

Better off households moving to more deprived areas: What is happening? Why?

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Abstract

Economic theories of residential location suggest that households tend to live in neighbourhoods with similar households. Yet in England we have seen increasing evidence of better off households moving to live in more deprived areas, especially since the financial crisis. Here we ask whether these household decisions are more a matter of choice or constraint. Our results suggest that household attributes are consistently important in decision making but household behaviour also relates closely both to the extent of market tension and to individual financial constraints - with households in pressured areas particularly affected by worsening affordability. Supply policy, which has tended to concentrate new building in deprived areas has helped facilitate such moves. A particularly important issue in a rapidly changing housing environment is the extent to which tenure and location appear often to be joint decisions - with many better-off households choosing to buy in more deprived areas. Those who move to or within more deprived areas as owner-occupiers are positive about both their housing and tenure choice but not about their location; private tenants on the other hand appear relatively unhappy with their dwelling, their neighbourhood and their tenure - in both cases reflecting trade-offs and constraints.

199 words

Key words: affordability, deprived area, higher income households, mobility, housing choice, location decisions, mortgage constraints, owner-occupation, renters, tenure change.

1. Introduction

Economic theories of residential location suggest that households choose - or are constrained to choose - neighbourhoods where similar households live. However, there is considerable research showing that income mix in neighbourhoods is more common than might be predicted (Bailey et al. 2006; Cheshire 2007; Silverman et al., 2005; Krupka, 2008; Galster et al., 2008). In the USA this strand of research, mainly investigates the attributes of households moving to less desirable areas that are already experiencing gentrification. It therefore tends to concentrate on investment or speculative motives behind such moves rather than the possibility that these moves might arise from a broader range of factors, notably increasing financial constraints. In England, the emphasis has been far more concentrated on analysing the impact of government policy on increasing income and tenure mix at local level, especially in the context of regeneration and new housing development on brownfield sites (Baruba, 2006; JRF, 2006; Cheshire 2007; Paccaud, 2016). Surprisingly, while there is a large literature on the phenomenon of gentrification this says little about the trade-offs that individual households make when moving to less desirable areas. Understanding these trade-offs in the English context is the core topic of this paper.

Evidence on mobility in England suggests that there have been significant changes in household behaviour since the turn of the century. In particular, there appears to have been both increased mobility since the global financial crisis and proportionately more moves to less desirable areas, not just by low income groups but also among higher income households. One reason may relate to the large scale shifts towards private renting that have occurred since the turn of the century (Rugg and Rhodes, 2018) - raising issues around the inter-relationship between affordability, location and tenure.

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The aims of this article are, first, to understand the extent to which higher income households are increasingly moving to less desirable areas in England and to clarify how these patterns have changed since the global financial crisis: secondly, to understand how that behaviour relates to affordability, tenure and policy change; thirdly, to show how decisions about location and tenure among higher income households appear to interact with one another, leading to both higher proportions of private renting and more moves to and within more deprived areas; and, finally, to assess the relative importance of incentives and constraints in determining individual households' location and related tenure decisions and the implications of these findings for future mobility patterns.

Our findings show that among higher income households, moves to and within more deprived areas are concentrated among those in the second income quintile, suggesting that affordability is of particular importance; that among those moving to owner-occupation in more deprived areas, achieving that tenure appears to be the highest priority; that these households tend to be younger and particularly from ethnic minority backgrounds; that they are generally comfortable with their housing choices. Among those moving to private renting in more deprived areas (the majority of movers) households appear to concentrate on achieving the dwelling attributes they want, while remaining relatively unsatisfied with both their housing and their location. These findings suggest that trade-offs are being made and that they vary between different groups of households, defined in the main by their tenure choice. The regional patterns of behaviour reflect variations in affordability, with the pressures more evenly spread across the country before the financial crisis but concentrated particularly in London thereafter. The analysis also reflects the impact of policy which both tends to locate new mixed tenure supply in more deprived areas and has also introduced additional mortgage constraints after the financial crisis making it harder for households to enter owner-occupation.

1 The paper starts from well-established theories of household location and tenure
2 decisions, placing these in the context of the existing literature. It then discusses what has
3 been happening in the market and policy environment since the turn of the century to help
4 identify the external factors that might have modified individual decisions. Thereafter we
5 evidence how mobility patterns to and within less desirable areas have changed after the
6 financial crisis and then set out a methodological framework for investigating the empirical
7 evidence of who move to less desirable areas and the choices they make about location and
8 tenure within this environment. The modelling results then help to clarify the types of moves
9 made by higher income households as well as the trade-offs they appear to be making with
10 respect to housing, location and tenure. Further analysis clarifies the particular constraints
11 movers face in London. Our conclusions bring out the implications of these findings for
12 future patterns of tenure, location and affordability.
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31 **2. Housing mobility and location decisions**

32 **2.1 Drivers of location decisions**

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41 This study is grounded in individual choice theory (Quigley, 1985). Every household
42 makes decisions about their housing at least a few times in their lifetime: whether to buy a
43 home or to rent; whether to buy a different type or size of dwelling; whether to move to a
44 particular area or to stay in their current dwelling. As the housing stock is heterogeneous,
45 individual household decisions involve a large set of factors and discrete alternatives. These
46 decisions are influenced by household characteristics and particularly the stage in the
47 household's lifecycle, together with their economic and financial circumstances.
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Given the prices and rents at which dwellings are offered in different housing markets, households ultimately choose one dwelling, a process which involves trade-offs between different attributes, including both tenure and location.

Tight housing markets and high prices might inhibit mobility into those areas while ample housing alternatives at lower prices could be expected to encourage such mobility. Households' mobility and location decisions are integrated in a utility function by which they maximise their utility through their choice of dwelling, tenure, neighbourhood and other public service attributes, given house prices or rents (Vigdor 2010).

We assume that households maximize the utility function given by

$$U_{mtl} = \tilde{V}_m + \tilde{V}_t + \tilde{V}_l + \tilde{\epsilon}_{mtl},$$

$$\mathbf{V}(m, t, l) \in C_n$$

$$(1)$$

Where

U_{mtl} is the total utility of the mobility choice m , tenure choice t , and residential location l

\tilde{V}_m is the systematic component of the utility of mobility alternative m

\tilde{V}_t is the systematic component of the utility of tenure alternative t

\tilde{V}_l is the systematic component of the utility of residential location l

$\tilde{\epsilon}_{mtl}$ is the random component of the utility of alternative (m,t,l)

C_n is the full choice set available to the n th household.

Households moving to less desirable and therefore lower priced areas are perhaps making a choice to buy more of other housing attributes at the expense of location; or they may simply want to spend less on housing and more on the other necessities of life. These choices are more limited for those facing tight financial constraints such as many first time buyers and young/newly formed households (Ellen et al., 2013). On the other hand, there may be more positive reasons to move to these areas, not just in terms of housing attributes but

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2 also because of the dynamics of house price and gentrification variables that are generally not
3 included in comparative static analyses (Krupka, 2008; Galster et al., 2008).

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5 Location itself is often seen as a core motive for neighborhood choice based on the
6 local environment but also the price and quality of transport to jobs, services and amenities.
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8 The majority of studies concentrate on understanding the areas and how they are changing,
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10 by examining different measures of income mix, and the exit and entry patterns of
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12 neighbourhoods (Hardman and Ioannides, 2004; Galster et al., 2008; Talen, 2006),
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14 particularly in the context of economic change and gentrification (McKinnish et al., 2010;
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16 Freeman, 2005). There is considerable evidence that demand from better off households is
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18 concentrated in neighbourhoods which have locational advantages and experience
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20 improvements in transport, and so are more likely to be gentrified, especially in large cities
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22 such as London and Paris (Butler & Robson, 2001; London & Palen, 1984).
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30 Notably the literature includes relatively little that relates specifically to why higher
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32 income households might move to poorer areas except for these 'speculative' gentrification
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34 reasons. An exception is the article by Ellen et al (2013) which estimates a residential choice
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36 model to examine the housing and neighbourhood preferences of higher income households.
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38 This concludes that decisions are shaped by constraints as much as by preferences, in that
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40 those who face greater constraints, whether they be financial or discriminatory, as well as
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42 those who place less value on neighbourhood amenities and more on housing cost, are more
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44 likely to move to low income/more deprived neighbourhoods.
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49 There is some evidence in England that the speed of gentrification is increased by the
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51 arrival of middle class renters (Van Criekingen; 2009, Paccoud 2017 and Cocola-Gant
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53 (2019). This builds on earlier evidence showing a relationship between gentrification and
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55 ethnicity by which non-white middle class renters tend to move to gentrifying areas (Lees,
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57 2000; Moore, 2009). A recent study (Paccoud, Niesseron and Mace 2020) further suggests
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1 that significant proportions of non-white middle class individuals move to areas that are less
2 attractive to white middle class households.
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4 Further studies in England examine in some detail the types of households making
5 location and tenure choices into areas where there has been mixed provision of new social,
6 intermediate and market housing (Crook et al., 2011; 2016). These show that those making
7 market decisions are prepared to move to less desirable areas when suitable housing, e.g.
8 shared ownership, is provided, resulting in a considerable mix of incomes both in 'new
9 housing areas' (ones built mainly on brownfield sites, previously used for industrial and
10 commercial activity) and in regeneration areas with large proportions of social rented housing.
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22 **2.2 Shifting trends in the market and policy in England**

23 Affordability

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25 Since the turn of the century we have experienced a period of rapidly worsening affordability
26 which could be expected to impact on location choices, even among higher income
27 households. Figure 1 shows affordability, measured in terms of price/income ratios,
28 worsening rapidly in the early part of the century across the country (arguably for national
29 policy reasons, as mortgage conditions became more flexible, Scanlon and Adamcxuk, 2015).
30 But after the financial crisis further declines in affordability became heavily concentrated in
31 London, as a result of continuing increases in housing pressure together with poor income
32 growth. This supports the view that we might expect to see proportionately more movement
33 towards lower valued areas in London as compared to other regions, after the financial crisis.
34 Private renting (usually the only option for those excluded from owner-occupation) is also
35 far more prevalent in the capital while less desirable areas in London are more likely than in
36 other regions to be accessible to jobs and services – so the overall location package may be
37 more desirable - further supports that view.
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Figure 1: at back

Mortgage market constraints

The global financial crisis brought with it a credit crunch followed by much tighter mortgage regulation, especially for first time buyers. So from 2007/8 potential home owners faced not just worsening affordability, but higher loan to value and loan to income ratios as well as a more difficult economic environment with less job and income security (Whitehead & Williams, 2017). As a result, even higher income groups, and especially younger households needing larger deposits, faced increasingly difficult tenure choices, notably in highly priced, pressured markets (Livingston et al., 2013; Alakeson & Cory, 2013).

For some households one way of overcoming these mortgage constraints could be to move to lower priced locations where they could afford to buy. Another option is to find a rented property that is acceptable while they save more towards a larger deposit. This suggests that households when they move are always making a joint decision about location and tenure, but, equally, homeowners and tenants are looking for somewhat different attributes and are differentially affected by the type of area to which they are moving. Homeowners also face much higher transaction costs than tenants and have more concerns about the future asset price of their chosen home. Both of these factors mean that they may be more risk averse, particularly with respect to location. As a result, it is argued, homeowners tend to move less than tenants into areas with higher levels of neighbourhood externality risks such as crime, litter, noise etc. attributes which themselves tend to be related to area deprivation (Hilber, 2005; Ellen & ORegan, 2011).

Tenure change

Market pressures since the turn of the century have brought fundamental changes in the English housing system. One of these has been the near doubling in the proportion of

1 homes in the private rented sector, from 10% to over 19%. The size of the private rented
2 sector in England, which has grown mainly at the expense of owner-occupation with many
3 units being bought to let out (Paccaud, 2016), has modified the options and the relative costs
4 and constraints faced by moving households in different areas (Scanlon et al., 2016). In
5 London the proportion is even greater with one in four dwelling now privately rented
6 (Udagawa et al, 2018). This shift in tenure is associated with changing incentives to invest in
7 housing assets, notably as a result of quantitative easing; easier access to finance for
8 landlords; and worsening affordability in the owner-occupied sector (with owner-occupation
9 rates falling from 2003).

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22 The impact on individual housing choice is threefold: as turnover in the private rented
23 sector is more rapid than in either of the other two tenures, the supply of vacancies is a much
24 higher proportion of available units than of the housing stock; rental is anyway cheaper and
25 easier to access, so if there are affordability or job security issues, private renting becomes a
26 more desirable option; and private renting is likely to be more concentrated in the types of
27 housing found in less desirable areas.

28 29 30 31 32 33 34 35 36 37 38 39 *New build policies*

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41 On the supply side much of government intervention has been around where new
42 homes should be located. In particular, planning policy has concentrated on ‘brownfield
43 first’ which has resulted in high proportions of both market and affordable housing being
44 built on urban sites often in MDAs, particularly in London (Brownill et al., 2015). This
45 concentration is reinforced by planning obligations which aim to secure significant
46 proportions of affordable housing (both for rent and purchase) as part of larger new private
47 developments. More generally, housing and regeneration policy has increasingly focused on
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creating sustainable communities through ensuring tenure mix, especially in deprived social housing areas (Monk et al., 2006; Crook et al., 2016).

Research (Crook et al., 2011; 2016) shows that across all tenures new housing is more than twice as likely to be built in the most multiply deprived as compared to other areas. More than 1 in 3 social housing units built after 1998 are located in ‘new’ residential with about 80% of these dwellings on brownfield sites. Equally, a majority will be on mixed tenure sites with high proportions of owner-occupation and shared ownership in the same developments as social rented housing. This owner-occupied housing is likely to be of particular interest to mid to higher income households who face mortgage constraints. New build, while a small part of overall supply, is a far higher proportion of transactions and so disproportionately affects the location choices available to movers.

This discussion indicates five factors that are of particular importance to households making location decisions to move to more deprived areas. These are: where these deprived areas are located with respect to other aspects of location such as accessibility; worsening affordability (as a factor constraining choice); limits on the availability of mortgage finance (which affects the capacity to buy one’s own home); changing tenure patterns (as renting is more directly associated with mobility as compared to other tenures); and the location of new supply (as this impacts on opportunities to move).

3. What has been happening in England?

3.1 Shifting trends in mobility and location choice

Mobility¹ is generally perceived to be positively related to economic growth (Hughes & McCormick, 1987). However, mobility declined after 2000, even though the economy continued to grow. After the financial crisis which hit the economy badly, mobility rates,

1 against expectations, again increased, showing a larger jump to an average of 14.9% between
2 2009 and 2013 as compared to 9.7% between 2001 and 2005. Our interest in this article is on
3
4 one particular aspect of these changing mobility patterns: what is happening with respect to
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6 higher income households moving to less desirable areas.
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9 To evidence these trends in mobility we first clarify our definitions of more or less
10 desirable areas and high or low income household. We define less desirable areas using the
11 Index of Multiple Deprivation (IMD)² provided by the Ministry of Housing, Communities
12 and Local Government (MHCLG). It is noted that IMD is updated over time which means
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14 geographic locations defined as less desirable areas include a composition effect. To take this
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16 into account we use 2004 IMD for the early period (2001-5) and 2010 IMD for the later
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18 period (2009-13).
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26 More Deprived Areas (MDA) are defined as the top (worst) 30% of areas based on
27 this index and MDA movers as the households who moved into or within³ these areas; other
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29 movers are defined as those who make a move to or within areas in the better 70% of the
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31 IMD index.
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36 Where are MDAs located? Whilst MDAs exist across the country although almost
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38 half of the physical area of MDAs is in the North (over 1 million hectares) as seen in Table 1.
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40 However, in proportionate terms London has by far the highest concentration, with almost
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42 40% of the area of London being defined as in the worst 30% multiply deprived areas. If,
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44 instead, the relevant metric is population, the North has the highest proportions, with almost
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46 65 % of the region's population living in the worst 30% deprived area as compared to 57% in
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48 London. Other regions have far fewer concentrations of areas of deprivation in both physical
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50 area and population terms. These proportions give some indication of the relative potential to
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52 move to more deprived areas across regions.
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Table 1: at back

Data from the English Housing Survey (EHS)⁴ provide evidence on the characteristics of MDAs and their housing that might further impact on housing choice. Compared to other areas, the dominant dwelling types in MDAs are old-style terraced houses, low and high rise flats and mixed estates of houses and flats. The majority of the dwellings, except for high rise flats, were built in the pre-war period but post-war social housing estates are also prevalent in these areas. These types of dwellings have been seen as particularly suited to being transferred into private renting but also provide relatively more space than modern homes. In an environment where prices are rising more rapidly than incomes, these dwelling attributes, including tenure, could be expected to contribute to why higher income households might increasingly choose to live in more deprived areas.

We also categorise households into two income groups, for which we use ‘household income before paying housing costs’⁵ from the EHS. The higher income group includes those whose income falls in the 4th and 5th quintiles, whilst the lower income group is those in the 1st, 2nd and 3rd income quintiles.

Table 2: at back

Using this definition, Table 2 clarifies mobility in and into the most deprived and into non-deprived areas for two different income groups⁶. It shows the changing patterns between two time periods: first considerable increases in movement after the financial crisis as compared to the early part of the century; second, disproportionate increases in the proportion moving to and within the most deprived areas from 34% to 44% of all moves.

While the numbers and proportions of moves made by higher income households across all types of area actually fell after the crisis, those who moved to deprived areas

1 increased (rising from 21% to 34% of higher income moves). While the numbers of lower
2 income households increased more than among the higher income group, the proportionate
3 shift towards more deprived areas rose only from 47% to 51%.

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7 Our starting hypothesis is that better off households would, if able to do so, tend to
8 choose more desirable neighbourhoods, while poorer households cannot outbid higher
9 income households for better environments and public services so end up in more deprived
10 areas. Table 2 shows that increased number and proportion of higher income households
11 break this pattern moving to less desirable areas. We thus have a particular interest in this
12 group: who are they; what are their attributes; what makes these households move to these
13 areas; and particularly whether these moves link tenure and location.
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26 **4. The analytic model: tenure and location choices**

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31 The location decision can be examined by a formal housing choice model based on a
32 utility function (Quigley 1985; Vigdor 2010) by which households maximise their utility
33 through their choice of housing, neighbourhood and public service attributes, given house
34 price or rent. As discussed earlier, we construct a joint decision model based on a utility
35 function by which individuals maximise household utility through their choice of location
36 and tenure.
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48 **4.1 The Model: individual housing decisions**

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53 For our empirical analysis, we set out two tier Multinomial Logit models, first to
54 examine the decision to move, followed by the selection of housing tenure and location.
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56 These choices could be made in sequence or jointly but are clearly interdependent. We
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1 assume that the mobility and location choices are separate but linked choices. Therefore, we
2 model marginal changes in residential location as a function of changes first in household
3 characteristics and then in locational and housing characteristics.
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9 Figure 2: at back
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14 As seen in Figure 2, we design a Multinomial Logit model to explain four mutually
15 exclusive choices with non-mover households as the base category: (1) moving to MDAs as
16 an owner occupier, (2) moving to MDAs as a private renter, (3) moving to non-MDAs as an
17 owner occupier, and (4) moving to non-MDAs as a private renter. Each category reflects the
18 joint decision across location and tenure.
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26 Data and variables 27 28

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33 As housing stock is heterogeneous, individual household decisions involve a large
34 number of factors: foremost are availability and affordability of the potential dwellings the
35 household can choose in that location; neighbourhood characteristics; accessibility to jobs
36 and other household activities; and how well public services are provided. In the decision
37 making process the household takes account of both incentives and constraints in relation to
38 each factor. Policy-and market-related variables such as the location of new build and the
39 supply of housing available cannot be directly included in the analysis, but are reflected in
40 housing cost.
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53 For the analysis we use data from the EHS for the period 2009 to 2013: thus five
54 year's data are merged and pooled. As the dependent variable, mover households are
55 categorised into four groups: MDA-Owner, MDA-Renter, non-MDA-Owner, and non-MDA-
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1 renter. It is important to note that EHS data do not provide previous location, so we cannot
2 distinguish between those who moved into an MDA from another area and those who moved
3 within the MDA.
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7 Among the various decision-making variables, we select two groups available from
8 EHS data: first, household characteristic variables such as age of household head, ethnicity
9 (BAEM, white), the number of household members, household income, and region
10 (reflecting different housing markets); second, as post-move housing and area characteristics
11 we use dwelling type (i.e. detached, semi-detached, terraced and purposed built flat), type of
12 location (i.e. urban, suburban, rural), satisfaction with their choice (i.e. dwelling, area and
13 current tenure) and housing cost variables. All independent variables are in categorical forms
14 except for household income and housing cost. The two scale variables are adjusted by the
15 GDP deflator (2010 base). Household incomes are standardized with respect to household
16 size and composition. Housing costs for owners are defined as mortgage payments; for renter
17 by rent including other expenses. The calculated housing costs are standardized with respect
18 to size of the dwelling (cost per room). It is important to remember that each independent
19 variable reflects post-move characteristics.
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41 **4.2 Who moves in less desirable areas?**

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46 As stated above, we construct two Multinomial Logit models: first, to investigate
47 what types of households move into the two tenures (owner and renter) in the two types of
48 location (MDA and non MDA); second, to understand the outcome of such moving decisions
49 in terms of housing and locational attributes.
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55 The models were estimated using the SPSS statistical package; using the Maximum
56 Likelihood Method to estimate the models. The estimates for the Multinomial Logit model
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1 for mover households are presented below in Table 3. The table summarises the partial logit
2 regression coefficients (Beta coefficients), Wald score (a maximum-likelihood analogue of
3 the OLS t-statistic) as indicators of statistical significance and odds ratios, Exp (B) for each
4 variable are presented for each choice of MDA-Owner, MDA-Renter, non-MDA-Owner, and
5 non-MDA-Renter when the reference category is non-mover.
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11 The Model Fitting Information table contains a Likelihood Ratio chi-square test,
12 comparing the full model (i.e., containing all the predict variables) against a null (or intercept
13 only model). Statistical significance indicates that the full model represents a significant
14 improvement in fit over the null model. The Likelihood Ratio chi-square test of the overall
15 contribution of each independent variable to the model and the Pseudo-R-square values both
16 suggest that the model fits the data well⁷.
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29 Table 3: at back
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31 The table compares each household's choice of location and tenure against the
32 reference group (non-mover). Specifically, the regression coefficients indicate that each
33 predictor significantly discriminates between MDA-Owner, (coded 1 in this portion of the
34 model) and non mover (coded 0); between MDA-Renter (coded 1 in this portion of the
35 model) and non mover (coded 0); between non-MDA-Owner (coded 1 in this portion of the
36 model) and non mover (coded 0); and between non-MDA-renter (coded 1 in this portion of
37 the model) and non mover (coded 0).
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48 The predictor variables also have categorical values which indicate the comparison
49 with the base units – in other words the odds ratios - show relative probability, compared to
50 the base element (B=0). For example, BAEM ethnicity is estimated in relation to white
51 ethnicity. Similarly, the estimates of other predictors including age, number of household
52 member, region and income variables are compared to the base elements (base unit of age
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1 group= 60+ years old; number of household= 4+; regional group= North; and income=
2 highest 75+%).
3

4 The predictors marked in bold in the table are statistically significant. Ethnicity
5 however is only significant for MDA movers (b=0.42, s.e.=.11, p<.000 for owner; b=0.52,
6 s.e.=.07, p<.000 for renter). Thus, in the first set (MDA-owner moves) the odds ratio of
7 BAEM group is higher than one (1.5) and statistically significant, which means that,
8 compared to those of white ethnicity, BAEM movers are 1.5 time more likely to move to or
9 within MDA as owners; equally BAEM movers are 1.7 time more likely to move to a MDA
10 as a renter. Note these probabilities are estimated against the reference group (non-mover).
11 For those who have chosen to move to/in more desirable area, ethnicity is not statistically
12 significant. These findings are in line with the evidence that significant proportions of non-
13 white middle class individuals have settled in areas that are less attractive to the white middle
14 classes (Paccoud et al 2020).
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31 The age of the household head and the number of household are both statistically
32 significant across all choices. They indicate that younger households have consistently moved
33 to both MDAs and non-MDAs as renters rather than as owners (the odds ratios for owners are
34 smaller than those of renters). They also show that one or two person households are more
35 likely to move to/in both locations than large household (4+) either as owners or renters.
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43 .Using the Northern regions as the base, movers to/in MDAs by both owner and renter
44 are more likely to be in London (the odds ratios being 1.2 and 1.7 respectively) whilst less
45 likely to be in either the South or East regions (the odds ratios being 0.5 and 0.6 respectively).
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51 It is worth noting that MDA owner movers are more likely be in 2nd highest quartile
52 income group (the odds ratios being 1.4) compared to the highest group, whilst non-MDA
53 owner movers appear to be more in the highest income group. Movers as renter to both
54 MDAs and non-MDAs are consistently more likely to be in lower income groups. However,
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1 it is higher income movers that move to rented housing in MDAs that we are most interested
2 in here and the evidence is consistent with earlier findings on rental gentrification by Paccoud
3 (2017) and Cocola-Gant (2019).
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6
7 Those who move to MDAs are significantly concentrated among younger age groups
8 and are one or two person households. Thus they have relatively few family responsibilities
9 and usually limited savings. They are also more likely to be moving to or in London. These
10 choices tend to reflect trends in affordability, which worsened from the mid-2000s,
11 particularly in London. They suggest that financial constraints have been a major factor in
12 moving to MDAs, notably among those looking for owner-occupation. The findings also
13 support the hypothesis that tenants may be choosing less desirable areas because of financial
14 or other constraints; that some that do so are being excluded from owner-occupation by these
15 constraints; but also that their decisions may be based on obtaining more housing than they
16 could afford elsewhere.
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34 **4.2.2 What types of housing and location do they move to? and are they satisfied?**

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39 Table 4 shows housing and area characteristics, satisfaction and housing cost with
40 respect to each type of mover household. A Likelihood Ratio chi-square test of the overall
41 contribution of each independent variable to the model and the Pseudo-R-square values both
42 suggest that the model fits the data well.
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52 Table 4: at back

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54 As in Table 3, the results show outcome estimates with respect to each household's choice of
55 location (MDAs vs non-MDAs) and tenure (Owner vs Renter) against the reference group
56 (non-movers) with our particular interest in the moving choices to/in MDAs. Except for the
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1 housing cost variable, all predictors are in dummy form, which means they are categorized
2 one (1) with base value (0). The predictors shown in bold are statistically significant.
3

4 First, housing costs appear to be positive (+beta) but the coefficient is very small for
5 all groups of movers and odds ratios are also only just over one (1.005 -1.006). This indicates
6 that every group of movers is paying slightly higher housing costs compared to non-movers
7 in the area they are moving to.
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10 The households who move to/in MDAs, as both owner and renter, are more likely to
11 buy a home in an urban location (all odds ratios being more than 1) and to purchase flats or
12 terraced houses, compared to the (non-mover) reference group.
13

14 Satisfaction differs significantly between the different groups: owner movers are more
15 satisfied with their home and tenure but not with their location as compared to non –movers.
16 This is particularly true among MDA owner movers. MDA-renter movers are more likely to
17 be unhappy with location, home and particularly with current tenure. These findings suggest
18 that both groups are making financially constrained decisions.
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22 In Non-MDA areas owner movers are buying all types of dwelling and appear more
23 satisfied with their dwelling, their area and their tenure than non-mover owners - so moves
24 are worthwhile. Non-MDAs renter movers are also living in all types of locations-urban,
25 suburban and rural - but are more likely to be renting flats and terraced houses, as compared
26 to non-movers. This group of households are generally satisfied with both home and area but
27 are not happy about their current tenure. Thus across both deprived and non-deprived areas
28 those who move into or within private renting remain dissatisfied by their tenure choice.
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34 4.2.3 Higher income households moving to MDAs 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65

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As noted in table 2, of particular interest is the increasing number and proportion of higher income households moving into and within MDAs. Table 5 shows that in the period 2001 – 2005, before the financial crisis, but when affordability across the country was worsening, about one in five higher income earners moved to MDAs. The proportion, nearly half, was highest in the North, perhaps reflecting the high proportion of dwellings in these areas as much as worsening affordability. In London the proportion was over 30%, while in the Midlands it was less than 20% and in the South under 7%. After the financial crisis, the proportion across the country rose to one in three high income movers, with the increase heavily concentrated in London (at over 50%, an 86% increase) and in the South where the proportion rose to over 25% - an increase of over 300%). In the Midlands the proportion grew, but only by 44%, and in the North there was actually a small decline.

Table 5: at back

This pattern is consistent with trends in affordability, which worsened in all regions in the early part of the century, while after the financial crisis it was only in the South and in London that affordability continued to worsen dramatically. This suggests that financial constraints have been a major factor in higher income households moving to MDAs.

Table 5 also breaks down the pattern of movement by tenure. Compared to the early part of the century, the total number of higher income households moving into MDAs across England as a whole after the financial crisis increased considerably in both numbers and proportion terms, but moves as owner-occupiers actually declined (from 66.4 % to 45.6%). In London there was a slightly larger number of owner-occupier moves in 2009 - 13 compared to the early part of the century, but this number accounted for just one third of all high income MDA moves as compared to 43% in the earlier period. In the North, although high income MDA moves slightly decreased, the shift between owning and renting, involving

1 decreases to MDA moves among owner-occupiers (from 74.5% to 48.7%) and increases
2 among tenants (from 17.2% to 36.3%), is consistent with national patterns. In the other
3
4 regions although there were increases in the numbers of homeowner movers, the proportions
5
6 also decreased (from 65% to 52.7% in South and East; from 71.7% to 50% in Midlands).
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10 These figures suggest complex interactions between tenure and location choice which
11 over the period have been significantly modified by the relatively rapid increases in house
12 prices in London, the South and East; by limited income growth; by the greater availability of
13 private rental accommodation; and by the impact of credit constraints. These pressures appear
14 both to be excluding large numbers of potential owners from purchasing a home and to be
15 incentivising households – whether owners or renters - to move to MDAs. But they are also
16 mean that MDAs have become more diverse both in terms of tenure and income after the
17 financial crisis.
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21 In understanding the scale of the changes in behaviour, it is useful to compare the
22 incomes of movers into MDAs relative to those already living in these areas over the period
23 of analysis (Figure 3). The change is quite dramatic between the early years of the century
24 and after the financial crisis.
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41 Figure 3: at back
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44 In the period from 2001 to 2005 high income movers into MDAs had incomes around
45 70% (£39,253) above the average for the MDA areas (£23,020) - and these incomes were
46 only 12% below those for all higher income movers (£44,479). After the financial crisis the
47 average income of high income movers to MDAs (£50,612) had risen to almost double the
48 average income in these areas (£25,368). The income levels of recent MDA movers have had
49 to be both absolutely and relatively much higher than those of the earlier 2000s. Even so,
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1 comparing movers with the overall average income of higher income households suggests
2 that those who moved were mainly in the lower segment of the top 40% of income group.
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7 Figure 4: at back
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9 London presents the most extreme picture. In the period from 2001 to 2005, high
10 income movers into MDAs in London had incomes nearly twice as high as the average for
11 the MDA areas (£60,020 versus £31,253). However, their incomes were very similar to those
12 for all higher income movers (£61,352). After the crisis, their incomes (high income movers
13 into MDAs) were significantly below the average income of their own group. This suggests
14 that those moving to MDAs are heavily concentrated in the lower half of the top 40% of
15 income group (two-thirds versus one third) and that their choices reflect increasing
16 affordability problems. It also reflects changes in household and tenure attributes, notably
17 the increasing proportions of private tenants, with 44% of higher income household moving
18 as tenants to these areas.
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36 **5. Discussion and conclusions**

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41 The focus of this paper is on the decisions made by households, particularly higher
42 income households, who move to more deprived areas. The basic hypothesis is that higher
43 income households – both owners and tenant movers - may move to less desirable areas
44 partly through choice (eg because of housing and transport attributes), but also increasingly
45 because of financial and other constraints.
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53 What we observe as a starting point is an increasing variety of households moving
54 into more deprived areas since the financial crisis, including larger proportions of higher
55 income households. Some of this group are moving as first time buyers, making a choice to
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move to lower priced areas in order to become owner-occupiers. Others appear simply to be looking for greater affordability.

What is certainly true is that there have been many more such moves since the financial crisis, with higher proportions of households in all income groups, but particularly in the top two income quintiles, moving into areas which are in the top 30% (the worst end) on the deprivation scale than in the earlier part of the century. Even before the financial crisis, one in five higher income households were moving into MDAs, but post the crisis that proportion increased to one in three across the country and to over 50% in London.

Owner-movers to/in MDAs

Owner movers to MDAs appear to be happy with their home and their tenure but not with their location. This suggests that moving to an MDA was seen as second best, chosen because owner-occupation was the priority when making the moving decision.

The higher income homeowners moving to MDAs are generally younger, one or two person households. They are also disproportionately from ethnic minority backgrounds. They are generally in the second highest income quintile, further suggesting that the decision is a matter of constraint rather than choice. What they do gain is affordability – and, given the increasing mix of households moving to these areas, also the potential for capital gains as the area becomes more gentrified.

Renter movers to/in MDAs

Higher income households moving to or within an MDA as tenants are relatively young but they are more likely to have children. They are also more likely to be from an ethnic minority background. However, they tend to be relatively unsatisfied not only with their area but also with their new home and their tenure –suggesting that affordability is a major constraint.

1 The evidence presented in this study suggests that it is affordability constraints that
2 are central to the decisions to move to MDAs, even among higher income households. It also
3 suggests that achieving owner-occupation is often a driver and that private renting even when
4 the property is relatively affordable is seen by many to be a second best option. This pattern
5 is particularly true in regions where affordability continued to worsen rapidly after the
6 financial crisis (notably London), suggesting that it is financial constraints that have been the
7 main cause of the disproportionate numbers making the decision to move to more deprived
8 areas.
9

10 But it is also important to note that the groups moving to these areas tend to be
11 younger and often smaller households – suggesting that their decisions may change were
12 their economic circumstance to improve unless they come to like the area better. They also
13 tend to be disproportionately from ethnic minority backgrounds suggesting that these groups
14 continue to prioritise urban locations with existing mixed communities.
15

16 On the other hand, the mix of households in these areas is changing – on average
17 becoming better off and more diverse. The housing available is also changing with mixed
18 tenure new build concentrated in these areas. Overall, the evidence points strongly to
19 increasing constraints on both tenure and location choice, particularly in areas where
20 affordability has continued to worsen rapidly. But it also suggests that the housing system is
21 dynamic and there is a potential to build longer lasting communities in areas of past
22 deprivation as long as the areas can continue to improve.
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markets and access to owner-occupation among younger households Working Paper 196.

Endnotes

¹ We define mobility rates as the proportion of households who moved within the previous 12 months.

² The IMD brings together 37 different indicators which cover seven dimensions of deprivation: income, employment, health and disability, education, skills and training, barriers to housing and services, living environment and crime. These are weighted and combined to create an overall IMD at small area level across England. Areas are ranked from most deprived to least deprived on each of these seven different dimensions of deprivation and a composite measure of multiple deprivation is then derived. Before crisis data (2001-2005) are based on 2004 IMD; post crisis data (2009-2013) on 2010 IMD.

³ Hereafter we usually use 'to' rather than 'into and within'. EHS data do not provide previous location, so we cannot distinguish between those moving into an MDA and those who moved within the MDA.

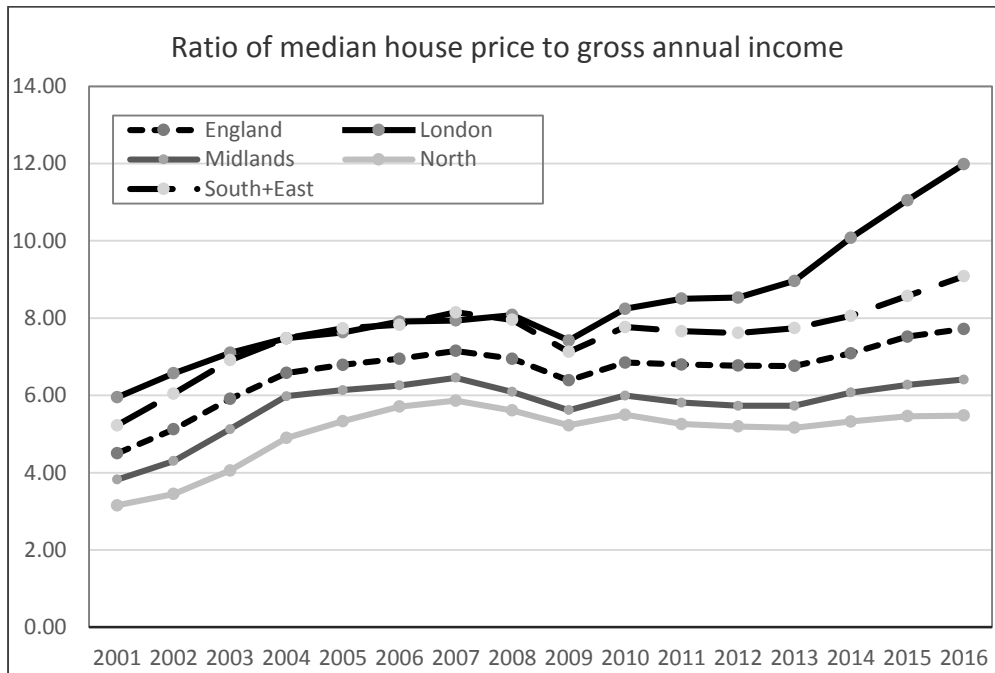
⁴ The EHS provides a continuous national survey with a sample of around 15,000 households per year. It collects information about households' economic and demographic characteristics, housing circumstances through face-to-face interviews. This survey also provides information on physical characteristics and the condition of dwellings by qualified surveyors' inspection with a subsample of around 6,200 properties per year.

⁵ Before Housing Cost (BHC) disposable income is adjusted for household size and composition, as a proxy for the material living standards of individuals and for the level of consumption of goods and services that people could attain given the disposable income of the household.

⁶ The numbers in the total EHS sample used for analysis are 72,433, including 60,079 non-movers; 3,560 MDA movers; and 8,794 non-MDA movers.

1 ⁷ The Pseudo-R-square values are treated as rough analogues to the R-square value in OLS
2 regression. There is however no strong guidance in the literature on how these should be
3 interpreted (Osborne, 2015; Pituch & Stevens, 2016).
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Figure 1: Ratio of median house price to median annual gross earning by region



Source: Office for National Statistics, Land Registry

Figure 2: Two Tier Multinomial Logit model

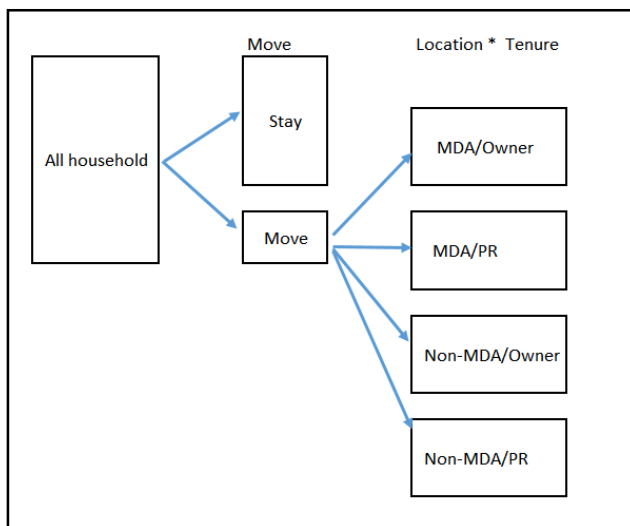


Figure 3: Income comparison between high income movers vs average income by area

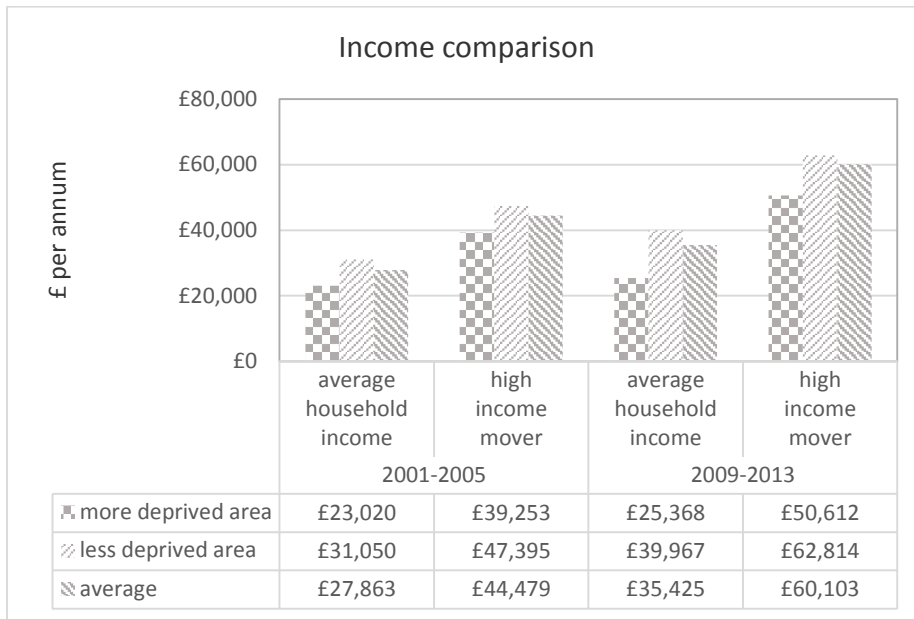


Figure 4: Income comparison between high income movers vs average income by area (London)

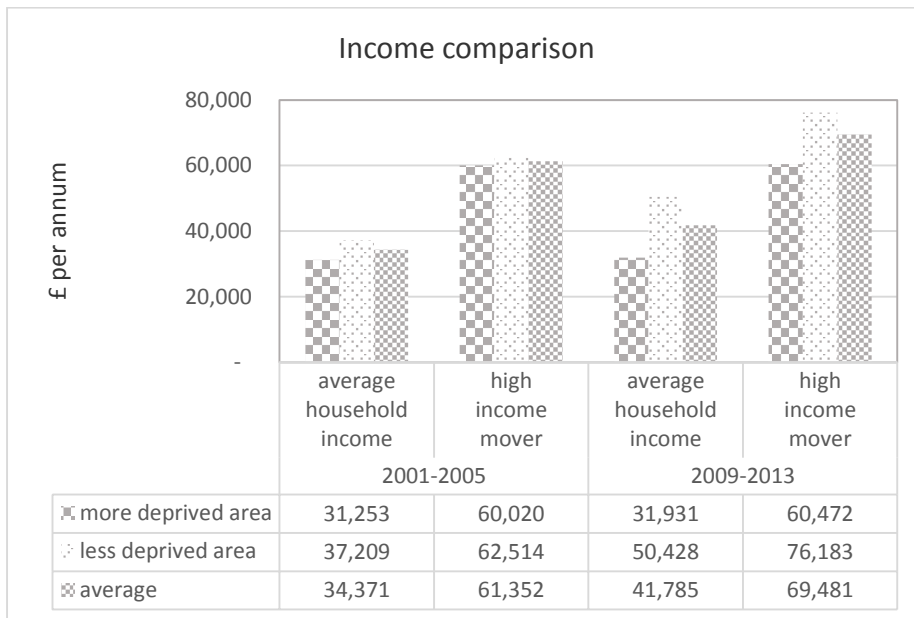


Table 1: Size and population in MDAs by region

Region	Hectare		%	Population in 2011		%
	Top 30% MDA area	total area	Pro of top 30% MDA	top 30% MDA	total pop.	Pro of pop in top 30% MDA
London	62,783	157,215	39.9%	4,673,686	8,173,941	57.2%
The other	690,520	6,201,539	11.1%	3,983,775	19,770,650	20.1%
Midlands	415,504	2,860,473	14.5%	3,973,702	10,135,069	39.2%
North	1,034,630	3,808,615	27.2%	9,469,181	14,932,796	63.4%
England	2,203,437	13,027,843	16.9%	22,100,344	53,012,456	41.7%

Sources: MHCLG and ONS

Table 2. Mobility trend by income group and area

	2001-5 (mobility rate =9.7%)			2009-13 (mobility rate= 14.9%)		
	Non-deprived area	top 30% deprived area	Total	Non-deprived area	top 30% deprived area	Total
high income group	5688	1550	7238	4022	2032	6054
% in area	78.6%	21.4%	100.0%	66.4%	33.6%	100.0%
% in income group	62.9%	34.0%	53.2%	44.0%	27.8%	36.8%
% in total	41.8%	11.4%	53.2%	24.45%	12.35%	36.80%
low income group	3352	3008	6360	5124	5272	10396
% in area	52.7%	47.3%	100.0%	49.3%	50.7%	100.0%
% in income group	37.1%	66.0%	46.8%	56.0%	72.2%	63.2%
% in total	24.7%	22.1%	53.2%	31.15%	32.05%	53.23%
Total mover	9040	4558	13598	9146	7304	16450
% in area	66.5%	33.5%	100.0%	55.6%	44.4%	100.0%
% in income group	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% in total	66.5%	33.5%	100.0%	55.6%	44.4%	100.0%

Table 3. Household characteristics of movers

	MDA-Own Occupier mover						MDA Private tenant mover					
	B	Std. Error	Wald	df	Sig.	Exp(B)	B	Std. Error	Wald	df	Sig.	Exp(B)
Intercept	-6.13	0.16	1558.7	1	0.000		-7.57	0.15	2539.2	1	0.000	
ethnic group-BAEM	0.42	0.11	15.8	1	0.000	1.5	0.52	0.07	62.1	1	0.000	1.7
[age group -39yrs]	2.79	0.11	610.8	1	0.000	16.3	4.37	0.12	1308.8	1	0.000	78.8
[age group 40-59yrs]	1.00	0.12	67.7	1	0.000	2.7	2.32	0.13	345.4	1	0.000	10.2
[age group 60+yrs]	0b			0			0b			0		
[No of household member=1]	1.21	0.11	119.4	1	0.000	3.3	0.53	0.08	48.4	1	0.000	1.7
[No of household member=2]	0.91	0.10	84.7	1	0.000	2.5	0.69	0.07	102.7	1	0.000	2.0
[No of household member=3]	0.47	0.11	17.1	1	0.000	1.6	0.41	0.08	29.9	1	0.000	1.5
[No of household member=4+]	0b			0			0b			0		
[regional group London]	0.22	0.10	4.7	1	0.030	1.2	0.52	0.07	59.5	1	0.000	1.7
[regional group South+ East]	-0.67	0.13	27.3	1	0.000	0.5	-0.57	0.09	39.1	1	0.000	0.6
[regional group Midlands]	0.02	0.08	0.1	1	0.782	1.0	-0.04	0.06	0.5	1	0.464	1.0
[regional group North]	0b			0			0b			0		
[incomeQ: Lowest 0-25%]	-0.87	0.14	40.9	1	0.000	0.4	1.71	0.09	408.4	1	0.000	5.5
[incomeQ: 25-50%]	-0.04	0.10	0.2	1	0.693	1.0	1.21	0.08	211.8	1	0.000	3.3
[incomeQ: 50-75%]	0.30	0.09	11.5	1	0.001	1.4	0.69	0.09	63.8	1	0.000	2.0
[incomeQ: Highest 75%+]	0b			0			0b			0		
	Non-MDA-Own Occupier mover						Non-MDA Private tenant mover					
	B	Std. Error	Wald	df	Sig.	Exp(B)	B	Std. Error	Wald	df	Sig.	Exp(B)
Intercept	-6.13	0.16	1558.7	1	0.000		-6.13	0.16	1558.7	1	0.000	
ethnic group-BAEM	-0.08	0.07	1.2	1	0.275	0.9	0.09	0.06	2.3	1	0.125	1.1
[age group -39yrs]	1.76	0.05	1236.9	1	0.000	5.8	3.87	0.08	2635.6	1	0.000	48.1
[age group 40-59yrs]	0.49	0.05	92.4	1	0.000	1.6	1.86	0.08	560.1	1	0.000	6.4
[age group 60+yrs]	0b			0			0b			0		
[No of household member=1]	0.86	0.06	211.3	1	0.000	2.4	0.82	0.06	192.7	1	0.000	2.3
[No of household member=2]	0.59	0.05	148.5	1	0.000	1.8	0.82	0.05	258.3	1	0.000	2.3
[No of household member=3]	0.17	0.06	9.2	1	0.002		0.42	0.06	53.5	1	0.000	1.5
[No of household member=4+]	0b			0			0b			0		
[regional group London]	-0.41	0.07	34.3	1	0.000	0.7	0.20	0.06	11.2	1	0.001	1.2
[regional group South+ East]	0.44	0.05	86.9	1	0.000	1.5	0.62	0.05	154.7	1	0.000	1.9
[regional group Midlands]	0.28	0.04	44.5	1	0.000	1.3	0.17	0.05	14.5	1	0.000	1.2
[regional group North]	0b			0			0b			0		
[incomeQ: Lowest 0-25%]	-1.69	0.07	562.6	1	0.000	0.2	0.43	0.06	52.7	1	0.000	1.5
[incomeQ: 25-50%]	-0.97	0.05	366.9	1	0.000	0.4	0.38	0.05	50.9	1	0.000	1.5
[incomeQ: 50-75%]	-0.54	0.04	152.4	1	0.000	0.6	0.26	0.05	25.0	1	0.000	1.3
[incomeQ: Highest 75%+]	0b			0			0b			0		

a. The reference category is: Non-mover.

b. This parameter is set to zero because it is redundant.

Model Fitting Information						
Model	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC	BIC	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	18466.6	18502.8	18458.6			
Final	5641.8	6111.9	5537.8	12920.9	48	0.000
Pseudo R-Square						
Cox and Snell	0.187					
Nagelkerke	0.256					
McFadden	0.158					

Table 4 Housing and area attributes of movers

	MDA-Own Occupier mover						MDA Private tenant mover					
	B	Std. Error	Wald	df	Sig.	Exp(B)	B	Std. Error	Wald	df	Sig.	Exp(B)
Intercept	-5.39	0.27	403.7	1	0.00		-2.40	0.12	438.6	1	0.00	
Housing Cost	0.01	0.00	187.3	1	0.00	1.0	0.01	0.00	307.5	1	0.00	1.0
satisfied with area	-0.54	0.12	18.5	1	0.00	0.6	-0.23	0.08	7.7	1	0.01	0.8
satisfied with home	0.74	0.21	12.6	1	0.00	2.1	-0.02	0.09	0.0	1	0.83	1.0
Satisfaction with current tenure	0.77	0.18	18.0	1	0.00	2.1	-1.49	0.07	471.9	1	0.00	0.2
Urban	0.26	0.19	1.8	1	0.18	1.3	1.28	0.09	186.7	1	0.00	3.6
Suburban	-0.43	0.16	7.1	1	0.01	0.7	0.03	0.10	0.1	1	0.75	1.0
Rural	-1.78	0.58	9.3	1	0.00	0.2	-1.51	0.36	17.5	1	0.00	0.2
Detached	-1.15	0.26	19.4	1	0.00	0.3	-2.45	0.34	51.4	1	0.00	0.1
Semidetached	-0.08	0.15	0.3	1	0.62	0.9	-0.84	0.14	38.2	1	0.00	0.4
Terraced	0.76	0.13	37.2	1	0.00	2.1	0.42	0.09	22.1	1	0.00	1.5
Flat	0.64	0.16	16.6	1	0.00	1.9	0.92	0.09	99.7	1	0.00	2.5
	Non-MDA-Own Occupier mover						Non-MDA Private tenant mover					
	B	Std. Error	Wald	df	Sig.	Exp(B)	B	Std. Error	Wald	df	Sig.	Exp(B)
Intercept	-5.39	0.19	799.9	1	0.00		-2.85	0.11	665.9	1	0.00	
Housing Cost	0.01	0.00	844.0	1	0.00	1.0	0.01	0.00	691.0	1	0.00	1.0
satisfied with area	0.73	0.11	40.5	1	0.00	2.1	0.83	0.09	90.7	1	0.00	2.3
satisfied with home	0.74	0.14	27.4	1	0.00	2.1	0.23	0.08	8.8	1	0.00	1.3
Satisfaction with current tenure	0.72	0.11	46.9	1	0.00	2.1	-1.84	0.05	1223.5	1	0.00	0.2
Urban	-0.43	0.16	7.9	1	0.01	0.6	0.55	0.10	33.7	1	0.00	1.7
Suburban	-0.25	0.09	8.7	1	0.00	0.8	0.33	0.07	22.5	1	0.00	1.4
Rural	-0.13	0.14	0.9	1	0.35	0.9	0.46	0.11	16.4	1	0.00	1.6
Detached	0.40	0.08	23.8	1	0.00	1.5	-0.57	0.11	27.4	1	0.00	0.6
Semidetached	0.21	0.08	7.3	1	0.01	1.2	-0.19	0.08	5.5	1	0.02	0.8
Terraced	0.28	0.08	11.7	1	0.00	1.3	0.15	0.08	3.9	1	0.05	1.2
Flat	-0.07	0.12	0.4	1	0.55	0.9	0.88	0.08	134.8	1	0.00	2.4

a. The reference category is: Non-mover.

b. This parameter is set to zero because it is redundant.

Model Fitting Information						
Model	Model Fitting Criteria			Likelihood Ratio Tests		
	AIC	BIC	-2 Log	Chi-Square	df	Sig.
Intercept Only	31052.389	31084.623	31044.389			
Final	26442.293	26829.103	26346.293	4698.096	44	0.000
Pseudo R-Square						
Cox and Snell	0.182					
Nagelkerke	0.226					
McFadden	0.123					

Table 5 High income movers by tenure (MDAs vs non-MDAs)

Region	Current Tenure	2001-2005				2009-2013			
		No MDA		MDA		Non MDA		MDA	
		No	% in region	No	% in region	No	% in region	No	% in region
London	homeowner	358	63.0%	129	43.2%	239	44.3%	186	33.3%
	private tenants	186	32.8%	153	51.2%	270	50.0%	316	56.6%
	total	569	65.6%	299	34.4%	540	49.2%	558	50.8%
Rest of South&East	homeowner	2311	69.2%	153	65.0%	643	56.5%	205	52.7%
	private tenants	889	26.6%	69	29.5%	445	39.1%	158	40.6%
	total	3340	93.4%	235	6.6%	1139	74.5%	389	25.5%
Midlands	homeowner	848	76.9%	188	71.7%	673	64.0%	214	50.5%
	private tenants	208	18.8%	50	19.2%	336	32.0%	172	40.6%
	total	1103	80.8%	262	19.2%	1051	71.3%	424	28.7%
North	homeowner	475	70.3%	559	74.1%	761	58.9%	322	48.7%
	private tenants	162	24.0%	130	17.2%	456	35.3%	240	36.3%
	total	676	47.3%	754	52.7%	1292	66.2%	661	33.8%
All region	homeowner	3993	70.2%	1029	66.4%	2316	57.6%	927	45.6%
	private tenants	1446	25.4%	403	26.0%	1507	37.5%	886	43.6%
	total	5688	78.6%	1550	21.4%	4022	66.4%	2032	33.6%