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An Assessment of Tenure-Specific Housing Market Areas for Housing Planning

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Abstract

Planning for housing in Britain has embraced the use of housing market areas (HMAs) as appropriate geographies to address calls for greater market responsiveness. Tenure is a crucial dimension of the housing market, so it must be central to assessing local housing demands. Despite the wide cleavages between social and private rented sectors, and between both of these sectors and the owner-occupying majority, the geography of tenure-specific HMAs has remained largely unexplored. This paper assesses the importance of tenure-specific HMAs for housing planning within the current policy frameworks aimed at meeting housing needs. The paper then reports analyses to delineate tenure-specific HMAs, with these boundaries then compared to HMAs defined by analysing the whole market. The empirical evidence presented reinforces the original perspective in the context of major urban cores and where there are concentrations of the PRS. However, the case for a national system of tenure specific HMAs based on migration is unproven given on the one hand their practical limitations and on the other it appears unnecessary for areas outside cities. Nevertheless the use of tenure-specific HMAs provide the basis for more meaningful local affordability measures and a tool to identify socio-tenurial segregation and reshape local housing systems.

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The purpose of this paper is to examine the potential of tenure-specific local housing market areas (HMAs) in England as an aid to local housing policy and planning. Besides this very specific objective the paper provides insights into the operation of the housing system through residential migration patterns. While the paper is set within a strong conceptual framework it encompasses a behavioural analysis that can inform and resolve some of the tensions between different disciplinary perspectives (see Marsh and Gibb, 2011). It also contributes to the continuing debates about the relationships between residential land markets, tenure and the role of planning/intervention.

Over the last decade market responsive planning policy has ostensibly been introduced but the change has proved difficult to implement. A major hurdle has been the construction of meaningful HMAs with both a degree of arbitrariness and a lack of consistency between planning authorities in different parts of the country. Recent research has resolved these problems by constructing a comprehensive tiered HMA geography for the whole of England based on clear theoretical principles (Jones et al, 2010). However, a deeper perspective on local housing markets needs to take account of the tenure structures which create cleavages in the housing system. This paper offers a further contribution to the challenges of market responsive planning by assessing the value of tenure-specific local HMAs. It does this by breaking down local migration flows identified in the 2001 Census by tenure destination. In this way the paper reviews both the difficulties and the significance of such tenure market areas and in particular how they vary from the overall HMAs that are based on gross migration flows.

The paper begins by setting out the British housing context and argues that there is a strong argument for local policy frameworks to take into account demands and needs in each tenure. The next section considers the planning context noting that planning is now at the centre of UK housing policy through the provision of affordable housing via planning agreements. Planning forecasts have as yet taken no account of tenure and are broadly tenure neutral in terms of land supply goals. This paper asks whether a tenure-specific HMA framework is the way forward for the planning process. The next section looks more closely at the HMA concept and the role of tenure. The paper then sets out the logic of the national tiered HMA structure applied in this study, and from this base derives tenure-specific HMAs. It then compares the differences in these HMAs across urban and rural localities in the North West of England with specific reference to a case study of greater Manchester. Finally the conclusions assess the significance of the findings for planning and local housing policy.

Housing Market Context

The overall tenure structure of Great Britain is dominated by the owner occupied sector accounting for, according to the most recent statistics available, 69% of the stock in 2007 compared with 12% for the private rented sector (PRS) and 18% social housing. The figure is relatively fluid for although owner occupation has been on a plateau, perhaps now a downward slope, the PRS expanded over the decade to 2010 by around 40%. Over the same time period social housing declined by 9% overall, even though housing association stock increased by 72% because council housing lost 40% of its stock. By the end of the last decade the numbers of housing association stock had just overtaken council housing (CLG, 2012a).

Behind these statistics lie numerous factors. The revival of the PRS emanates from the removal of rent regulation in 1989, and was supported by the phasing out and ultimate abolition of subsidies via tax relief on mortgages to owner occupiers at the turn of the millennium (Jones, 2007). The rise of the PRS was also encouraged by the availability of mortgage finance and rising house prices making it an attractive investment. The decline in council housing is a consequence of a combination of minimal new building, the sale of council houses to sitting tenants, and stock transfer to housing associations (Jones and Murie, 2006; Mullins and Pawson, 2009).

This restructuring has resulted in only marginal changes in the socio-economic composition of households living in each tenure, so fundamental differences in their characteristics remain. The PRS continues to attract new immigrants and those in higher education, both growing in number, while between 1988 and 2004 the percentage of young people aged 25-29 private renters rose from 16% to 31% as the young were priced out of home ownership (Andrew, 2006). In 2008 9% of owner occupiers with a

mortgage were aged 29 or less, the lowest percentage of any tenure (Table 1). The age profile of private tenants while skewed toward young adults also has a long tail of people into middle age and beyond. Table 1 also shows that social housing tenants are over-represented among young adults and the elderly, particularly those over 80 years of age.

An overview of the socio-economic composition of households in the different tenures is in Table 2. Tenants in social housing are predominantly inactive as are owner occupiers without a mortgage. These statistics hide a social polarisation: owner occupiers who own outright are generally retired and there is little overlap between their socio-economic background and social tenants'. The majority of social tenants have low incomes, are on housing benefit and do not have a car. Average gross income of social tenants is approximately a third of home owners with a mortgage (Watkins and Pawson, 2010). The PRS has a dual personality because it houses students and young professional households (who see it as a transitional step toward owner occupation), but also long term tenants who are generally on low incomes. This latter role has been targeted by local authorities since 2003 who have been seeking to assist households at risk of homelessness to access private tenancies (Hulse et al, 2010).

There are therefore substantial differences in the characteristics of the households living in each tenure. The English Housing Survey (EHS) shows some movement between tenures, notably between the PRS and owner occupation by young households (CLG, 2011a), many of which may be long distance job-related moves. Low income households are increasingly rehoused in the PRS where 30% are unemployed (CLG, 2011a). Dwindling numbers are taking up the right to buy (Jones, 2009): the EHS reports that only 3% of established households moving into owner occupation were from social housing (CLG, 2011a). Owner occupation is an end state for many households once aged 35 and over. Only 2% of owner occupiers moved in the year 2009-2010 according EHS, and only 5% of these movers switched to social housing. Most of these movers were either not working or retired (CLG, 2011a). These structural differences in the household composition of tenures, and low tenure mobility patterns, provide a strong case for examining future housing demand requirements within frameworks that distinguish the tenures.

This argument is reinforced when it is also recognised that there are considerable spatial variations in the tenure structure of the English housing system, with owner occupation particularly predominant in suburban and rural areas. The highest concentration of the PRS in absolute terms is in London, but as Table 3 illustrates the proportion of the stock in major cities is not necessarily above the average in England. The highest percentages of the local stock accounted for by the PRS are found in inner London boroughs and there are also high proportions in seaside resorts and academic centres such as Oxford and Cambridge. The highest proportion of council housing is found in the North East and the cities.

The Planning Context

A key function of planning is to ensure sufficient provision of land for new development and a critical input has been an assessment of future local housing needs based on population forecasts. As the role of social housing has diminished, brought about by a combination of minimal new building over two three decades and the sale of council houses to sitting tenants (Jones and Murie, 2006), so the planning system has become more pivotal to housing policy (Bramley, 1997; Malpass, 1999). 'Planning agreements' by local authorities can oblige private housing developers to make social contributions in the form of 'affordable housing' mixed tenure developments, in return for planning permission to build (CLG, 2006). The Labour government to 2010 chose to use this mechanism of planning agreements to provide affordable housing as the central core of its national housing strategy.

The objectives of the statutory planning system also widened at the beginning of the last decade from a purely land-use based approach to spatial planning that aimed to achieve sustainable development (ODPM, 2005). In addition there was a realisation that insufficient new housing was being built and that the planning system was a contributor to the problem. An independent government review by Kate Barker (2003, 2004) for the government set out a plethora of recommendations aimed at changing the planning system. She argued that there should be a greater use of market indicators as a basis of providing land for future development. In particular Barker suggests that the traditional approach of allocating land on the basis of household projections (and related needs estimates) could be improved by

setting targets for planning that are based on affordability measurements. Following this advice in 2004 the planning system in England was made more sensitive to market pressures and overall the last decade has seen planning committed to shaping the housing market to meet social goals.

This revised approach initially centred on the development of regional spatial strategies incorporating the identification of both a rolling five year supply of developable land over a fifteen year time horizon and a complex system of allocating land for new housing based on assessments of housing need, and future requirements for new housing. This process included projections of future numbers of households and assessments of local capacity to provide for this additional requirement and centred on a framework of HMAs.

The change of government in 2010 brought a 'localism' agenda and abolition of regional spatial strategies. The National Planning Policy Framework published in 2012 still argues that planning should take account of market signals (defined for example by affordability and land prices), and plan for housing needs with a clear strategy for allocating sufficient land (CLG, 2012b). In particular local authorities should

"use their evidence base to ensure that the Local Plan meets the full, objective assessed needs for market and affordable housing are met in the housing market area...." (CLG, 2012b, para 47)

A local authority is expected to draw up a "Strategic Housing Assessment" working with neighbouring authorities when the local HMA crosses administrative boundaries.

This new planning framework also extols the virtue of 'mixed sustainable communities', ie mixed tenure developments. This is also promoted by a parallel national housing strategy that continues to pursue local planning agreements with house builders as a means of providing affordable housing although the government has a revised financial model of affordable rents (CLG, 2011b; HCA, 2011). Overall the switch from a regional approach to localism changed no fundamentals of the housing planning process (or the issues to be addressed), but now the process is devolved to individual local authorities.

Planning policies have persistently failed to deliver sufficient homes, and the new localism framework may actually make the position worse if NIMBYism becomes dominant. The technical analysis driving local housing targets have been subject to serious criticisms for being data constrained and based on debatable theory (Jones and Watkins, 2009; Ferrari et al, 2011). Other criticisms of these planning processes include their failure to assess the impact of tenure structures on housing markets, and that they often measure affordability solely as the cost of ("access to") owner occupation (Jones et al, 2011).

Despite the apparent tenure neutrality of planning policies, they do have consequences for tenure patterns in individual areas. The supply of social housing is directly dependent on the success of planning agreements in promoting affordable housing. The focus on sustainable development as an overarching goal of planning led to the share of new house building in England provided by flats on brown field sites rising from 20% at the beginning of the 1990s to 46% by 2010. This was largely facilitated, especially in city centres, by the emergence of 'buy to let' private landlords, supported by low levels of house-building generally fuelling the house price boom that meant many households in their twenties delayed their plans for home ownership.

Overall the planning system's attitude towards tenure is ripe with conflicts. On the one hand forecasting techniques of land requirements take little or no account of tenure, yet planning is expected to provide affordable housing and social mix, which both have tenure implications. The consequences of planning policies can be seen in changes in the pattern of tenure. If planning is to shape the market then it must make a formal recognition of tenure structures within the housing system. As yet this recognition process has got as far as suggesting a specific use class for affordable housing (Simpson and MacDonald, 2003). One requirement now is to develop tenure-specific housing market areas and this is considered in the next section.

Housing Market Areas

Definitions of HMAs are crucial to the valid analyses needed to meet housing demand and needs. In fact every geographical analysis is affected by the boundaries of the areas used (Openshaw and Taylor, 1979; Briant et al, 2010). This has been highlighted by the changes in local housing allowance to tenants in the PRS in 2009 following the introduction of “broad rental market areas” (BRMA) in determining “local reference rents”. It is instructive to examine this issue in more detail because BRMAs illustrate the importance of HMA definitions to policy outcomes.

A BRMA is a form of housing submarket and is defined in the legislation as an area within which a tenant could reasonably be expected to live, having regard to facilities and services for the purposes of health, education, recreation, personal banking and shopping, taking account of the distance of travel, by public and private transport, to and from those facilities and services. BRMAs must also contain residential premises of a variety of types, including such premises held on a variety of tenures and sufficient privately rented residential premises, to ensure that, in the rent officer’s opinion, the local reference rents for tenancies in the area are representative of the rents that a landlord might reasonably be expected to obtain in that area.

The national geography of BRMAs is not published but some local research by Shelter (2009) demonstrates some of the issues that arise from it. Shelter’s report – dubbed “Housing Benefit: A Postcode Lottery” – illustrates how boundaries really matter in several examples. Cambridge’s BRMA encompasses the city, where rents are relatively high as a prosperous academic centre, but also parts of rural Cambridgeshire where rents are much lower. The effect is that local housing allowance claimants are unable to live in the city where many of the work opportunities are. The impact of the Blackpool BRMA boundaries has been the opposite to the effect in Cambridge, but with an equivalent damaging impact on tackling barriers to work (House of Commons, 2010).

Notable urban/rural contrasts exist in house prices and the Commission for Rural Communities (2007) expressed concerns about potential misleading planning conclusions if HMAs are drawn ‘incorrectly’. It argues that HMAs which contain only a few urban areas will have a very different price and affordability profile to those including a mix of urban and rural areas. Some cities with excess supply are also near to rural areas where demand exceeds supply: if such a city and rural area are grouped into the same HMA then it may appear to have a balance of supply and demand. On the other hand, if that rural area had been defined as a separate HMA then this would be seen to have a distinct housing shortage. These brief examples illustrate the importance of defining HMAs for housing policy and planning, and the rest of the section considers approaches to defining them, beginning with national planning advice and then previous academic studies.

The use of HMAs in planning began in Scotland in the 1980s and national planning advice has evolved over time. The most recent version sees a HMA as an area where the demand for housing is relatively self-contained, in that a large percentage of the people moving house move to a house in the same area (Scottish Executive, 2003, DTZ Peida, 2003). The definition in the guidance in England follows broadly the same lines but is less specific about the approaches it recommends to identify HMAs (DTZ Peida, 2004; CLG, 2007). In outline, each of the approaches centred on the analysis of one of three different types of information:

House price levels and/or rates of change

Household migration and/or search patterns

The boundaries of Travel-to-Work Areas (TTWAs) and/or other functional areas

This guidance has been reviewed in more detail by Jones et al (2012) who argue it lacks a definitive theoretical underpinning and is so flexible that the HMAs constructed across England following this advice are not truly comparable, with many following arbitrary administrative boundaries (Baker et al, 2010).

A number of academic studies have been published based on the underlying theory, whether explicit or implicit, that the law of one price applies within each HMA, and this is achieved if the market is sufficiently closed in terms of buyers and sellers (see Jones et al (2012) for a detailed review). In other

words within a particular HMA the rent or price of a standardised house is the same. This logic implies that the identification of HMAs is achieved by finding areas with high levels of 'closure' (ie. self-containment) of migration flows, defined by the percentage of moving households who do not move across the area boundary. Following this approach Jones (2002) derives HMAs based on the migration patterns within the owner occupied sector of the mainland west central Scotland. Similarly Brown and Hincks (2008) delineate a system of HMAs for the North West of England partly based on migration data between wards from the 2001 Census. Coombes (2009) also develops a national geography of HMAs based on migration data from the Census but based on a different algorithm.

None of these academic studies or the planning geographies above differentiate HMAs by tenure although Jones (2002) only examines the owner occupied sector. To date there has only been one study by Coombes et al (2006) of the North East of England that has constructed specific HMAs for different tenures. This study is also based on migration closure. The results are robust for the owner-occupied groups producing numerous sub-regional HMAs but there are problems with the PRS. Application of the same migration closure threshold and algorithm for the PRS as that for owner occupation produces a single HMA that covers the whole country for private renters because of the long distance moves by students. The geography of equivalent HMAs for social housing tenants is affected by the patchy distribution of this type of housing.

These academic studies are based on (closed) migration patterns that link to the process of spatial arbitrage in the housing market, namely the degree to which changes in house prices/rents in one area influence prices/rents in another. While there is a rich literature on the role of search in housing markets from Smith and Clark (1982) through to Maclellan and O'Sullivan (2012) none of these studies incorporate search patterns to construct HMAs for the practical reasons set out in Jones (2002). These issues relate to the different layers of search and the data requirements. There are a number of other issues that remain uncertain about this basic HMA model. The studies illustrate how the selection of a closure threshold can produce very different HMAs, but there is no 'natural' level to apply. All these studies also draw out the links between housing market areas and travel to work areas but it remains unresolved as to how labour and housing markets are linked. The role of tenure similarly needs more clarification – one study focuses only on owner occupation whilst the one study that does differentiate between tenures produces problematic results, especially with regard to the PRS.

Focus on the question of tenure draws out the fundamental basics of the arbitrage process. Comparative levels of local private sector rents versus house prices could generate some inter-tenure moves, inter-tenure transfers of housing and changes in relative costs between tenures. However, this process is difficult to identify and, given the complexities of these inter-tenure shifts and the information constraints in the housing market, is arguably of minimal significance in practice. Spatial arbitrage is therefore primarily internal (but not exclusively) to each tenure. There is also the caveat that migration patterns in social housing do not influence rents so do not represent an arbitrage process and so do not generate equivalent HMAs. Analyses of gross migration patterns that do not distinguish by tenure are at best approximations of spatial arbitrage and at worst ignore an important element of the housing system. Given that the socio-demographic composition of households in each tenure is very different, with differing mobility patterns, tenure-specific HMAs are likely to differ. The role of tenure and the relationship between migration and commuting are brought together in the next section within a tiered geography of HMAs.

A Tiered Geography of HMAs

The academic studies outlined above define HMAs as the spatial expressions of house price arbitrage, identified as areas that contain within them both the origin and destination of most people moving house. In reality it is not possible to achieve 100% migration closure, even for a country. The choice of migration self containment benchmark to construct HMAs is an empirical question and differs between studies. These analyses also highlight that while there is a significant theoretical relationship between migration and commuting patterns, their linkages are complex, a finding reinforced by Hincks and Wong (2010).

These questions have been addressed fully by Jones et al (2010) with a systematic hierarchical approach to defining HMAs which recognises:

1. *Framework HMA* defined by long distance commuting flows
2. *Local HMAs* defined by migration patterns
3. *Submarkets* defined by neighbourhood and/or house type price premiums.

The theory underpinning these tiers follows Muth (1968) and Evans (1973), with the journey to work as a central influence on the structure of urban housing markets and hence on the limits of the upper tier. The second tier then focuses on the role of spatial arbitrage in moulding the nature of housing markets via household migration.

The constraints on market adjustment or spatial arbitrage between the second tier *Local HMAs* (and even *submarkets* where relevant) means that standardised house prices in different parts of the same *Framework HMA* can be very different. Spatial arbitrage does occur across a *Framework HMA* but it will be subject to (long) time lags. Excess demand for particular dwellings (and their close substitutes) drive prices and affordability in that *Local HMA* upward but it may not affect adjacent *Local HMAs*, certainly not immediately. The implication is that different parts of a *Framework HMA* can have very different levels of affordability, a key planning indicator in a market responsive planning approach. From this perspective tackling affordability requires a focus on *Local HMAs* embedded within their *Framework HMA*.

The tiered national geography for England generated by the Jones et al (2010) provide the starting point for the empirical analysis of tenure-specific HMAs presented in this paper. A grouping algorithm (Coombes and Wymer 2010) first groups wards linked by commuting flows (for the upper tier), and then migration flows (for the lower tier). Figure 1 shows *Framework HMAs* defined by 77.5% commuting closure with *Local HMAs* of 50% migration self-containment. Based on these criteria, there is a coincidence between *Framework HMAs* and *Local HMAs* in much of the country away from more urbanised regions.

The introduction of tenure-specific HMAs could potentially replace the layer of ‘aggregate’ *Local HMAs*. The original *Local HMAs* would therefore be replaced by three distinct HMA geographies, one for the owner occupied sector (*OOHMA*), one for the PRS (*PRSHMA*) and one for social housing (*SOCHMA*). The spatial pattern of tenure-specific HMAs would be determined independently within *Framework HMAs* and so their boundaries could be very different from the original second layer.

HMAs and Tenure Mobility

A useful initial perspective on the significance of tenure can be derived from examining the degree of closure of the different specific migration closure levels within the overall *Local HMAs* across the whole of Great Britain. Derived by Jones et al (2010), all these *Local HMAs* have closure levels of at least 50% and so this is the principal benchmark for comparison across tenures. Social renting closure levels, shown in Table 4, are consistently above 65%. In fact there are only 6 out of 368 in Britain that are less than 55% and 9 that are 85 to 95%. It can thus be argued that SOCHMAs are embedded in the general HMAs derived from aggregate migration flows, although it is noteworthy that they have numerous fragmented boundaries due to the tenure being absent from many part of the country. Insofar as many social housing tenants are economically inactive, commuting is not relevant to them and the theoretical underpinning to *Framework HMAs* does not apply.

The breakdown of migration closure rates for owner occupiers in Table 4 is closer to the overall pattern of all tenures, although it demonstrates a greater degree of openness. Most *Local HMAs* have owner occupation self containment levels below 65%. PRS migration patterns reveal an even greater degree of openness with the majority of the *Local HMAs* having closure rates below 55%. A major reason for this openness is that, despite the migrants analysed here being aged over 25, many migrants into the PRS are changing job and so often moving further.

Table 5 looks at *Framework HMAs* which are specifically defined as labour market areas. As anticipated, the migration closure rates rise significantly. Within the PRS there is a substantial London effect: the

London *Framework HMA* has a self containment level of over 75%. Outside the capital there is a greater fluidity of migration with almost two thirds of all *Framework HMAs* having a closure rate of less than 65% for private tenants. In comparison owner occupiers are less mobile across *Framework HMAs* with closure rates of more than 75% in all major urban areas. Closure rates above 75% for *Framework HMAs* are typical for social housing tenants.

These patterns allow us to draw some broad conclusions about tenure-specific *HMA*s. The usefulness of *SOCHMA*s would appear to be limited for planning because their boundaries are substantially determined by the location of the stock. However, there may be a case for detailed analysis of these *SOCHMA*s at the local level in relation to an assessment of social housing allocation policies. *OOHMA*s are the most closely aligned with *Local HMA*s as one would expect from the dominance of owner occupation. *PRSHMA*s could be important, especially in large urban areas where the PRS is concentrated, due to the distinctive migration patterns of private tenants. The response here is to define tenure-specific *HMA*s to assess their value and, for example, the impact of the numerous long distance moves into the PRS which potentially threatens the underlying theoretical basis of local spatial arbitrage in determining *Local HMA*s and may also lead to *PRSHMA*s that are too large to be meaningful for local planning purposes.

Research Method

The research task is to construct a series of second tiers of tenure-specific *HMA* geographies that are embedded within *Framework HMA*s. As discussed earlier, there is no *a priori* basis for the degree of closure of migration so here the level of closure applied is the 50% used in Jones et al (2010). A grouping algorithm analyses tenure-specific migration flows using the method of Coombes (2010) which does not impose any structure (eg. core-periphery) but identifies clusters of flows of any form. The algorithm seeks to identify as many as possible separate areas which meet the set level of closure (ie. the proportion of the flows analysed which both start and end within the same area).

Migration data in Britain tends to be strongly dominated by the numerous lengthy moves of students, who are not directly relevant to this research. The published Census migration data does not cross-tabulate households by either small age groups or whether the person was a student, so the effect of students on the research is reduced by the use of a customised dataset of Moving Group Reference Persons (MGRPs), specifically provided by the Office of National Statistics to exclude all people aged under 25. It should be noted here that the definition of MGRPs covers many people who are not heads of households: for example, a 25 year old returning to the parental home will be a single person moving 'group' and if the parental home is owner-occupied then this 25 year old will be recorded as an owner-occupying MGRP because the same tenure characteristic applies to all household members. The research presented is based on the dataset covering all 25(+) MGRPs moving into each tenure.

Spatial Implications of Tenure-specific HMAs

These definitions of tenure-specific *HMA*s result in 318 *OOHMA*s, 238 *PRSHMA*s and 777 *SOCHMA*s nested within *Framework HMA*s. These numbers echo the earlier arguments on the size of tenure-specific *HMA*s. The smallness of *SOCHMA*s must mean that including social housing in aggregate *HMA*s will lead to smaller *Local HMA*s in those areas where the social housing sector is substantial. Beyond these simple conclusions it is difficult to generalise about the variation between tenure-specific patterns on the basis of numbers alone. To explore the evidence in more detail the paper focusses on the North West region of England, chosen here because it offers a wide range of urban and rural areas, including the major cities of Manchester and Liverpool, as well as extremely rural localities in its 12 *Framework HMA*s and their 56 *Local HMA*s.

As the national data indicated, *SOCHMA*s are consistently smaller than *Local HMA*s. Rural areas with little social housing often have non-contiguous *SOCHMA*s (ie. the areas are fragmented). By contrast, *PRSHMA*s and *OOHMA*s in more rural areas mostly match 1-for-1 the aggregate pattern of *Local HMA*s. However in the major urban areas there are fewer *OOHMA*s and *PRSHMA*s, and this is not simply due

to amalgamations of overall *Local HMAs*. These distinctive boundaries imply there are tenure-specific market processes.

To assess further these issues a case study of the Manchester region is undertaken, with its outer boundary defined by the respective *Framework HMA* which has 15 *Local HMAs* defined by aggregate migration patterns (Figure 1). Manchester is a very interesting case study because its local authority (LA) area has the highest percentage of private tenants of the larger English cities (see Table 3). The first point to note is that there are only 10 *PRSHMAs* and 14 *OOHMAs* compared with the 15 *Local HMAs* identified by analysing the aggregate migration flows (which include moves into social housing).

Figure 2 shows the *PRSHMAs* (shown as ‘pecked’ boundaries on top of the boundaries seen in Figure 1). The fact that the *PRSHMAs* are fewer in number than *Local HMAs* means that some of the latter are grouped into larger *PRSHMAs*: some examples can be seen in the Oldham area in the east of the region. The boundary of the Manchester LA is elongated north-south and it is somewhat surprising that the *PRSHMA* covering central Manchester includes the northern part of the LA too just as the *Local HMA* had done (nb. because it can be difficult for social housing tenants to move between LAs, it was more likely that the *Local HMA* would include the whole LA because it was based on analyses including moves within the social housing tenure). To the south of this *PRSHMA* is a very large area extending from the more affluent south Manchester through suburban Stockport and beyond Macclesfield to the edge of the *Framework HMA*.

In fact much of the private rented stock is located in the central and southern parts of the Manchester LA and the two *PRSHMA* discussed above are likely to be rather distinct from the more localised *PRSHMAs* in the rest of the study region. One aspect of the fewer private rented properties found in these other parts of the Manchester *Framework HMA* is a fragmentation of some *PRSHMA* boundaries which, in one particular case, has led to the clear anomaly of a single *PRSHMA* grouping together part of the Bolton LA in the north-west with an area in the far south-west part of Macclesfield LA. This consequence of the few flows between some areas in this tenure is a cautionary signal about applying and interpreting the analyses for small areas where the necessary data reflects low levels of the relevant stock. It is a simple response to the fact that the PRS remains a minority tenure in aggregate, but with local concentrations.

Figure 3 shows the *OOHMAs* in and around Manchester. Although in much of the country the dominance of the owner-occupied sector means that *OOHMAs* tend to be very similar to the all-migrant based boundaries of *Local HMAs*, the varied tenure mix across this study region has produced a rather distinct set of *OOHMAs*: the overall impression is of a set of *OOHMAs* that radiates out from the central Manchester to the east, west south west, south east, north west and north east. Possible explanations include the trend seen in other major conurbations for people to gradually move further from the urban centre over time, so that many house moves are radial. Further away from the inner parts of the Manchester conurbation it is seen that the *OOHMAs* are aligned more closely with the all-migrant based boundaries of *Local HMAs*.

Conclusions

A key argument here is that the characteristics of households living in each tenure differ, with associated tenure-specific market processes, mobility and outcomes. In turn this means that there is a strong case for planning to address future housing needs by taking into account the tenural structure of local housing markets. It follows that there needs to be a set of HMAs that is tenure-specific, or at least takes into account the spatial pattern of tenures. These arguments provide the theoretical base and context for the empirical analysis of this paper: an assessment of tenure-specific HMAs. It draws on a national tiered geography of HMAs, with *Framework HMAs* based on commuting patterns and *Local HMAs* derived from migration flows. The analysis extends this framework by deriving *Local HMAs* based on migration into specific tenures. The analysis is undertaken on a national basis but for ease of exposition the detailed results are only discussed for the North West of England.

The results show that *SOCHMAs* are very small, fragmented and embedded within aggregate HMAs (and in any case do not fit easily into the theoretical concept of HMAs based on spatial arbitrage). In many more rural areas there are only modest differences between *OOHMA*s, *PRSHMA*s and aggregate *Local HMA*s. The picture is different in large cities and where there are concentrations of the PRS. The case study of Greater Manchester reveals some subtle differences between *OOHMA*s and aggregate HMAs, possibly because of the localising influence of social housing. *PRSHMA*s show more significant variation from the aggregate HMAs. These spatial differences illustrate the potential for mis-specification of the analysis of housing demand and its interaction with supply.

The derivation of these tenure-specific HMAs demonstrate useful insights into large urban housing systems. To summarise: there are strong arguments for incorporating reference to tenure in a planning process that seeks to respond to market signals, and the empirical evidence presented here reinforces this view in the context of major urban regions and where there are concentrations of the PRS. However, the case for a national system of tenure-specific HMAs based on migration is unproven, especially away from the major cities.

There are, however, broader issues raised about local housing policy and the extent to which housing system analyses should be more tenure-specific. For example, tenure-specificity could be seen as counter to a broader policy agenda favouring mixed communities. However the argument here is that analyses need to be tenure sensitive: this does not mean the policy response should fragment into tenurial silos. The use of tenure-specific HMAs may provide the basis for more meaningful local affordability measures broken down by both tenure and dwelling type. Understanding the geography of tenure-specific HMAs can be a tool to identify socio-tenurial segregation and thus be the first step to reshaping local housing systems in the long term.

These conclusions are based on research of the British housing market context with its tenure structure and associated migration patterns. Taking a broader vista on applicability the link between migration patterns and functional areas has been recognised and applied in many studies around the world, and in particular has been harnessed to develop HMAs in Spain (Royuela and Vargas, 2009). In terms of the tenure specifics of the UK housing market the dominance of home ownership is a commonality with most countries, and social housing is a significant minority tenure in many parts of Europe (Scanlon and Whitehead, 2004). However, the degree of residential mobility does vary across countries with for example one study finding the rate of household mobility is much lower in Germany than in the USA (Clark and Drever, 2000). The ability or power to move also varies with tenure (De Groot et al, 2011) and how well markets function, with markets in developing countries suffering from in particular a range of significant constraints (Dowall and Ellis, 2009). While there are differences between countries it is important to note that the research method in this study based on actual mobility could be utilised wherever small area migration data is available and the issues raised on tenure differences are of almost universal relevance.

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Table 1 Age Groups of Heads of Household by Tenure in 2008 in Great Britain

Age classification	Owned Outright	Owned with Mortgage	Council Housing	Housing Ass'n	Private Rented Furnished	Private Rented Un- furnished	All
	%	%	%	%	%	%	%
Under 25	0	2	4	5	12	19	3
25 – 29	0	7	7	5	15	27	6
30 – 44	5	48	25	27	38	25	29
45 – 59	23	36	23	24	20	17	28
60 – 69	30	5	15	14	5	5	15
70 – 79	27	1	14	13	6	5	12
80 or over	15	0	13	12	4	4	8
All ages	100	100	100	100	100	100	100

Source: General Lifestyle Survey 2008 from Wilcox and Pawson (2010)

Table 2 Socio-Economic Groups of Heads of Household by Tenure in 2007 in Great Britain

Socio-economic classification	Owned Outright	Owned with Mortgage	Council Housing	Housing Ass'n	Private Rented Furnished	Private Rented Un- furnished	All
	%	%	%	%	%	%	%
Large Employers	2	10	1	0	3	3	5
Higher Professionals	5	13	0	1	10	11	8
Lower Managerial and Professionals	10	32	5	6	20	21	19
Intermediate	4	8	4	3	8	6	6
Small employers and own account	6	8	2	4	8	5	6
Lower supervisory	4	10	4	4	7	7	6
Semi-routine	3	7	13	10	12	11	7
Routine	4	6	7	8	8	8	6
Never worked/long term illness	0	0	3	3	0	5	1
Economically inactive	63	6	62	61	22	24	36
Total	100	100	100	100	100	100	100

Source: General Lifestyle Survey 2008 from Wilcox and Pawson (2010)

Table 3 The Tenure Structure of Major UK cities in 2001

	Owns Outright %	Owns With Mortgage %	Council Housing Tenants %	Housing Association Tenants %	Private Tenants %
Bristol	25.9	36.3	17.0	4.1	12.2
Birmingham	26.4	33.2	19.4	8.4	7.8
Liverpool	21.0	31.1	17.4	14.9	12.4
London	22.1	33.5	17.1	9.1	14.3
Manchester	16.8	24.3	28.6	10.8	15.0
Leeds	24.6	37.2	20.9	4.3	8.4
Newcastle	20.7	32.2	28.0	5.5	10.7
Sheffield	24.4	35.2	26.5	3.8	7.6
England	29.2	38.9	13.2	6.1	8.8

Source: 2001 Census

Table 4 Local Self Containment Levels for *Local HMAs* in Britain broken down by Tenure

Local Self Containment	All Tenures	Owner Occupier	Private Renting	Social Renting
<55%	83 (23)	150 (41)	228 (62)	6 (2)
55-65%	209 (57)	166 (45)	121 (13)	29 (8)
65-75%	71 (19)	48 (13)	18 (5)	165 (45)
75-85%	5 (1)	4 (1)	1 (0)	159 (43)
85-95%	0	0	0	9 (2)
Total	372	372	372	372

Numbers in brackets are percentages

Table 5 Local Self Containment Levels for *Framework HMAs* in Britain broken down by Tenure

Local Self Containment	All Tenures	Owner Occupier	Private Renting	Social Renting
<55%	5	15	14	1
55-65%	38	37	51	1
65-75%	35	27	39	16
75-85%	26	24	1	56
85-95%	1	2	0	31
Total	105	105	105	105

Figure 1 Geography of *Local HMAs* embedded in *Framework HMAs*

Figure 2 Geography of *PRSHMAs* embedded in the Manchester *Framework HMAs*

Figure 3 Geography of *OOHMA*s embedded in the Manchester *Framework HMA*s

Key to Figures 2 & 3

Code	Main centre of Local Authority (LA)	M	Manchester
A	Altrincham (Trafford LA)	<i>n</i>	<i>north Manchester</i>
B	Bolton	O	Oldham
C	Macclesfield	R	Rochdale
D	Rawtenstall (Rossendale LA)	S	Salford
K	Stockport	U	Bury
L	Ashton-under-Lyne (Tameside LA)	X	Buxton (High Peak LA)