Homeownership Transition Influences among British Young Adults: Do Neighbourhood Effects Matter?
Research aim is to explore socio-psychological influences of housing tenure choice among British young adults.

Presentation outline:

* Introduction

* Theoretical background

* Results

* Conclusions: Implications of the research and future work
Homeownership: The largest share of the three major housing tenure in Britain

Source: Office for National Statistics (2016)
Introduction

First-time buyers: Predominantly young adults

Regional house price to earnings ratio for first time buyers

Source: Nationwide (2016)
What are the suggestions?:

Q1. Are homeownership decisions influenced by intergenerational assistance through inheritance/financial expectations?

Q2. Are homeownership decisions influenced by path dependency through parental/family motivation or by societal/local norms?

Data sources and methods:

Q1
* Review of literature
* Summary statistics and cross-tabulation of data from:
  - HM Revenue & Customs
  - English House Conditions Survey
  - Wealth and Assets Survey

Q2
* Principal components analysis
* Fixed-effects regression
* Multi-level binary logistic regression

Using data from:
- Index of multiple deprivation
- British census data
- British Household Panel Survey
- Office for National Statistics
What are the established drivers of housing tenure decisions in Britain?:

**Econometric/theoretical context**

- **Economic**
  - Household income
  - House prices
  - Employment status
  - Cost of owning to renting

- **Demographic**
  - Age
  - Sex (male/female)
  - Household formation
  - Race
  - Geographic mobility/location

**Other theoretical context**

- **Socio-psychological**
  - Beliefs/expectations
  - Norms
  - Values
  - Socialisation
  - Status/wellbeing
  - Motivations
  - Family background

Build-up of the socio-psychological context

- Attitude towards homeownership
- Norm/standards set by (network of) trusted individuals
- Perceived behavioural control
- Intention (not) to own
- Actual decision (not) to own

Adapted from Ajzen, I. 1991.
The theory of planned behaviour
## Results

Non-spouse related housing estates passing on death, 1999-2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Housing Estates</th>
<th>Value as % of all property assets</th>
<th>Value as % of total assets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number (thousands)</td>
<td>Value (billion £)</td>
<td></td>
</tr>
<tr>
<td>1999-00</td>
<td>107.94</td>
<td>9.85</td>
<td>64.85%</td>
</tr>
<tr>
<td>2001-02</td>
<td>107.40</td>
<td>12.51</td>
<td>62.78%</td>
</tr>
<tr>
<td>2002-03</td>
<td>115.95</td>
<td>15.88</td>
<td>66.81%</td>
</tr>
<tr>
<td>2003-04</td>
<td>121.50</td>
<td>18.46</td>
<td>68.92%</td>
</tr>
<tr>
<td>2005-06</td>
<td>123.49</td>
<td>20.07</td>
<td>65.82%</td>
</tr>
<tr>
<td>2006-07</td>
<td>121.46</td>
<td>20.81</td>
<td>66.27%</td>
</tr>
<tr>
<td>2007-08</td>
<td>115.40</td>
<td>20.62</td>
<td>64.61%</td>
</tr>
<tr>
<td>2008-09</td>
<td>114.05</td>
<td>18.75</td>
<td>64.35%</td>
</tr>
<tr>
<td>2009-10</td>
<td>118.13</td>
<td>18.68</td>
<td>63.77%</td>
</tr>
<tr>
<td>2010-11</td>
<td>124.83</td>
<td>19.21</td>
<td>65.27%</td>
</tr>
<tr>
<td>2011-12</td>
<td>132.20</td>
<td>19.63</td>
<td>66.70%</td>
</tr>
<tr>
<td>2012-13</td>
<td>138.45</td>
<td>20.55</td>
<td>66.55%</td>
</tr>
<tr>
<td>2013-14</td>
<td>138.78</td>
<td>22.22</td>
<td>66.30%</td>
</tr>
</tbody>
</table>

Source: Table 12.5 of HM Revenue & Customs (2016)
Hamnett, C. et al. (1991)’s evidence from Inland Revenue data: *Housing inheritance would become a major source of homeownership over the next four decades from the early nineties.*

**But** previous figure suggests that there is no substantial increase in the size of British housing inheritance.

**Other updates:**
Rowlingson, K. and Mckay, S. (2004) and Hamnett, C. (1997)....*both agreed that the initial prediction is wrong due to growth in private residential care homes for older people; and*

*Young adults have lower chances of inheriting estates*

What then are the age groups of beneficiaries of housing inheritance?
Based on the responses from the heads of households:

- Whether home was acquired as inheritance
- Whether home was acquired as/or using gift

Home owners (within 5 years length of ownership) sourced from inherited or gifted house or money by age groups in percentages of total population per year (actual numbers as labels)

Source: English House Conditions Survey (EHCS)
Q2 – Work in progress:
Firstly, by predicting local area home ownership rates using their corresponding socio-economic and deprivation features with data specific to young adults (aged 16-34)

Three-staged procedure:

1. OLS regression ................. \( z_i = \alpha_i + \chi_i \beta + u_i \)
   *Not presented for brevity

2. Principal Components Analysis (PCA)
   *For reducing : dimensionality
   multicollinearity

3. Fixed-effects regression ... \( z_{it} = \chi_{it1} \beta_1 + \chi_{it2} \beta_2 + ... + \chi_{itk} \beta_k + u_{it} \)
   where:
   \( z_{it} \) represents homeownership rate of a neighbourhood ‘i’ in the year ‘t’;
   \( \chi_{it} \) represents principal components (i.e. social characteristics) of the neighbourhood ‘i’ in the year ‘t’;
   \( \alpha_i \) represents any neighbourhood-specific omitted variable in the estimation;
   \( \beta \) represents the coefficient estimates; and
   \( u_{it} \) represents the error term of the estimation.
### Principal components grouping for census and deprivation data

#### 2001

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pc1</td>
<td>Degree and higher, A-levels, lower O-levels, higher professional, lower professional, lower technical, semi routine, routine, no dependent child(ren)</td>
</tr>
<tr>
<td>Pc2</td>
<td>Higher O-levels, intermediate, small employees, unemployed, couple, Q-IMD5, Q-Income5, Q-Employment5</td>
</tr>
<tr>
<td>Pc3</td>
<td>Q-IMD2, Q-Income2, Q-Employment2</td>
</tr>
<tr>
<td>Pc4</td>
<td>Q-IMD3, Q-Income3, Q-Employment3</td>
</tr>
<tr>
<td>Pc5</td>
<td>Q-IMD4, Q-Income4, Q-Employment4</td>
</tr>
</tbody>
</table>

#### 2011

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pc1</td>
<td>Degree and higher, lower O-levels, higher professional, lower professional, semi routine, routine, no dependent child(ren)</td>
</tr>
<tr>
<td>Pc2</td>
<td>A-levels, higher O-levels, intermediate, small employees, lower technical, unemployed, couple, Q-IMD5, Q-Income5, Q-Employment5</td>
</tr>
<tr>
<td>Pc3</td>
<td>Q-IMD2, Q-Income2, Q-Employment2</td>
</tr>
<tr>
<td>Pc4</td>
<td>Q-IMD3, Q-Income3, Q-Employment3</td>
</tr>
<tr>
<td>Pc5</td>
<td>Q-IMD4, Q-Income4, Q-Employment4</td>
</tr>
</tbody>
</table>
Fixed-effects principal components regression of neighbourhood homeownership rate on their socio-economic attributes

<table>
<thead>
<tr>
<th>Principal components</th>
<th>Coefficient</th>
<th>Standard error</th>
<th>t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pc1</td>
<td>3.385</td>
<td>0.099</td>
<td>34.32***</td>
</tr>
<tr>
<td>Pc2</td>
<td>1.521</td>
<td>0.121</td>
<td>12.54***</td>
</tr>
<tr>
<td>Pc3</td>
<td>-0.348</td>
<td>0.135</td>
<td>-2.59**</td>
</tr>
<tr>
<td>Pc4</td>
<td>1.886</td>
<td>0.121</td>
<td>15.53***</td>
</tr>
<tr>
<td>Pc5</td>
<td>0.925</td>
<td>0.111</td>
<td>8.35***</td>
</tr>
<tr>
<td>Year 2011</td>
<td>-12.515</td>
<td>0.124</td>
<td>-100.93***</td>
</tr>
<tr>
<td>Constant</td>
<td>71.168</td>
<td>0.073</td>
<td>973.54***</td>
</tr>
<tr>
<td>N</td>
<td>80867</td>
<td></td>
<td></td>
</tr>
<tr>
<td>prob&gt;F</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>5306.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.4679***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** denotes significance at 1%; ** at 5% and * at 10%
Implications and future work

* **YES** – Neighbourhood effects really matter.

* Local area homeownership rates can be predicted from their corresponding socio-economic features in Britain.

* The reduced components can form neighbourhood-level predictors in an impending two-level housing tenure choice model.

**Future work:**

* The results obtained are only a demonstration of what to expect when these neighbourhood-level components are combined with individual-level data to pull out neighbourhood effects.

* But firstly, an update to the duration analysis of time to homeownership findings in Britain, running up to 23 waves (1991-2015) at the individual level only.

* **Duration of socialisation in parental homeownership** is an additional variable to be included in our two-level housing tenure choice model at the individual level.
Thank you!
Questions/suggestions please?

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Ideas on neighbourhood effects:

Following data from related literatures on neighbourhood features as drivers of later outcomes. e.g.


Some deprivation variables and concept:

LSOA highest academic qualification (default is ‘no qualification’)
LSOA Socio-economic class (default is ‘long-term unemployed’)
LSOA unemployment rate
LSOA household living arrangement (‘single’, ‘has dependent child(ren)’ as defaults)
LSOA IMD (in quantiles (Q), ‘Qi’ is most deprived and default)

Where:

**LSOA:** Lower super output area or data zones of 1000-3000 population

**IMD:** Index of multiple deprivation

**Quantiles:** An innovative way to combine the deprivation samples to form a British sample. Quantiles is an equal division of a set of values of a variate frequency distribution, each containing the same fraction of the total population.