

A HOME OF THEIR OWN

TECHNICAL REPORT

Prepared for Shelter
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METHODOLOGY

The aim of the project was to produce county/city/ local authority level data for England, to show the relative lengths of time it would take for three first-time buyer households (FTBH) to save for a deposit to buy a home.

The types of households were

1. Two full-time (FT) workers, one male, one female, without children
2. One FT male worker, one part-time (PT) female worker, one child
3. One FT single worker, without children

FTBH were assumed to be aged 22-29. This is not the age at which FTBH achieve ownership, but is the age group where households tend to form, young people begin to become financially independent and plan for their future.

Gross incomes for each individual were adjusted for tax and national insurance and where appropriate, summed to provide post-tax household income for the FTBH.

Post-tax income was modelled to rise in line with OBR wage growth forecasts until Q1 2018, and at the same rate thereafter. In addition an extra uplift was included to take account of career progression for the first ten years.

Post-tax household income was then adjusted to take account of spending on essentials. FTBH spending on rent, council tax, childcare, food, transport and utilities was updated in line with OBR RPI forecasts throughout the analysis. Total spending on essentials was subtracted from post-tax income to arrive at FTBH discretionary income. Taking this approach allowed us to arrive at a more realistic sense of the true budget constraints faced by FTBH.

The size of the deposit to be saved was calculated as 20% of the first-time buyer house price for each local authority. House prices were modelled to increase in line with OBR forecasts. Each FTBH was assumed to save 20% of their discretionary income.

Savings were assumed to attract interest throughout the analysis at a rate consistent with the cash ISA rate, modelled to change in line with OBR forecasts of LIBOR.

The time-to save a deposit for each FTBH was calculated when savings were at least equal to the required deposit.

DATA SOURCES AND ASSUMPTIONS

INCOME

Gross income: Annual Survey of Hours and Earnings 2012 (ASHE) Table 8.7a, earnings by place of residence; Table 6.7a, earnings by age.

<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-280149>

Median earnings for three types of workers were included: male full-time (MFT), female full-time (FFT) and female part-time (FPT). In addition, average full-time (FT) earnings were used for the single person household.

ASHE data was collected in April 2012, so ASHE earnings data was uplifted in line with the change in earnings up to Q4 2012. The Labour Force Survey provided income growth at a regional, but not local, level. The relevant regional growth in incomes was applied to each local authority (LAs).

<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-254386>

At smaller sample sizes the earnings data becomes less reliable. Where the coefficient of variation (CV) was equal to or less than 10%, the reported figure from ASHE was used. Where the CV was greater than 10%, the data was adjusted according to the ratio of earnings in each LA to England.

EXAMPLE

Devon CV > 10% for FFT, hence earnings data is unreliable. Estimate Devon FFT as below

	All earnings	FFT	Estimate Devon FFT earnings
Devon	18,514	Unreliable	19,817
UK	21,794	23,328	= UKFFT x Devon/UK all earnings ratio (£23,328 x 85%)
Devon/UK ratio	85%		

Notes: Figures are rounded

In some cases there was no reliable earnings data at all. These areas were omitted from the reported analysis.

Earnings by age are not available at local level. To overcome this, MFT, FFT, FPT and FT data for each area was adjusted according to the ratio of earnings of 22-29 year olds to the UK median income for each category. This provided an estimate of individual first time buyer earnings.

EXAMPLE

	22-29	All	%
Full time Male (MFT)	21,606	28,713	75.25%
Full Time female (FFT)	19,929	23,074	86.37%
Part time female (FPT)	7,942	8,666	91.65%
Single full-time (FT)	209,01	26,462	78.98%

Income tax and National Insurance: HMRC <http://www.hmrc.gov.uk/rates/it.htm>

The tax and national insurance rates were applied to gross income data for each of the occupation types, MFT, FFT and FPT.

Individual after tax incomes (disposable incomes) were then added together to form the relevant FTBH income.

WAGE GROWTH AND CAREER PROGRESSION

FTBH incomes were assumed to rise in line with OBR forecasts of wage growth. Data is available up until Q1 2018. After this wage growth was assumed to remain constant.

An additional allowance was made to take account of the likely career progression in the first ten years. An additional growth rate was applied for the first ten years, consistent with the percentage growth required each year in order to close the gap between median earnings in the age group 22-29 and 30-39. This proxy for career progression was in addition to the OBR wage growth assumption.

ESSENTIALS

Rent: Valuation office, Median rents by local authority, Q4 2012 .

http://www.voa.gov.uk/corporate/statisticalReleases/130328_PrivateRentalMarket.html

For FTBH including couples, spending on rent was based on a two bedroom flat. For the single person FTBH, spending on rent was based on a one bedroom flat.

Council Tax: council tax by local authority for Band D property 2012/2013

<https://www.gov.uk/government/publications/council-tax-levels-set-by-local-authorities-in-england-2012-to-2013-revised>

For the single person FTBH a 25% discount to council tax was applied

Child Care: Daycare trust survey 2013. Assumed child has 25 hours per week in nursery care

http://www.daycaretrust.org.uk/data/files/Research/costs_surveys/Childcare_Costs_Survey_2013.pdf

Data is only available at a regional, rather than local level. Regional costs were applied according to the region relevant to each LA. Childcare spending was assumed to continue for the first five years only.

Food, Transport and Utilities: Family Spending Survey 2012 Tables 2.4, A9 – by age of household reference person, 2011; Table 2.7, A23, expenditure by household composition, 2011; Table 2.5, A33, Household expenditure by countries and regions, 2011

<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-267317>

The latest available data was for 2011 so it was updated in line with inflation using CPI disaggregated data for each type of essential.

<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-276818>

Regional spending data is not available by age or household composition. Spending in each region was therefore adjusted using the ratio of regional household spending to the UK average.

EXAMPLE

	Food spending, 2 person no children household, pw	Average household spending on food, pw	Estimate NE 2 person household food spending, pw
North East	n/a	45.70	46.30
UK	54.10	53.40	= NE average food spending x UK ratio of average food spending to 2 person household food spending
UK 2 person household food spending/UK average food spending	86%		

Notes: Figures are rounded

Discretionary income was calculated by subtracting total spending on essentials from post-tax income for each FTBH in each area.

HOUSE PRICES

Data is from HM Land Registry, HMLR HPI at end December 2012

<http://www.landregistry.gov.uk/public/house-prices-and-sales>

Average house prices are available from HM Land Registry for almost all LAs, but the data is not mix adjusted so can be unreliable. Data from the HMLR house price index is preferable because of its more robust methodology but is not available for all LAs. As a result some local authorities were excluded from the analysis.

First-time buyer (FTB) house prices are not available from HMLR. Nationwide Building Society and Halifax produce series for FTB house prices. Comparison of the Nationwide and Halifax FTB and all house price series shows that FTB prices are typically 75% of the all houses series. This ratio was applied to all HMLR index prices to produce an estimate of first-time buyer prices by local area.

TIME TO SAVE A DEPOSIT

The model built in six assumptions to calculate of the length of the time required to save a deposit:

1. house price growth
2. earnings growth
3. return on savings
4. how much can be saved out of discretionary income
5. size of deposit , and;
6. how long child care is paid for

OBR forecasts for house prices and earnings growth were applied to the adjusted HMLR house price data and to the FTBH post tax incomes data up to Q1 2018. After that the growth rates were assumed to remain constant at the Q1 2018 rates

<http://budgetresponsibility.independent.gov.uk/economic-and-fiscal-outlook-march-2013/>

The return on savings involves an additional assumption about future interest rates. Initial savings rates were set in line with the prevailing cash ISA rate at the end of 2012. This was

also consistent with a margin above Libor for ISA rates of 1.5%. Future savings rates were assumed to be at the same margin above Libor until the OBR Libor forecasts began to rise. The margin was assumed to narrow to 1% by Q2 2017 and to remain at this level.

The proportion of discretionary income saved was assumed to be 20%, to allow for spending on other, less essential, things such as clothing, entertainment, going out etc.

The deposit requirement was assumed to be 20% - an 80% LTV.

For the FTBH with a child, the model assumed that spending on childcare ceased after five years.

DEBTS

In some local areas, outgoings on essentials were higher than earnings, particularly in the early periods. The model ignored any debts accumulated in this way when calculating the time to save a deposit. Once FTBH incomes were in excess of spending on essentials, the full 20% of remaining funds were allocated to saving for a deposit.

FUTURE INFLATION

The costs of essentials were assumed to rise in line with the OBR forecasts for RPI.

SUMMARY OF ASSUMPTIONS

Household type	MFT, FFT, no child	MFT, FPT, 1 child	Single FT, no child
Age of FTB	22-29		
Deposit	20%		
Earnings growth	In line with OBR wage growth forecasts		
House price growth	In line with OBR house price growth forecasts		
Essential price growth	In line with OBR RPI forecasts		
Return on savings 2013-2015	In line with a margin above OBR Libor forecasts		
Amount of discretionary income saved	20%		
Council tax	Band D		Band D with 25% discount
Rent	Median, 2 bed flat		Median, 1 bed flat
Child care	nil	25 hours per week for five years only	nil

FURTHER NOTES

It is important to bear in mind that the results of this research are sensitive to the assumptions made and that data limitations make it difficult to accurately represent households at a consistent local authority level.

There are actions that individual FTBH could take to reduce the amount of time it would take to save a deposit. For example, renting in a cheaper area, saving a greater proportion of discretionary income, economising on essentials (eg cycling rather than driving to work,

turning down heating thermostat, etc). Despite these limitations, this research gives an indication of the pressures faced by FTBH based on reasonable assumptions.