made to the listing other than
it being rented out. In addition, the database contains redirection postcodes for outmovers who chose this Royal Mail service (around 10% of records).

These data were not designed for statistical analysis and so they contain missing values and inconsistencies. Cleaning was undertaken to address these issues. This involved (1) removing duplicated records, (2) listings with illogical date sequences (4% of the total) and (3) estimation of vacancy opening and closure dates based on the date stamps provided. These steps and further cleaning procedures can be varied by users in order to create a customized dataset with assumptions that are appropriate to any particular project.

DATA QUALITY
The number of listings per Local Authority District found in the WhenFresh/Zoopla data is highly correlated with the number of PRS moves recorded by the 2011 census. The more moves occur, the more Zoopla listings are seen in the database with the WhenFresh/Zoopla data capturing an average of one third of all census moves. Figure 1 shows how this relationship varies across England and Wales. The lighter blue areas denoting places where WhenFresh/Zoopla seems to most significantly undercount PRS moves.

Figure 1. Zoopla listings as a percentage of 2011 PRS census moves across England and Wales
We then compared listing prices in the WhenFresh/Zoopla data to Valuation Office Agency’s (VOA) Private Rental Market Statistics. *Figure 2* shows the difference between these indicators for one Local Authority District, Winchester.

In general, the WhenFresh/Zoopla listings offer slightly higher rental estimates for larger dwellings than the VOA data, while the reverse is true for smaller dwellings. This may reflect that VOA data reports rents being paid by households while WhenFresh/Zoopla records new listing prices before discounts have been negotiated. It is also difficult to separate large units being rented out to a single household from house-shares (which may command higher rents). Users will therefore need to apply their own assumptions to make the data more suitable for their purposes, for instance by excluding particularly large dwellings or using listing text to assign units with many bedrooms into ‘shared’ and ‘single-family’ categories.

*Figure 2. Monthly rents: Zoopla data (price asked) compared to Valuation Office Agency data (price paid) in Winchester Local Authority District.*

**CONCLUSIONS**

The dearth of administrative data about the PRS makes consumer data a particularly attractive resource. Our initial analysis of WhenFresh/Zoopla listings indicates that these can function as an effective proxy indicator of PRS mobility and that listed rents align closely with official estimates. Crucially, these types of consumer data resource are available much more quickly and at more customizable and local geographic scales than conventional data resources. However, users need to bear in mind that repurposed consumer datasets have not been designed for statistical analysis and so careful cleaning, assumption checking, analysis of data coverage and representation as well as sensitive interpretations are all vital to the success of any data analysis project.
FURTHER READING


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