

Data Note 1/2018

Private sector rents in UK cities: analysis of Zoopla rental listings data

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Introduction

The private rental sector (PRS) is the most dynamic part of the housing system, having doubled in size over the last two decades. More stringent requirements from mortgage lenders and a shrinking social rented sector have led to increasing demand for PRS housing. This has been met largely by a growing number of individuals acquiring property to let, aided by the growth of Buy-to-Let mortgages.

In spite of its dynamism, the PRS is widely acknowledged to be a part of the housing system for which the quality and quantity of data is unsatisfactory; see for example the recent report by the Office for Statistics Regulation.¹ There is reasonable data from surveys which provides information at the national, regional and even local authority levels, while the Valuation Office Agency produces useful tables of rents down to local authority level.² The Census has much finer geographic detail, but only provides limited details about PRS accommodation and occupiers. Apart from this, we do not have good data at lower geographies.

The Urban Big Data Centre (UBDC) has explored a variety of ways to fill this gap. For example, in Scotland, we have argued that data from the statutory landlord registration scheme could provide a rich picture of the spatial distribution of the stock of rental properties and we have shown that these data can legally be published; see our analyses for Renfrewshire³ and Aberdeen City⁴. Unfortunately, these data are not available for the rest of the UK and, even in Scotland, getting access has proven difficult and time-consuming.

Another source of information is the growing number of online property websites, which cover sales and/or rental properties. To explore the value of these data, and to make them more widely available for academic and other non-commercial research, UBDC made a licensing arrangement with Zoopla PLC. This has provided access to both historic and current data on sales and renting, covering the period 2009 onwards. Individual researchers can apply to UBDC for access to the property-level information but must agree to the terms of our End User Licence which limits use to non-commercial research. UBDC is also

¹ Office for Statistics Regulation (2017) *Statistics on housing and planning in the UK: systematic review of public value*. London: UK Statistics Authority.

² <https://www.gov.uk/government/collections/private-rental-market-statistics>

³ http://ubdc.ac.uk/media/1421/data_note_prs_in_renfrew.pdf

⁴ <http://ubdc.ac.uk/media/1518/data-note-22017-landlord-register-aberdeen.pdf>

publishing some simple summary tables of data, showing the number of rental adverts and the mean and median rents for each local authority and for smaller units, termed Middle Layer Super Output Areas (MSOA) in England or Wales, and Intermediate Zones (IZ) in Scotland. These are available from the UBDC website for personal use and are subject to strict limits on use.

This note lays out some basic analysis of these Zoopla data from the local authority tables and examines their potential to provide a more detailed picture of the PRS.

Methods

It should be stressed that this report is based on our analysis of the UBDC database of listings derived from the original Zoopla database. Zoopla produce their own analyses of the rental market and supply data to a range of organisations, and the details in those data will differ from the analysis presented here.

Details of how the UBDC database was created are available in a separate report⁵. Further processing of the data was carried out for the purposes of this report. In particular, we only used listings with a start date identified and we have removed some records we regarded as duplicates. We have also chosen to concentrate on the years 2012-16. Within our database, the listings for earlier years had a larger proportion of records lacking details such as property size which we considered important.

In addition, we only included data from local authorities that had sufficient cases (10 or more) in all the years we were examining; 376 (96%) of the 393 unitary or lower-tier authorities in the UK were included.

Table 1 gives an indication of the impact of these selection criteria on our analysis.

Table 1: Number of cases included and excluded

	N
All listings	3,820,216
Missing data or duplication	713,745
Before 2012	803,778
Listings from 2012-2016	2,302,693

A number of additional fields were also derived from the master file, including the number of days listed. Postcode was used to allocate the advert to higher geographies (MSOA/IZ and local authority) so listings where the postcode was incomplete are omitted.

Volume of adverts

The number of adverts fluctuates over the five years from 2012-16, falling from a high in 2012 to a low in 2015 before recovering a little in 2016 (Table 2). If we compare changes in the number of adverts to changes in PRS stock estimated from national surveys, we see some divergence in trends as the latter suggest the PRS has grown steadily. This could be produced by changes in market share captured by the Zoopla database or changes in the rate of turnover of properties as listings reflect turnover rates as well as underlying stock levels. It may also reflect a shift in Zoopla's coverage of different sub-markets within the rental sector, i.e. a move away from higher turnover sub-markets. Whatever the explanation,

⁵ <http://ubdc.ac.uk/media/1656/zoopla-property-listings-history-processing.pdf>

this discrepancy suggests we should be cautious about interpreting changes in the number of listings for an area as an indication of change in either stock or the flow of available lettings.

It is worth noting that the volume of adverts in our database is broadly comparable to that compiled by the VOA through their contacts with landlords and lettings agents. In the year to September 2017, for example, they recorded 488,000 adverts for England. Their database provides information on all current lets, whereas the Zoopla database provides information on the new lets. Both can be valuable for understanding the housing system.

Table 2: Number of adverts by year and stock of PRS properties

		Number of adverts	Number adverts (index, 2012=100)	UK Private Rental Stock (index, 2012=100) ¹
year	2012	559,590	100	100
	2013	405,641	72	104
	2014	487,760	87	108
	2015	385,191	69	111
	2016	460,590	82	n/a

1: Based on Table 102: Dwelling stock: by tenure (2012-2015), Great Britain (historical series) from Gov.UK Statistical data sets

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Breaking the data down by quarter, we see a varied seasonal pattern (Table 3). In 2012 and 2016, the fourth quarter is significantly quieter but there is less variation in the other three years.

Table 3: Number of adverts by year and Quarter

Year	Quarters			
	1	2	3	4
2012	149113	147429	169633	93415
2013	97677	100456	105263	102245
2014	112723	138258	122664	114115
2015	96941	93177	96541	98532
2016	114575	124999	130000	91016

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Most properties have 1 to 3 bedrooms, with 2 bedrooms the most common (Table 4). A significant number of adverts give the number of bedrooms as '0'. These may represent studio flats with a single living/sleeping space or a room in a shared property; our database does not allow us to distinguish. There are significant levels of properties in all categories even in the larger 4+ bedroom properties.

Table 4: Number of adverts by bedrooms, 2012-16

Number of Bedrooms	Number of adverts	% of total adverts
0	81,731	4
1	470,592	20
2	908,867	39
3	571,155	25
4+	271,324	12
Total	2,303,669	100

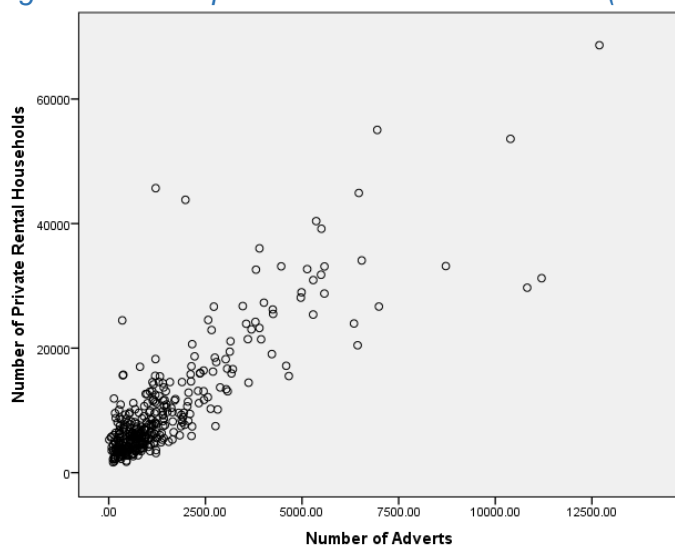
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Geographic coverage

To understand the geographic coverage of our database, Figure 1 compares the number of rental adverts in 2012 for each local authority to the number of private rental households recorded at the Census in 2011. Where the Census measures the stock of properties⁶, the Zoopla database shows the flow of new lets which also reflects rates of turnover. Nevertheless, we find a high correlation ($R=0.85$), suggesting that our database has good geographic coverage which largely mirrors variations in stock. There are of course fewer adverts than properties (very roughly, one listing for every five properties) but in general, higher numbers of properties leads to higher numbers of adverts.

⁶ This only includes households renting from a landlord or agency and excludes those living rent free or in tied accommodation.

Figure 1: Scatterplot Private rental households (Census 2011) by number of adverts (2012)



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Rents

As noted above, we are cautious about interpreting changes in the number of adverts in our database as evidence of changes in the stock of PRS properties in an area. However, provided the database maintains consistent coverage of the market even as it changes market share, we should be able to rely on it for evidence of how local rent levels are changing, at least for new lets. Table 5 and Figure 2 show median rents for all properties and compares change for these with change in the ONS Index of Private Housing Rental Prices.⁷ It should be noted that the Zoopla data are for new lets in the market whereas the ONS Index is for all current lets. In addition, our Index is calculated on a crude or unadjusted basis whereas the ONS index adjusts to limit the influence of changes in the mix of properties in the market over time. Nevertheless, there is a close correspondence in their estimates of rental increases over time.

The Zoopla data differ in one respect, and that is that they show a clear seasonal pattern with rents in the first quarter of each year tending to be lower relative to the rest of the year. Timing appears to have a significant impact on rents being sought. This seasonal factor does not impact on the ONS data as it is for continuing lets.

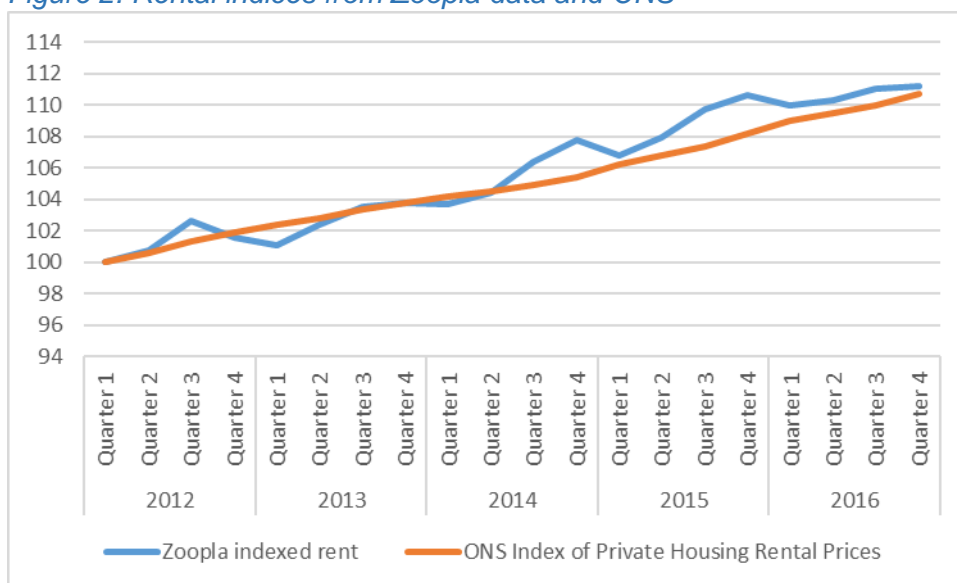
⁷<https://www.ons.gov.uk/economy/inflationandpriceindices/bulletins/indexofprivatehousingrentalprices/previousReleases>

Table 5: Means rents for Zoopla listings and ONS index of private housing rental prices

		Zoopla indexed rent	ONS Index of Private Housing Rental Prices
2012	Quarter 1	100	100
	Quarter 2	100.8	100.6
	Quarter 3	102.6	101.3
	Quarter 4	101.6	101.9
2013	Quarter 1	101.1	102.4
	Quarter 2	102.4	102.8
	Quarter 3	103.5	103.4
	Quarter 4	103.8	103.8
2014	Quarter 1	103.7	104.2
	Quarter 2	104.4	104.5
	Quarter 3	106.4	104.9
	Quarter 4	107.8	105.4
2015	Quarter 1	106.8	106.2
	Quarter 2	107.9	106.8
	Quarter 3	109.7	107.4
	Quarter 4	110.6	108.2
2016	Quarter 1	110.0	109.0
	Quarter 2	110.3	109.5
	Quarter 3	111.0	110.0
	Quarter 4	111.2	110.7

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Figure 2: Rental indices from Zoopla data and ONS



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Aggregating rents in this way treats all rental property the same regardless of the size of the property. Table 6 shows median rents by number of bedrooms in the property up to a maximum of four. Median rents rise year on year for all sizes of properties. Figure 3 shows that rates of change are similar across properties of different size.

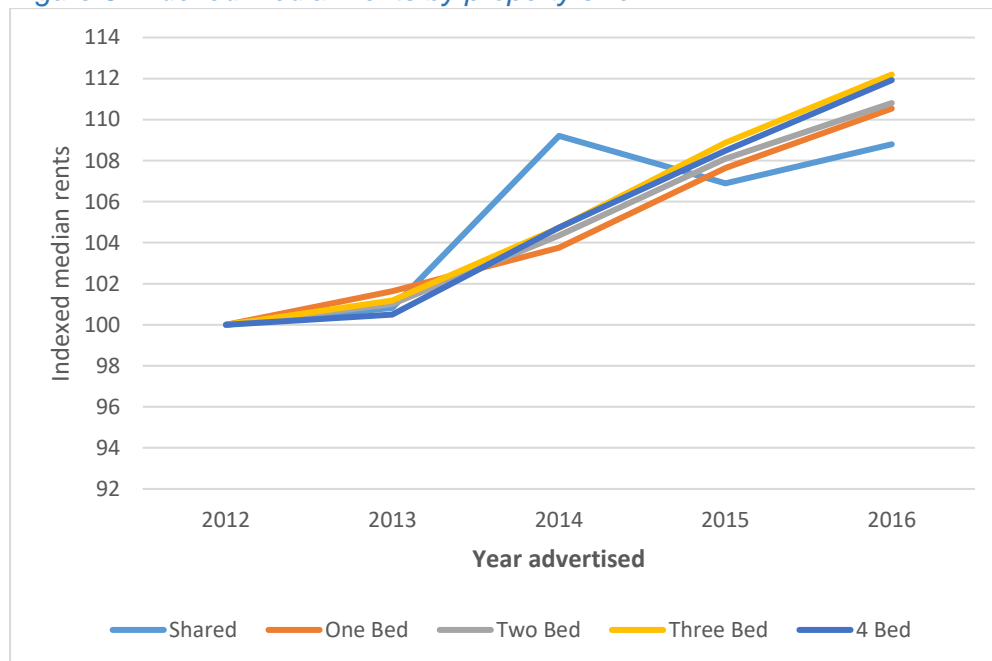
Table 6: Monthly average local authority median rent by year and property size

	0 Bed*		One Bed		Two Bed		Three Bed		4 Bed	
	Median Rent	No Adds	Median Rent	No Adds	Median Rent	No Adds	Median Rent	No Adds	Median Rent	No Adds
2012	540	21958	533	108543	677	216858	832	140354	1131	50200
2013	544	11456	542	79085	684	157617	842	105453	1137	35923
2014	589	15833	553	94311	707	193930	871	122757	1185	41600
2015	577	13463	574	79616	732	150606	906	93629	1227	31122
2016	587	17631	589	103700	751	182583	934	105459	1266	34104

*We presume that this means there is no designated bedroom, but property has one reception room which also acts as a bedroom.

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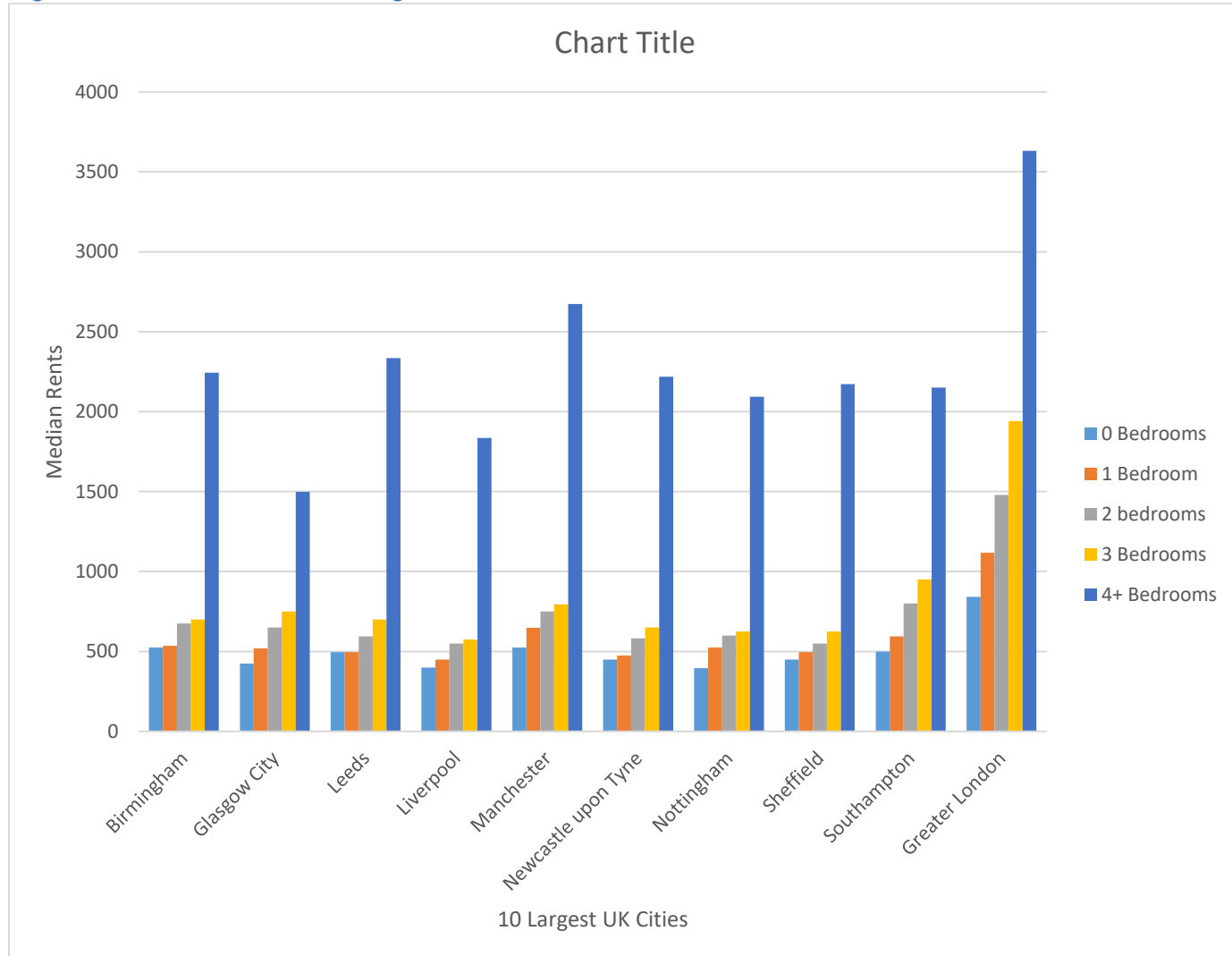
Figure 3: Indexed median rents by property size



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Comparing median rents in the 10 largest cities by bedroom size shows us the disparity between London and other major cities in the UK (Figure 4). There are differences in median rents between other cities, but these are small compared to the rents in London.

Figure 4: Median rents for 10 Largest UK Cities



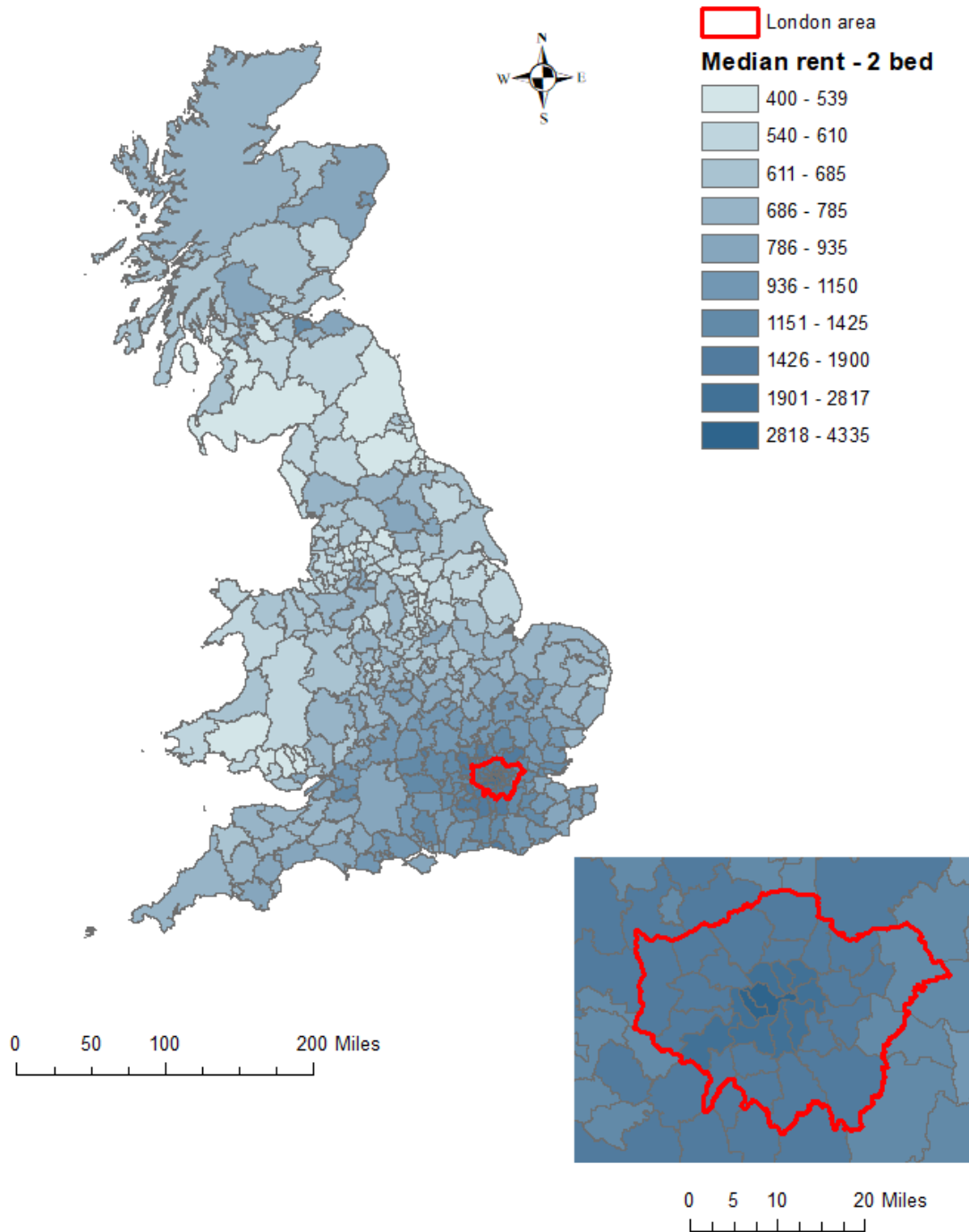
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Figure 5 provides a picture of rents across Britain, focussing on 2-bedroom properties. It emphasises again the high rents in the London authorities but also wide disparities in rents elsewhere. There is a strong North-South divide but also pockets of higher rents in cities like Manchester and Edinburgh, as well as Aberdeen.

Finally, Figure 6 show how rents for 2-bedroom properties have changed between 2012 and 2016. The general rise in rents is seen across the countries but there are some areas where rents appear to have fallen, at least according to our database. Some of these are not surprising, for instance, Aberdeen where the economy has been so badly affected by the problems of the oil and gas industry, linked to the drop in oil prices. Rental values also appear to have dropped in the Borders, parts of the west of Scotland, and some coastal

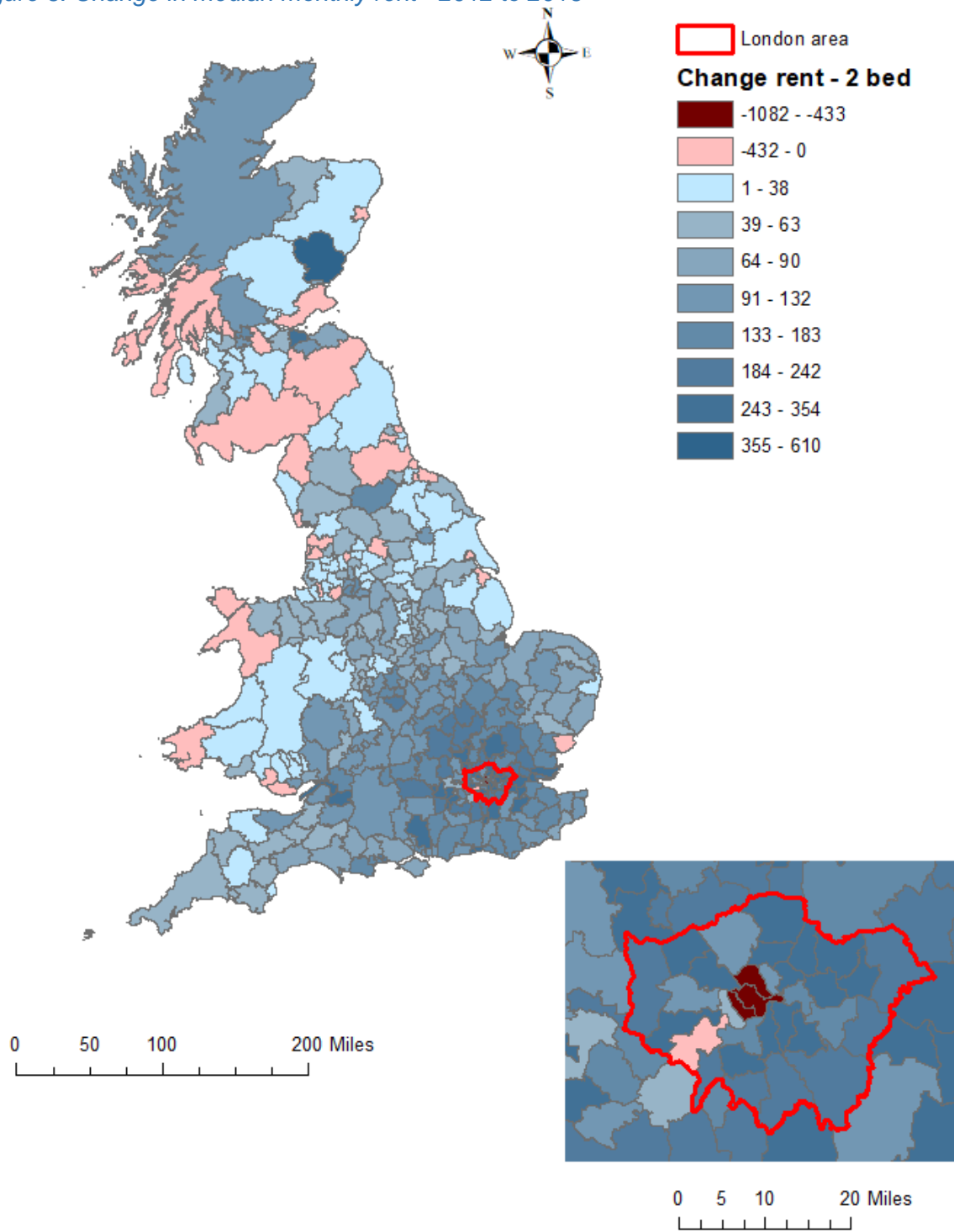
areas around Britain. The insert for London shows that there may also have been reductions in rents for some very high value areas in the city centre and along the Thames.

Figure 5: Median monthly rent - 2016



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Figure 6: Change in median monthly rent - 2012 to 2016



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