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Rent or buy? The challenge of access to housing

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Introduction

Everyone needs a place they call home. If you buy, it is likely to be the most expensive thing you ever purchase. If you take out a mortgage or decide to rent rather than buy, the mortgage instalments or rent payments are likely to be among your largest monthly outgoings. Since putting a roof over one's head accounts for a good deal of most households' spending, it is important to make the most appropriate decisions about where to live, what kind of home to choose and whether to rent or buy it. Furthermore, in many countries, housing is seen not just as a place to live but as a store of wealth. This means decisions about housing are important at the household level in planning for long-term financial security but also create tension between those who hold housing wealth and others who cannot afford to buy.

In this free course, *Rent or buy? The challenge of access to housing*, you will explore a range of issues relating to housing financial decisions. In particular, you will consider four key questions:

- What are people's motives in deciding whether to buy or rent?
- Are house prices too high – in other words, what is 'affordability' and how is it measured?
- If you buy, what are the total costs and some pitfalls to watch out for?
- What determines the level of house prices and makes them change?

Along the way, you will be introduced to two financial tools: a mortgage calculator, which can be used to compare mortgage costs; and a balance sheet analyser which assesses the strength of a household's finances based on its assets (the things that it owns, like savings and property) and liabilities (the things that it owes, such as a mortgage and other debts). These tools can help you with decisions about housing, both in your study of this course and your own personal finances.

This OpenLearn course is an adapted extract from the Open University course DB125 *You and your money*.

Learning Outcomes

After studying this course, you should be able to:

- understand some features of the housing market, such as affordability, and decisions to rent or buy, supported by the use of various media, including graphs, tables, news articles, videos and household interviews
- describe different types of housing finance and, with the aid of an interactive tool and relevant calculations, choose between them given some different constraints
- explain, using a simple economic model, how demand and supply affect house prices and discuss the consequences for different types of household
- understand, with the aid of the household financial balance sheet, why housing may be viewed as a store of wealth.

1 Buy or rent?

Attitudes to buying or renting vary a good deal across countries. A few households in six different countries from around the world were interviewed and asked about their reasons for deciding to buy or rent, and what the usual type of housing tenure is in their country. ('Tenure' means the way in which a property is occupied, for example as an owner or as a tenant who is renting.)

Activity 1 Buying or renting preferences for households around the world

Allow around 30 minutes

The interactive map (link below) presents people from around the world talking about their decisions to buy or rent a home and what seems to be the norm in their country. Select 'View interactive version' below the image to expand the map. Open it in a new tab or window so you can view it alongside this activity. You can select each of the red pins on the map to find out more about the households that were talked to. Select each tab below the map to watch a video where some of the households talk about each topic. As you watch, make some notes to help you answer the questions below.

Interactive content is not available in this format.

Attitudes to buying and renting

Based on the videos, answer these questions:

1. What arguments are given for and against buying a home and for and against renting?

Provide your answer...

Discussion

These are the main arguments mentioned by the households:

- **Advantages of buying:** Maureen in the UK mentions security; Edson and Rosangela in Brazil and Rohith in India suggest the ability to match their homes to

their own needs and preferences; Isabel in Berlin mentions housing as an investment.

- **Disadvantages of buying:** Aline in Brazil reminds us that not everyone who owns a property has enough money to choose the home they want. Some of the other disadvantages, such as reduced mobility, are the flip side of the advantages of renting.
- **Advantages of renting:** It may be more affordable than buying (D. L. Mahesha in India); Pia in Germany likes the flexibility ('you can quickly pack up and go'); and Jen in the USA points out that renting lets you try out an area before you buy. But some people are reluctant renters, like Yassra in Sweden, who does not have a job.
- **Disadvantages of renting:** Money paid as rent is often seen as 'dead money', a view expressed by Hector and Sonia in the UK who say renting would be 'putting money into nothing'. Other disadvantages are the flip side of the advantages of buying, such as being less secure.

2. Thinking about the typical tenure, can you spot any differences between types of household or countries?

Provide your answer...

Discussion

Some of the differences mentioned are:

- Young people are more likely to start out renting rather than buying (mentioned by Jen in the USA and Rohith in India).
- Possibly people in cities are more likely to rent (mentioned by Pia in Germany), maybe because younger people are more likely to live in cities and only move to the countryside as they get older.
- There may be some difference between countries – Yassra suggests renting apartments is common in Sweden, while the UK households talk more about homeownership. Rohith says owning is encouraged in India.
- However, both the UK households highlight that younger people are more likely to be renting these days than in the past because buying has become too expensive.
- However on average, income levels seems to be the prime drive of whether to rent or buy.

2 Are house prices too high?

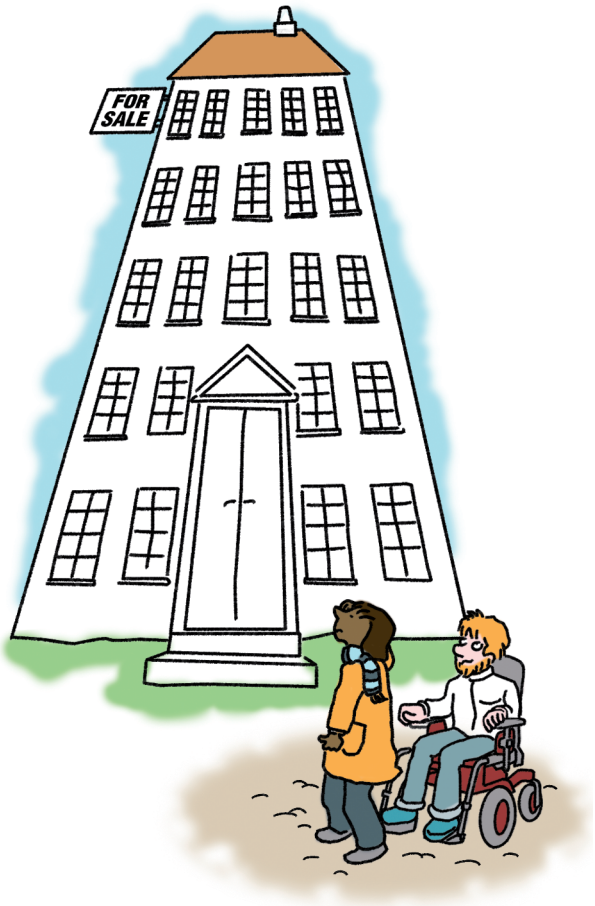

Figure 1 Are prices too high?

If young people and those on low income more generally are being priced out of the housing market in the UK, does that mean prices are too high? And what about house prices in other countries?

Property is often treated as an investment (a source of potential gains or profits) and not just as a place to live. This can create tension between different types of household: rising prices can make it difficult for people to buy their first home, but are welcomed by those who already own a home and so have an investment that is rising in value.

Therefore, different households may have different views about what ‘too high’ means. In this section, you will look at how we might evaluate house prices in a meaningful way.

2.1 Changes in nominal house prices

To start, look at the evidence for rising house prices.

Figure 2 shows an index of ‘nominal’ house prices for six different countries, which correspond to where the households featured in Activity 1 live. By ‘nominal’, we mean

actual house prices without any adjustment for the way the value of money changes over time because of changing (usually rising) prices.

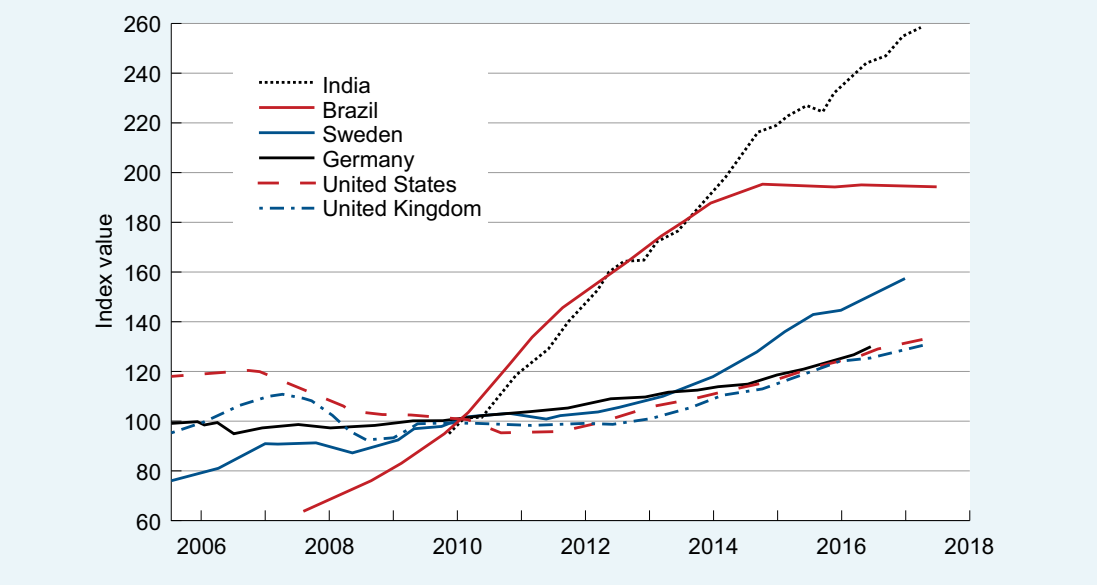

Figure 2 Nominal house prices, 2006–2017. Source: authors' chart using data from OECD (2018). Index: base year is 2010 (average of four quarters) = 100.

Figure 2 is a line chart with each line representing the change in average house prices over the years in each particular country. The lines do not show actual house prices (in pounds, dollars, and so on). Instead, actual values have been converted to index values. See Box 1 for an explanation of index values.

Box 1 Constructing and using an index

An index shows the value of something (in the case of Figure 2, average house prices in each country) relative to a base value.

A time period is chosen as the base and this is assigned a value of 100. The value in every other time period is calculated using the change in the actual value relative to the actual value in the base period. For example:

- Suppose the actual value in the base period was £100,000 and the actual value in the next year was £110,000. This is an increase of 10%.
    - **Study note:** The percentage (10%) has been worked out like this: take the difference of £10,000 (£110,000 - £100,000), divide it by the starting value of £100,000, and multiply by 100 to express the value as a percentage (in other words a fraction out of 100 parts). This course assumes you have dealt with percentages before. However, if you want to learn about them or brush up on your skills, see the free OpenLearn course *Ratio, proportion and percentage*.
- The index value for the base year is set at a value of 100. This is called the base value.
- The index value for the following year would be calculated to be 110 (£110,000 ÷ £100,000 x 100), which is 10% higher than the base value of 100. The general formula for calculating an index value is:

Actual value in selected time period ÷ Actual value in base period x Base value

In other words, index values tell you how the underlying actual values have changed relative to the base year.

In Figure 2, the base value is the average for 2010, so that's when the index was 100. Index values for other periods that are below 100 mean that house prices were lower than the 2010 average; index values above 100 indicate that house prices were higher.

Activity 2 Patterns in nominal house prices

Allow about 10 minutes

Take a moment to study Figure 2 and then answer the following questions.

1. Since 2010, how would you describe the trend in nominal house prices in the six countries? (Select one answer.)

- ○ Downwards
- ○ Level
- ○ Upwards

You can see from Figure 2 that the trend in all six countries has been upwards since 2010.

- ○ Different in different countries

2. Which country has seen the steepest rise in nominal house prices since 2010? (Select one answer.)

- ○ Brazil
- ○ India

Although nominal house prices have risen in all the countries, they have done so at very different rates. The steepest rise has been in India where, by 2017, nominal house prices were nearly 160% higher than in 2010. This is calculated as ((260 – 100) ÷100) × 100.

- ○ UK
- ○ Sweden

2.2 Changes in real house prices

You have seen that rising nominal house prices has been a phenomenon in many countries, albeit at different rates. However, the differences between countries may simply reflect differences in the changing value of money caused by price inflation. By 'inflation', we mean a sustained generalised increase in the price of goods and services in a country, which would result in each pound, dollar or other unit of currency buying less and less as time goes by.

In practice it would be more useful to look at the 'real value' of house prices: in other words, values after adjusting for changes in the general level of prices. This is useful both

for a household thinking about how much more money it needs to buy a home, or how much wealth a household has really gained as its home rises in value.

Figure 3, based on the same sources as Figure 2, shows the movements in real house prices. Expressing the prices in real rather than nominal terms gives a clearer sense of how the value of property as a purchase or as an asset is changing.

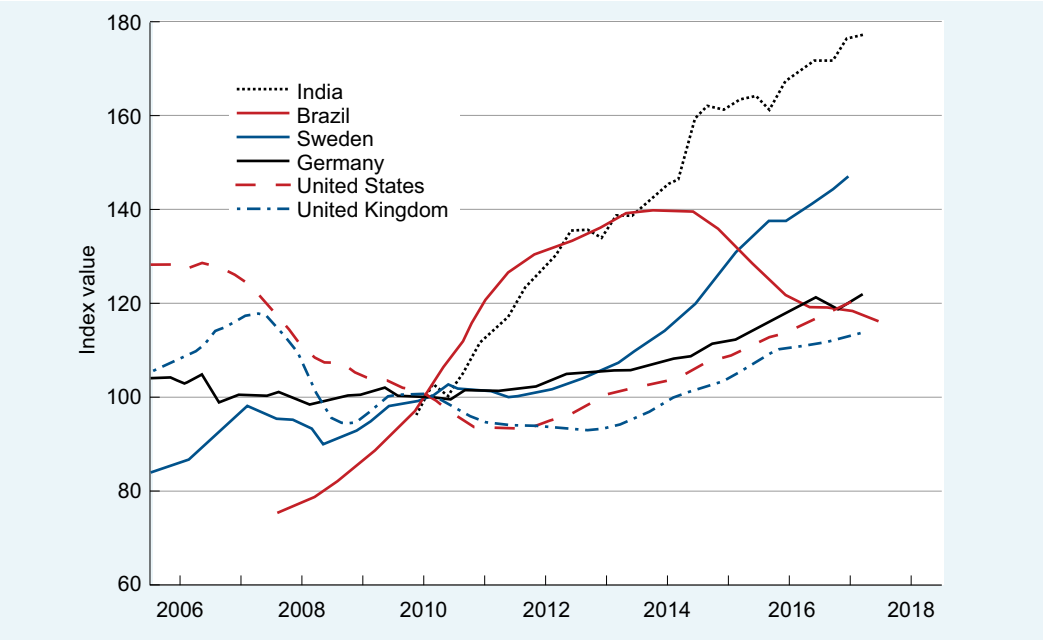

Figure 3 Real house prices, 2006–2017. Index: base year is 2010 (average of four quarters) = 100. Source: authors' chart using data from OECD (2018).

Compared with nominal prices, with the exception of Brazil, real house prices show a similar upward trend since 2010, although the degree of change is less. In Brazil, real house prices have fallen fairly substantially in recent years – which is good news for those wanting to buy, but less good for those who already own a home (though any fall in house prices is just a loss on paper that materialises only if the home is sold). Note also that in the UK and the US, real house prices in 2017 still had not returned to their peak levels around 2007, despite rising house prices in the last few years.

2.3 Homes as investments

Especially in countries like the UK, a home is viewed as a solid and desirable investment. But is this belief well-founded?

Figure 4 shows the change in real house prices in the UK over a long period (1979−2017). The prices are shown in real terms, in today's (2017) money. For example, in 1979, the actual (nominal) average UK house price was only £22,000 but prices of goods and services then were much lower, so that was a lot of money. It would be equivalent to £101,000 today, which is the real value in today's (2017) prices shown in Figure 4.

Figure 4 shows that, despite some ups and downs, the trend in real house prices has been upwards over the whole period. Based on that trend, the rise over the 38-year period has been 169%. That seems a lot, but in fact it's an average of only 2.6% a year – hardly exceptional for an investment.

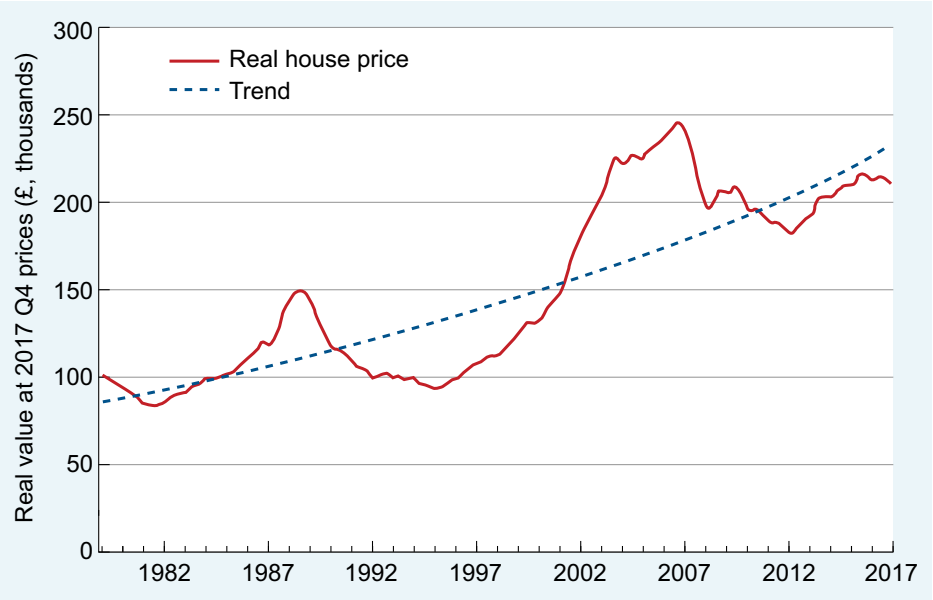

Figure 4 UK average real house prices at 2017 money values, 1979–2017. Source: authors' chart using data from Nationwide (2017)

However, most homeowners have made a lot more than a real return of 2.6% a year from owning their home. What has made residential property so profitable for them is that property is usually bought with a mortgage, making it a leveraged investment. You'll look at what that means now.

2.4 Homes as a leveraged investment

Leverage – in other words, taking out a loan, such as a mortgage, to fund the purchase of an investment – increases gains when the item rises in price. Of course, there is a cost (monthly payments) for the mortgage, but many households would have had to pay out similar or even larger amounts in rent if they had not bought a home. So, when house prices are rising, there can be significant potential gains for existing homeowners.

Figure 5 Leveraging a home purchase is a balancing act between risk and return.

However, leverage also increases potential losses if the price falls. As you saw in Figure 4, house prices can – and do – fall as well as rise. Borrowing to buy an investment, such as a home, whose price can vary always involves some risk of:

- **Capital loss:** Whether or not a householder borrows to buy their home, they will make a capital loss if the value of their property falls below the price they paid. For example, if a home cost £100,000 and its value falls to £90,000, the capital loss is £10,000 (£90,000 - £100,000).
- **Negative equity:** When a householder borrows to buy their home, they own only a small part of their home which is called their 'equity'; the rest in effect belongs to the lender. If house prices fall to such an extent that the value of the home is less than the outstanding loan, the homeowner is said to have negative equity.

Also, you have been looking at national average house prices. House price experience is different in different regions of the UK – in particular, London has in recent years seen much higher price increases and subsequently higher falls than elsewhere. Moreover, when buying a home, a household is putting a lot of eggs in one basket – if their home unexpectedly develops subsidence or is condemned to make way for a new rail route, its investment value could be quite different from the regional or national trend.

So sometimes, despite the popular adage, owning a home is not 'as safe as houses'.

Activity 3 The effect of leverage

Allow about 20 minutes

Read the following situations and fill in the boxes with your answers. Do not include '£' or '%' in the answers you type into the boxes and make sure to include a minus sign for any negative values.

Gavin, having inherited a substantial sum, pays cash for a house costing £200,000. Over the next five years, the house increases in value by 2.6% a year (over and above general price inflation) to £227,400. How much profit has Gavin made? Express the profit both in pounds and as a percentage (to one decimal place) of the amount Gavin invested in purchasing his home.

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Alexi buys a house also costing £200,000 but with a mortgage of £180,000. After five years, the home is worth £227,4000. After paying off the mortgage (assume £180,000 is still owed), how much profit has Alexi made? Express the profit both in pounds and as a percentage of the money Alexi invested in the purchase of her home.

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Using an inheritance, Arif pays cash for a house costing £200,000. Over the next five years, the house price falls by 25% (after adjusting for inflation) to £150,000. How much loss has Arif made? Express the loss both in pounds and as a percentage of the amount Arif invested in purchasing his home.

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Holly buys a house for £200,000 using a mortgage of £180,000. Over the next five years, the house price falls 25% (after adjusting for inflation) to £150,000. After paying off the mortgage (assume £180,000 is still owed), how much loss has Holly made? Express the loss both in pounds and as a percentage of the amount Holly invested in purchasing her home.

Interactive content is not available in this format.

In light of your answers to these questions, comment on the risk involved in buying a home with a mortgage and why households may be willing to take the risk.

Provide your answer...

Discussion

Buying a home with a mortgage increases the percentage profit when house prices rise (question 2 compared with question 1). But it also increases the percentage loss if house prices fall (question 4 compared with question 3). The increase in both profit and loss is large, suggesting the risk is high.

Households may perceive the risk as being lower than your answers to questions 1 to 4 suggest, if they think that house prices are more likely to rise than to fall.

Even if households think the risk is high, few are in a position to buy a house outright for cash given that it is so expensive. Therefore they have no choice but to take out a mortgage. Bear in mind that, if house prices fall, this is a loss ‘on paper’ and not a real loss. It only crystallises as an actual loss if the home is sold. Homeowners may be able to put off selling their home until prices have recovered.

2.5 Measuring affordability

Rising house prices do not necessarily mean that homes are becoming unaffordable. This will depend on whether a household can accumulate enough money for a deposit and whether it has enough income to be able to manage the regular mortgage payments.

Ability to save for a deposit and to manage mortgage payments are both likely to be heavily influenced by household income. Therefore a widely used indicator of housing affordability is the house price-to-income ratio.

2.6 The house price-to-income ratio

The house price-to-income ratio takes the basic form of:

> Average house price ÷ Average income of buyers

This ratio is the starting point for the data shown in Figure 6. However, some adjustments have been made so that, for each country, the ratio in any period can be compared with its long-run average value. First, the average of the ratio has been calculated over a long period (several decades). The ratio for each period has then been divided by this long-run average. Finally, the answers have then been turned into index values, and it is those index values that are plotted in the chart in Figure 6. You looked at index values earlier – recall that they show the value of something (in this case how the house-price-to-income ratio compares with its long-run average) relative to a base value which is set at 100.

These adjustments may seem complicated but they mean we can describe house prices relative to income as being high or low relative to the long-run value of the ratio. And the adjustments strip out the differences caused by different currencies and different average house price levels between countries. If the figure for a particular period:

- equals 100, this means the house price-to-income ratio is the same as the long-run average
- is lower than 100, the ratio is below the long-run average and might suggest home buying is relatively cheap
- is higher than 100, the ratio is above the long-run average and this might suggest that house prices are high – or even too high – compared to average incomes.

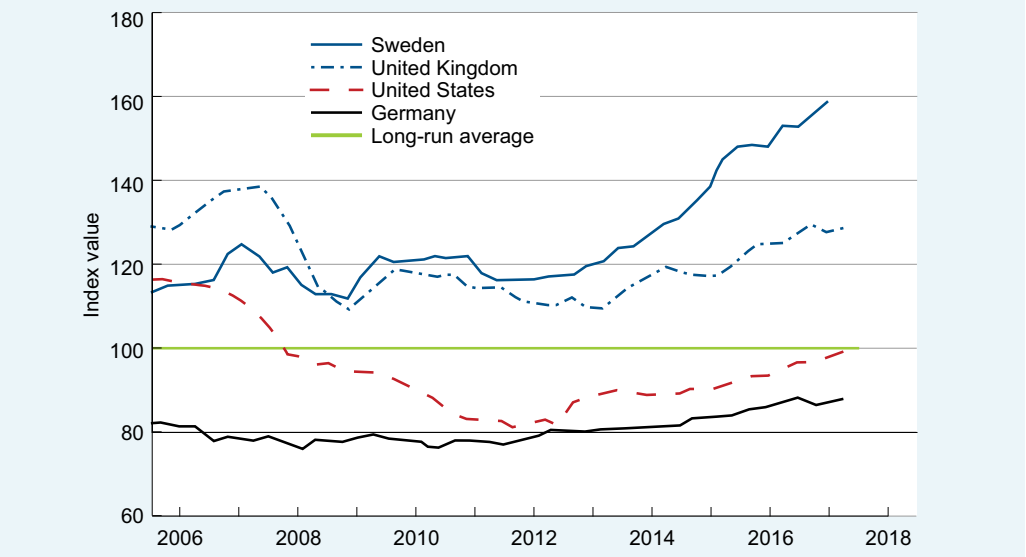

Figure 6 House price-to-income ratios relative to their long-run average for selected countries, 2006–2017. Source: authors' chart using data from OECD (2018). Index: base value is the long-run average = 100.

Activity 4 Housing affordability

Allow about 10 minutes

Using Figure 6, comment on whether or not house prices seem 'too high' in the four countries shown.

Provide your answer...

Discussion

Whether or not house prices are 'too high' is a subjective judgement. However, 'too high' might be interpreted as the house price-to-income ratio being above - or well above - some long-run average. On that basis, German house prices do not look too high, as the index value in the chart has been below 100 during the whole period shown. Prices in the USA seem to have been high at the start of 2006 (when the index was above 100) but have not been too high from 2008 onwards. UK house prices seem to have been high during the whole period (as shown by an index value that is persistently above 100), especially in late 2007 and again in the most recent year or so. Similarly, in Sweden, house prices seem to have been persistently high: since 2013, they might be described as too high with the house price-to-earnings ratio nearly 60% higher than its long-run average by 2017.

It is not possible to compare affordability between countries using this indicator because the actual value of the long-run average of the ratio for each country is not known.

2.7 Housing affordability in the UK

With the focus now on the UK, now you will explore a range of measures of housing affordability to see if UK house prices are ‘too high’.

Figures 7−9 show three different measures of affordability for two different types of buyer: first-time buyers who are more likely to be from younger generations; and existing homeowners who will typically be older. The three measures are:

- **House price-to-income ratio** (Figure 7). Unlike Figure 6, this is the actual ratio itself not an index relative to the long-run average. The ratio shows by how many times house prices are higher than the annual gross income of buyers. For example in 2016, on average first-time buyers homes cost 4.5 times the amount of their annual income.
- **Deposit as a percentage of the house purchase price** (Figure 8). For example, in 2016, existing owners on average put down a deposit equal to 35% of the purchase price of the property. (The remaining 65% was provided by a mortgage loan.)
- **Proportion of household income spent on mortgage repayments** (Figure 9). For example, in 2016, first-time buyers spent 17.5% of their gross income on mortgage payments. A common ‘heuristic’ (meaning a rule-of-thumb or mental short-cut) is that households should spend no more than 30% of their disposable income on total housing costs (mortgage or rent, regular property taxes and home insurance) but of course individual households may have to, or choose to, spend more.

When looking at Figures 7−9, it’s important to bear in mind that you are looking at data only for people who have bought homes. Trends in the data are useful as an indicator of how affordability has changed over time. However, they do not tell you anything about the number of households who may have wanted to buy a home but have been squeezed out of the market by rising house prices.

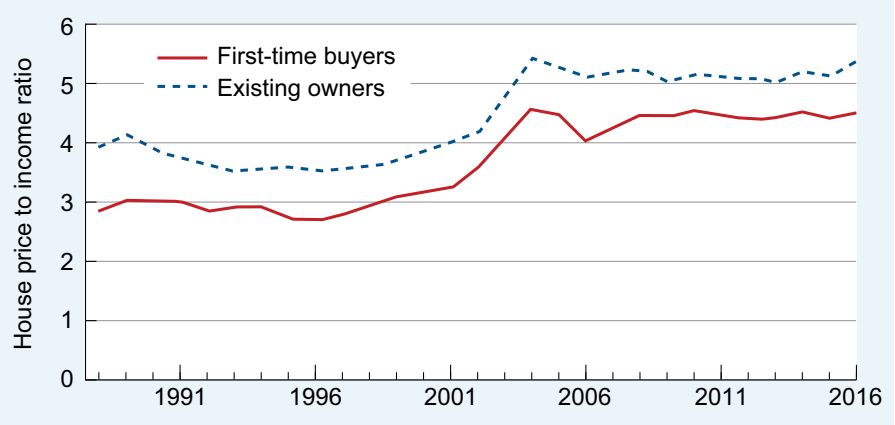

Figure 7 UK house price-to-income ratio, 1988–2016. Source: authors’ chart based on ONS (2017), Table 30.

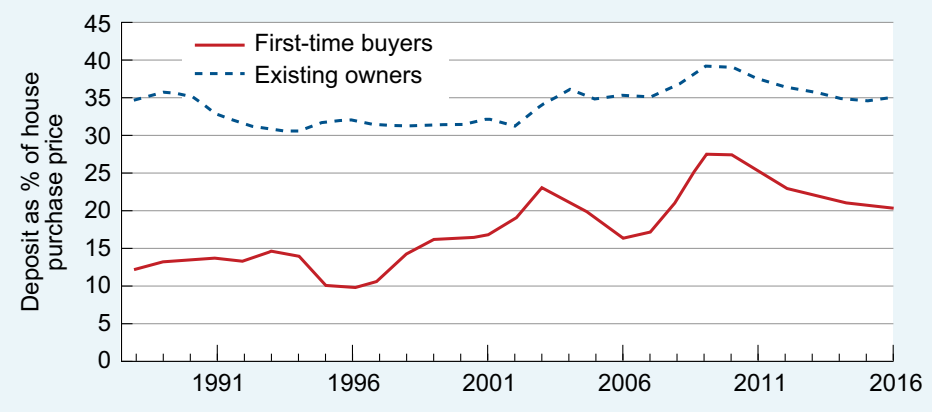

Figure 8 UK deposit as a percentage of house price, 1988–2016. Source: authors' chart based on ONS (2017), Table 30.

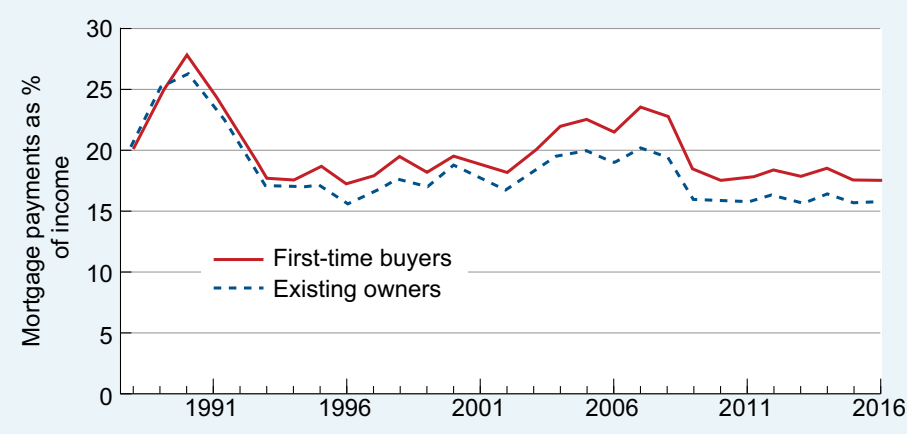

Figure 9 UK mortgage payments as percentage of income, 1988–2016. Source: authors' chart based on ONS (2017), Table 30.

Activity 5 Comparing affordability measures over time

Allow about 30 minutes

Based on Figures 7 to 9, write two paragraphs:

a. the first comparing the three measures of housing affordability in the UK for first-time buyers and existing owners over the period 1988 to 2016.

b. the second giving your conclusion, based on the evidence in the charts, on whether UK house prices are 'too high'.

Provide your answer...

Discussion

There are many different paragraphs you could write, but here is an example of the points you are likely to have included:

a. There was a marked upward shift in the house price-to-income ratio from 2004 onwards, affecting both first-time buyers and existing owners, suggesting that UK homes became less affordable. Deposits as a percentage of purchase price have

not changed greatly over the period for existing owners, but have generally increased for first-time buyers reaching a high of about 28% in 2009 before falling back to 20% in 2016. By contrast, mortgage payments as a percentage of income, while higher for first-time buyers than existing owners, have fallen for both groups over the period.

b. The evidence from Figures 7 to 9 suggests that house prices have increased relative to income over the last decade or so and that first-time buyers are having to find larger deposits than in the past before they can get on the housing ladder. However, once they have made the purchase, the cost of their monthly mortgage payments is more affordable than in the past.

It's important to bear in mind that the data describe the average experience of first-time buyers and existing homeowners. For example, they tell you nothing about regional variations. However, using these national averages, you might be wondering how mortgages can be more affordable even though house prices have risen. It's this topic you will turn to next.

3 Choosing a mortgage

There are many different types of mortgage. In this section, you'll examine briefly the main aspects of mortgages before trying to select a suitable mortgage for a case study.

3.1 Different types of mortgage

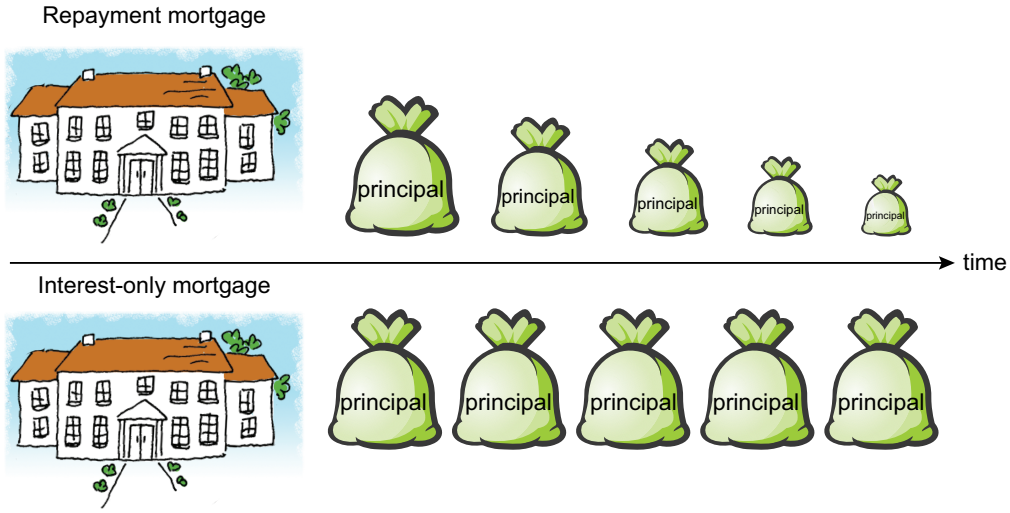

Figure 10 The difference between repayment and interest-only mortgages

A mortgage is a type of loan used to buy property. It is a 'secured' loan, meaning that it is backed by the property being purchased. This means that, if at any time during the mortgage term you do not make the remaining agreed loan payments, the lender can seize and sell the property to get its money back. In that event, the lender will often go for a quick sale, so the sale price may be less than the full market value of the property. This means that, once the loan has been repaid, the amount (if any) left for the former homeowner may be low.

There are two basic types of mortgage: repayment and interest-only. 'Interest' refers to the main charge for borrowing money, normally calculated and expressed as a percentage of the amount owed.

Repayment mortgage

With a repayment mortgage, the 'principal' (the original sum borrowed, also called the 'capital') is paid off through regular monthly payments made throughout the life of the loan, along with the interest. The key feature of this type of mortgage is that, provided all the monthly repayments, are made, the amount owed is reduced to zero by the end of the mortgage term, so the former borrower then owns their home outright.

The typical structure of a repayment mortgage is a 'reducing balance loan'. The payments are set at the same amount each month, calculated to be the exact amount needed to reduce the loan to zero by the end of the term. (If the mortgage's interest rate changes, the level of monthly payments is recalculated and set to a new level to ensure the loan is still completely paid off by the end of the term.)

Each monthly payment is made up of both interest and repayment of a bit of the principal. Initially the payments are mainly interest. One consequence of this is that a borrower who wishes to repay the mortgage in the early years might be surprised at how much of the principal remains. But the amount of principal repaid each month accelerates over the term of the mortgage.

Interest-only mortgage

With an interest-only mortgage, the monthly payments during the term comprise just the interest on the loan. There are no repayments of the principal sum during the term of the loan.

The principal is paid off only at the end of the loan in a single lump sum. It's essential that the borrower then has the means to repay the principal. Failure to do this means the property may be repossessed. One way to plan for repayment of the principal is to pay money regularly throughout the life of the mortgage into a savings or investment scheme. To determine how much to save each month, the investment is projected to grow at an assumed rate in order to produce a lump sum large enough to repay the principal in full at the end of the mortgage term. Usually, there is no guarantee, so the homeowner runs the risk of having to adjust the amount they save each month or having to find money from elsewhere to pay off the rump of the mortgage if the savings or investment plan falls short of the full amount needed.

Another option would be to plan to sell the property when the mortgage ends. That's suitable for someone who has bought a second home or a property they rent out, but would leave an owner-occupier with the problem of where to live.

3.2 Different types of mortgage interest

The other two main ways in which mortgage products vary are in:

- whether the interest on the loan varies (variable interest mortgage) or not (fixed-interest mortgage)
- the way payments are made and offset and can be changed.

Box 2 outlines the main options available.

Box 2 Main mortgage interest and payment variations

- **Standard variable rate mortgage:** The rate of interest goes up and down broadly in line with movements in the official rate set by the country's central bank.
- **Tracker mortgage:** Variable rate mortgage where the interest rate is guaranteed to be a specified amount above an official rate and automatically adjusts when that rate changes.
- **Discounted rate mortgage:** Variable rate mortgage which offers a discount to the standard variable rate for an initial period.
- **Fixed rate mortgage:** The interest rate is fixed at a specified rate for a period of years whatever happen to official interest rates. Borrowers know exactly what their mortgage expenditure will be for several years ahead. Typically there is a fee if the borrower wants to pay off this mortgage early.

- **Capped rate mortgage:** The interest rate is variable but cannot exceed a maximum level. These products also have early repayment fees.
- **Flexible mortgage:** Variable rate repayment mortgage which may provide a number of payment options, including being able to overpay, underpay, re-borrow amounts previously overpaid or suspend payments for a while. It can be especially useful for borrowers whose income tends to vary – for example, the self-employed.
- **Offset mortgage:** A cash balance in a current account or savings accounts with the same provider is deducted from ('offset' against) the outstanding mortgage debt before the monthly mortgage interest is worked out. No interest is paid on the current account or savings account, but offsetting reduces the amount of interest charged on the mortgage.
- **Family offset mortgage:** As above, but family members – usually parents – provide the savings account that is offset against their son's or daughter's mortgage.
- **Shared ownership mortgages:** The borrower buys just part of their home, reducing the size of mortgage needed. The rest is typically owned by a social landlord, to whom the householder pays rent. The aim is that the sum of the mortgage payments and rent is lower than mortgage payments would have been for buying the whole property.

Activity 6 A recap of mortgage types

Allow about 10 minutes

Thinking about the two main types of mortgage (repayment and interest-only) and the variations described in Box 2, drag and drop the types of mortgage and interest payments into their matching brief description.

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The decision about which type of interest rate to choose depends partly on a person's attitude towards risk in budgeting and their capacity to cope with changes in their level of spending. For example, some people may prefer a fixed-rate mortgage even if the rate seems a little high rather than gambling on the likely direction of movement of a variable rate. In some countries, fixed rates over terms as long as 25 years are common, and gambling on variable rates is seen as far too risky. The decision may also depend on expectations about the future state of one's finances. There is always a range of factors to consider in making such a big decision.

3.3 Choosing a suitable mortgage

Figure 11 Meiling – a university lecturer who wants to buy her first home.

In the next activity, you'll use the information about different types of mortgages to help a case study, Meiling, choose a suitable mortgage.

Activity 7 Advantages and disadvantages of different mortgage types

Allow about 20 minutes

Meiling, a university lecturer, has been renting a flat in the city centre but decides to buy a house further out. She has lived quite frugally and managed to save a deposit for this, her first home. Buying the home will use all her cash savings. Interest rates are at a historic low and Meiling expects to continue in her present job for some years to come and to receive annual increments or increases in her salary as well as possible promotion.

For each of the following mortgage types, consider the plus points and potential risks and jot down a brief comment on its suitability for Meiling's situation.

a. Flexible mortgage
b. Offset mortgage
c. Fixed-rate mortgage
d. Capped-rate mortgage
e. Discounted mortgage
f. Interest-only mortgage

Provide your answer...

Discussion

a. Flexible mortgage: this would allow Meiling breaks in payments if needed – this could be useful, given that for now she will have little or no savings to fall back on in an emergency. This type of mortgage also gives her the opportunity to overpay, for example, as her salary rises, which would reduce the mortgage term and overall cost. However, the variable rate is likely to be a bit higher than the lender's standard variable rate and, if interest rates rise, her monthly payments will go up.

b. Offset mortgage: All of Meiling's savings will be spent on the deposit, though she could offset a current account against her mortgage. But, unless the average balance in her current account is relatively high (which seems unlikely), this type of mortgage is likely to be more costly for her than the other options.

c. Fixed-rate mortgage: This would let Meiling manage her day-to-day money with certainty, which is good if her current budget is tight. However, she should be prepared for a rise in payments when the fixed term comes to an end if interest rates have then risen. If interest rates were to fall during the term, she could find herself paying more than she needs and having to pay a penalty if she wants to get out of the fixed-rate deal early - in making that judgement, Meiling might consider whether or not rates are already low, and the economic outlook.

d. Capped-rate mortgage: This could be good as long as the cap is not too high. The cap would protect Meiling from significant rises in variable rates, yet she would also benefit if interest rates were to fall further. However, some capped-rate mortgages also have a 'collar', in other words a minimum below which the interest will not fall even if competing rates go lower.

e. Discounted mortgage: This would be useful if her budget is currently tight, but the rate could rise during the discount period. She needs to be prepared for the extra cost once the discounted rate period ends if she stays with her current lender. Alternatively, she could plan to shop around and switch to a new discounted (or, say, fixed-rate) deal when the discount period ends, but if interest rates generally have risen then, she will still find her monthly payments rise and must be prepared for this possibility. If her salary rises as she expects, she should be able to cope.

f. Interest-only mortgage: This would likely have lower monthly payments, but Meiling would have to think how to pay off the loan at the end of its term. She is buying a home to live in (not, for example, to rent out), so selling the property to pay back the loan is unlikely to be an option as she will still need somewhere to live. She could pay into a savings plan to build up the repayment sum, but this would push up her monthly payments considerably. Depending on the type of savings or investments, it also could expose her to the risk of a shortfall if her money does not grow as well as she hopes. In practice, in the UK, regulation generally prevents providers offering interest-only mortgages unless the borrower has a clear plan for repayment.

3.4 Additional costs of buying a home

Apart from a deposit, homebuyers need to budget for a range of other upfront costs. The largest are usually any purchase taxes (such as Stamp Duty in England and Northern

Ireland, Land and Buildings Transaction Tax in Scotland, Land Transactions Tax in Wales and similar taxes in other countries), and valuation and legal fees. There may also be a fee for arranging a mortgage that can either be paid upfront or added to the loan.

Taken together, these additional costs can be substantial – for example, equivalent to another 5 to 15% of the value of the property, so must be estimated and planned for.

Box 3 Property purchase taxes in the UK

Governments in the UK provide calculators to help you work out the purchase tax that may be payable when you buy a home. You can find the calculators at the following links:

- England and Northern Ireland
- Scotland
- Wales

Having made the purchase, the main ongoing cost is the mortgage payments. However, the lender will also insist that the building is insured, since the mortgage is secured against the property.

3.5 Comparing mortgage costs

Let's focus on Meiling's buying process in more detail. She has found a house she likes, and her offer of £141,500 has been accepted. After allowing for other upfront costs, she can afford to put down a sizeable £41,500 as a deposit, which means she needs a mortgage loan of £100,000. She has shopped around and is undecided between these two repayment-mortgage options:

- **Mortgage 1:** A 25-year discounted mortgage at a variable rate currently 1.64% for the first 24 monthly payments followed by the standard variable rate at 4.49% for the remaining 276 payments. Her mortgage quote says the Annual Percentage Rate (APR) is 4.16% (see below for an explanation of APR). The lender tells Meiling that (assuming no change in interest rates) her repayments during the discount period will be £406.00 per month, rising to £538.68 per month after the end of the discount period. The total amount she is projected to pay back over the life of the mortgage is (24 × £406.00) + (276 × £538.68) = £158,419.68.
- **Mortgage 2:** A standard variable rate repayment mortgage with an APR of 3.70% and a term of 25 years.

  Study note: The APR is a standardised way of expressing the yearly cost of a loan that takes account of the interest and any planned changes in the rate, any other compulsory charges and when all these costs have to be paid. You do not need to know how to work out the APR, only that you can use it to compare the cost of one loan with another. The higher the APR, the more expensive the loan. Factors that will tend to increase the APR include, for example, high interest charges and/or a long repayment term.

Based on the APR, Mortgage 2 is a bit cheaper (3.70% APR is lower than 4.16%), but Meiling is also interested in her monthly cash flow and wants to know what her monthly

repayments would be with the second mortgage. You will now use a Mortgage calculator provided with this course to work this out. Activity 8 takes you through the steps.

Activity 8 Comparing repayment mortgages

Allow about 15 minutes

Open the Mortgage calculator.

To run this calculator, you need a version of Microsoft Excel or its equivalent.

1. Given the details about Meiling and Mortgage 2 above, enter the information asked for in the 'Inputs' section of the calculator. Then select 'Reveal comment' to check you have entered the right information.

Discussion

The figures you enter in the calculator should be as shown in Table 1.

Table 1 Inputting information for Meiling's Mortage 2 quote

Amount to borrow	100,000.00
Terms (years)	25
Interest rate (APR)	3.70%

2. How much will Meiling have to pay each month and how much will she repay in total with Mortgage 2?

Provide your answer...

Discussion

The answers in the Mortgage calculator should look like Table 2. You need to select the monthly payments for the repayment mortgage, which is £508.09.

Table 2 Meiling's quote for Mortgage 2

	Monthly payments	Total repaid
Repayment mortgage	508.09	152,427.88
Interest-only mortgage	303.22	190,967.46

3. Give one advantage and one disadvantage to Meiling of choosing Mortgage 2 rather than Mortgage 1.

Provide your answer...

Discussion

An advantage of Mortgage 2 is that it is cheaper than Mortgage 1. You already know this because its APR is lower than that for Mortgage 1. You can also see that the total repaid is lower for Mortgage 2 (£152,427.88) than for Mortgage 1 (£158,419.68).

A disadvantage of Mortgage 2 is that the monthly payments, which are assumed to be constant throughout at £508.09, are much higher in the first two years than the early payments for the discounted-rate mortgage (assumed to be constant at £406.00 throughout the discount period). If Meiling's budget is stretched in the first couple of years, she might prefer the discounted-rate mortgage even though it is more expensive overall, especially if she plans to switch to another mortgage lender after the end of the discount period (as borrowers commonly do).

3.6 Making home purchase more affordable

Meiling (who you met in Activities 7 and 8) has been lucky or thrifty enough to save a substantial sum for a deposit. Her secure, reasonably well-paid job means she can probably manage the repayments on the mortgage she needs. But what if her circumstances were different? Are there ways to make her home purchase more affordable?

For some people, family, particularly parents, might be willing and able to help. For example, parents who can afford to might agree to act as guarantor for the mortgage loan, which means that they agree to take over the mortgage payments if Meiling couldn't pay them. Governments, housebuilding firms and social landlords may also help.

Activity 9 Help with home buying

Allow about 25 minutes

Videos 1 and 2 below describe two of the types of help available to home buyers in the UK in 2018.

Video 1: Help to buy: how does it work?

Video content is not available in this format.

Video 2 Help for homebuyers in the UK: shared ownership

When you have watched the videos, look at the table, which lists some types of help that may be available for homebuyers. Thinking back over what you have learned in this course so far, select whether each helps with the deposit, reduces the mortgage payments or both.

Interactive content is not available in this format.

Discussion

Here's a summary of the different forms of help with home buying:

- **Lump sum cash gift from parents:** Parents often borrow against their own home or draw money out of their retirement savings to do this. It is typically used where the homebuyer does not have enough money for a deposit. But, by helping with the deposit, less mortgage is needed and so this also helps to reduce the monthly payments.
- **Government equity loan:** In the first video, you saw how the government provides a loan to cover part of the deposit. This enables the homebuyer to put up a smaller deposit and take out a smaller mortgage, reducing the monthly payments. But the government takes a share of the proceeds when the home is sold.
- **Family offset mortgage:** You looked at offset mortgages in Section 3.2 above. With a family offset mortgage, parents or other family members open a savings account with the mortgage lender. The balance of their savings is deducted from the borrower's outstanding mortgage before interest is calculated. This reduces the monthly payments.
- **Shared ownership:** As you saw in the second video, the homebuyer only buys part of the home, reducing the size of both the deposit and the mortgage. The remainder of the home is rented, typically from a social landlord at a subsidised rent. As a result, monthly spending on the sum of the mortgage and rent is lower than spending on the mortgage payments for buying the whole home would have been.

- **Parents act as guarantor:** Mortgage guarantors must usually use their own home as security for the guarantee. With such a guarantee, the mortgage provider may be willing to lend a larger amount, reducing the deposit required, but likely increasing the monthly mortgage payments than otherwise.

3.7 Other ways to cut mortgage costs

In the activity below, you will again use the Mortgage calculator to explore other ways to reduce monthly mortgage payments.

Activity 10 Varying length of mortgages

Allow about 15 minutes

1. In Activity 8, you saw that Meiling was thinking about Mortgage 2 which would allow her to borrow the £100,000 she needs at an APR of 3.70% over a 25 year term. If Meiling were able to get a mortgage at 3.70% APR but over 30 years instead of 25, use the Mortgage calculator to help you explain the effect this would have on her monthly repayments.

Provide your answer...

Discussion

Your entries in the Mortgage calculator should look like this:

Table 3 Inputting information for Meiling's 30-year Mortgage 2 quote

Amount to borrow	1000,000.00
Term (years)	30
Interest rate (APR)	3.70%

Which gives the following answers.

Table 4 Meiling's quote for a 30-year Mortgage 2

	Monthly payments	Total repaid
Repayment mortgage	456.15	164,214.00
Interest-only mortgage	302.78	209,000.80

Looking back to Activity 8, with a 25-year term for her repayment mortgage, Meiling would have to pay £508.09 a month for Mortgage 2. Extending the term to 30 years,

reduces the monthly payments to £456.82. However, because she would have the loan for longer, interest is charged for longer so the total repaid would be higher at £164,456.16 compared with £152,427.88 for the 25-year mortgage. (The APR is the same for both loans because it reflects not just the total paid but also the timing of each payment, with more distant payments worth less.) So another way of reducing her monthly payments would be for Meiling to look for a mortgage with a longer term.

2. Meiling is surprised to see that the monthly payments for a 30-year interest-only mortgage at 3.70% APR are so cheap. Explain why this observation may be misleading.

Provide your answer...

Discussion

The Mortgage calculator shows that, if Meiling borrowed £100,000 at 3.70% APR over 30 years on an interest-only basis, the monthly payments would be much lower at £303.22. However, as you saw in Section 3.1 above, at the end of 30 years she would still owe £100,000. If she sold the house to pay the £100,000 back, she might have nowhere to live. Most likely, she will need to save regularly over the 30 years to build up enough money to pay off the loan and this will increase the amount she has to find each month to cover her housing costs. Also note that the interest-only loan is much more expensive in the long run – the total she would have to pay is over £209,000. Because there is no reduction in the principal owed as the years go by, the amount of interest she would pay is much higher.

4 The household balance sheet

In this section, you're going to look at the impact buying a home has on a household's financial security and resilience. You'll do this by looking at the household balance sheet.

The balance sheet of a household is a record of the household's stock of different assets (things the household owns) and liabilities (things it owes) at a point in time. Analysing this record in different ways can tell us how well the household may be handling its current financial situation and its ability to manage in future if it is hit by financial shocks, for example, as a result of job loss or a rise in interest rates.

First, though, make sure you're aware of what is meant when using key terms such as 'income', 'assets', 'stocks' and 'flows'.

4.1 Income and assets

Figure 12 Assets can take a variety of different forms: (a) diamonds are assets (as are the copyrights in the James Bond movies and books), and so are (b) houses, (c) a higher education qualification, and (d) shares and bonds on the financial markets.

Before examining housing and the balance sheet further, it is important to be certain about the difference between income and wealth:

- **Income** is a flow of money received over a period of time, such as a salary every month, weekly rent from a property, annual interest from savings, or a weekly cash benefit for children. Notice that a flow of money is always associated with a time period.
- **Assets** (also called wealth) are stocks of resources, valued at a point in time. They may have been accumulated over time as a result of saving (setting aside some income) or transferred between people at a point in time (for example through inheritance). A house, a car, the balance in a bank or building society account, investments, personal possessions, a piece of the London 2012 Olympic Cauldron or a Modigliani sculpture are all assets.

There are three main types of asset:

- **Financial assets:** for example, money in a savings account, shares in a company, investments you have in your pension fund. These often produce a stream of income (in the form of, say, interest on savings or dividends from shares).
- **Physical assets:** for example, objects of art and jewellery, cars, land or property. Physical assets usually have to be sold to be transformed into cash, but property is one obvious exception because it can produce income – a rent – without being sold.
- **Intangible assets:** for example, rights to eventually receive a state pension, insurance policies that may pay out on a future date or event, and your 'human capital' (the value of your skills, experience and education that allows you to sell your labour in exchange for earnings). Copyrights in artistic and intellectual creation and patents for inventions are other examples of intangible assets.

One important aspect in thinking about assets is their 'liquidity': the easier it is to turn an asset into cash without losing any value, the more liquid an asset is said to be.

Activity 11 Distinguishing income and assets

Allow about 15 minutes

1. Select which of the following items are income and which of them are assets by placing a tick in the appropriate column.

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2. Looking at the items you identified as assets in question 1, can you say which are more liquid and which less liquid?

Provide your answer...

Discussion

Liquid assets are those that are most easily converted to cash without losing value, while less liquid assets are not so easily converted to cash and/or whose value can change quickly.

The most liquid asset is the instant-access savings account, while the least liquid would be the house and the artwork.

Shares are usually treated as less liquid, since, in most cases, when traded on stock exchanges, they can easily be converted to cash. However, their value can fluctuate rapidly.

3. Can you think of a reason why a household may have a large value of assets and yet may not be as financially secure as first appears?

Provide your answer...

Discussion

Households also have liabilities, that is, money they owe for example to banks or credit card companies, other people and to firms whose services they have used but not yet paid for, and taxes owed but not yet paid. The difference between a household's assets and its liabilities is crucial to understanding the financial strength of a household.

4.2 Balance sheet ratios

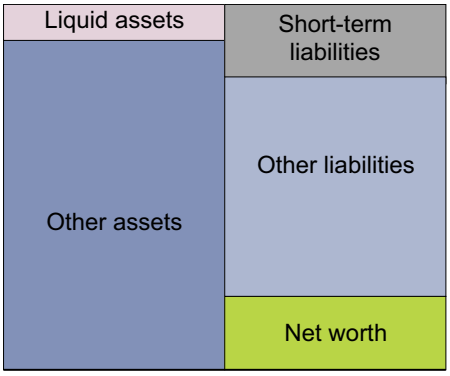


Figure 13 Main elements of the household balance sheet and key ratios

As Figure 13 illustrates, assets can be divided into two broad categories, liquid assets and other assets (that is, those that are less liquid). Liabilities can also be divided into short-term liabilities, typically debt for which repayment is due within one year, and other liabilities, with longer repayment horizon.

This distinction is made in order to derive three important 'ratios' that can tell us something about a household's financial situation:

- **Net worth:** Subtracting the household's total liabilities from its assets gives the measure called the household's net worth. Net worth is the amount of money the household would be left with if all its debts were paid off.
- **Current asset ratio:** This is an indicator of the liquidity position of the household, in other words, the scope for raising cash to pay off all its short-term debts. This depends on the extent to which the household has at least some assets that have high liquidity. The higher the current asset ratio, the better is the household's liquidity situation. If the current asset ratio is less than 1 (that is, short-term liabilities exceed short-term assets), the household would already have a liquidity problem if it wanted to – or had to – clear its short-term liabilities in a hurry (as might be prudent in the event of redundancy or prolonged illness). There's no hard and fast rule, but personal finance experts generally recommend that a good target to aim for is a current asset ratio of 3 or 4.
- **Leverage ratio:** This gives a measure of the household's overall level of indebtedness, expressing total liabilities as a proportion of total assets. It sheds light on two aspects of the household's finances. Firstly, is the household solvent (could it meet all its debts if it had to)? A leverage ratio above 100% indicates that a household's debts exceed all its assets and so technically the household is insolvent. Secondly, it suggests how resilient the household might be if conditions changed – for example, a household with a high leverage ratio could find its spending rising sharply if interest rates were to rise. This could make servicing its debts (keeping up the repayments) difficult or impossible. A low leverage ratio may indicate a comfortable level of solvency and resilience, but that doesn't mean that keeping it low is always a household's most rewarding financial strategy. A relatively high leverage ratio can be beneficial for a household if it borrows to buy assets (or to improve assets like human capital) which then rise in value. But this strategy also carries risks if the assets don't perform as expected.

4.3 The impact of home buying on the balance sheet

Let's now trace the effects on the balance sheet of buying a house using mortgage finance. In the slideshow below, you can use the controls to move through the different stages involved for an example homebuyer, Jack. If you prefer, click on Play to run the stages automatically.

Interactive content is not available in this format.

4.4 A detailed example: before the purchase

Now return to the previous example of Meiling to explore in more detail the impact on the balance sheet of buying a home with a repayment mortgage. You'll use the second financial tool that comes with this course, the Balance sheet analyser.

Before Meiling's house purchase, her finances stood as shown in Table 5. The entries are jumbled in a random order.

Table 5 Meiling's finances

Item	Amount (£)
Current account	2,500
Credit card and store card debts	1,000
Savings accounts (instant access)	50,000
Shares	3,500
Family heirloom (a painting)	7,000
Student loans	6,500

Your task in the next activity will be to sort them more systematically and draw some conclusions from them!

Activity 12 Assessing a simple balance sheet

Allow about 10 minutes

Open the Balance sheet analyser. To run this calculator, you need a version of Microsoft Excel or its equivalent.

Enter the data from Table 5 into the Balance sheet analyser.

Discussion

As shown in Table 6, you should make the following entries, leaving the other amounts set to '0'.

Table 6 Meiling's finances before buying a home

Assets	
Liquid assets	
Cash	0

Current/Deposit account	2,500
Instant access savings account(s)	50,000
Debts owed to you and repayable within one year	0
Total liquid assets	**52,500**

Other assets	
Savings account(s) (locked in for one year or more)	0
Gilts and corporate bonds	0
Investment funds other than savings invested in bonds	0
Shares	3,500
Investment funds other than savings invested in shares	0
Home	0
Other land and buildings	0
Investment funds other than savings invested in property	0
Collectables (e.g. antiques, paintings)	7,000
Debts owed to you and not repayable within one year	0
Other financial assets	0
Total other assets	**10,500**
Total assets	**63,000**

Liabilities

Short-term liabilities	
Overdraft	0
Credit card and store card debts	1,000
Household services used but as yet unbilled	0
Taxes (e.g. income tax, council tax) due but as yet unpaid	0
Other debts you owe and repayable within one year	0
Total short-term liabilities	**1,000**

Other liabilities	
Personal loans	0
Amount outstanding on hire purchase agreements	0
Mortgage	0
Other secured loans	0
Student loans	6,500
Other debts you owe and not repayable within one year	0
Other liabilities	0

Total other liabilities	**6,500**
Total liabilities	**7,500**

2. Comment on Meiling's net worth, current asset ratio and leverage ratio, suggesting whether each one seems high or low, and what this says about her financial position.

Provide your answer...

Discussion

The analyser should be showing the ratios replicated in Table 7.

Table 7 Meiling's financial situation before buying a home

Net worth / wealth	55,500
Current asset ratio	52.50
Leverage ratio	11.90%

Having saved to buy a house, Meiling currently has high financial net worth. Her total assets exceed her total liabilities by £55,500.

Her current asset ratio is very high at 52.5. This means she would be financially very resilient in the face of a sudden shock to her income such as losing her job, with plenty of liquid assets that could be cashed in quickly and used to clear her short-term debts (the credit card balance).

She has low leverage ratio of 11.90%, which suggests that servicing her debts is unlikely to put much strain on her cash flow. (In fact, the potential strain on her cash flow will be even lower than the leverage ratio suggests because student loans are unusual, being structured so that her repayments would stop if her income fell below a set threshold.)

Keep the Balance sheet analyser open. In the next activity, you will adjust the data you've entered so far.

4.5 A detailed example: after the purchase

Now look at what happens to Meiling's balance sheet when she buys the home.

Activity 13 Home buying and the balance sheet

Allow about 10 minutes

Recall that Meiling buys a house costing £141,500 and takes out a mortgage of £100,000. She pays the £41,500 deposit out of her savings account. All the remaining money in the savings account is used up on the up-front costs of buying the home.

1. Starting with the entries you made into the Balance sheet analyser in Activity 12, adjust them for the new information described above. Select 'Reveal answer' to check your entries are correct.

Discussion

Table 8 Meiling's finances after buying a home

Assets	
Liquid assets	
Cash	0
Current/Deposit account	2,500
Instant access savings account(s)	0
Debts owed to you and repayable within one year	0
Total liquid assets	**2,500**

Other assets	
Savings account(s) (locked in for one year or more)	0
Gilts and corporate bonds	0
Investment funds other than savings invested in bonds	0
Shares	3,500
Investment funds other than savings invested in shares	0
Home	141,500
Other land and buildings	0
Investment funds other than savings invested in property	0
Collectables (e.g. antiques, paintings)	7,000
Debts owed to you and not repayable within one year	0
Other financial assets	0
Total other assets	**152,000**
Total assets	**154,500**

Liabilities

Short-term liabilities	
Overdraft	0
Credit card and store card debts	1,000
Household services used but as yet unbilled	0
Taxes (e.g. income tax, council tax) due but as yet unpaid	0
Other debts you owe and repayable within one year	0
Total short-term liabilities	**1,000**

Other liabilities	
Personal loans	0
Amount outstanding on hire purchase agreements	0
Mortgage	100,000
Other secured loans	0
Student loans	6,500
Other debts you owe and not repayable within one year	0
Other liabilities	0
Total other liabilities	**106,500**
Total liabilities	**107,500**

2. Comment on how Meiling's financial position has changed compared to that in Activity 12.

Provide your answer...

Discussion

Meiling's balance sheet now looks rather different. Her liabilities have increased by £100,000, the amount of the mortgage.

Her assets have also increased by a net amount of £91,500, with the home adding £141,500, while paying the deposit and home-buying costs out of savings has meant a decrease of £50,000 in them. (£141,500 – £50,000 = £91,500).

These changes have had an effect on her key balance sheet ratios, as shown in Table 11.

Table 9 Meiling's financial situation before and after buying a home

	Before	After
Net worth / wealth	55,500	47,000
Current asset ratio	52.50	2.50
Leverage ratio	11.90%	69.58%

Her financial net worth has fallen slightly because she has had to spend some of her savings on the up-front costs of buying the home. But she still has a healthy level of positive net worth.

Her current asset ratio has fallen dramatically from 52.5 to 2.5. While this is above 1, meaning she could still clear her short-term debts in full in a hurry if need be, it is below the level of 3 or 4 that experts recommend. The fall has occurred because she has swapped most of her liquid savings for a much less liquid asset, the home.

Meiling's leverage ratio has increased almost six-fold owing to a large increase in liabilities because of the mortgage. The ratio is still much less than 100%, so she is solvent. However, it suggests that, in theory, servicing her debts could put significant pressure on her cash flow. Whether it does in practice depends on interest rates, not just the large amount of the debt.

4.6 Interest-only mortgages and the balance sheet

You have seen in the interactive activity in Section 4.3 that, with a repayment mortgage, income is used to pay off part of the mortgage loan each month. This reduces the mortgage liability over time. But what is the effect on assets and liabilities of an interest-only mortgage?

Activity 14 Balance sheet with interest-only mortgage

Allow about 10 minutes

Piotr buys a home with an interest-only mortgage and also starts to save regularly into an investment plan that he will use to pay off the mortgage at the end of its term.

1. Select, from the following options, two effects of this arrangement on Piotr's balance sheet **at the start** of the mortgage term.

   - ☐ No change in liabilities
   - ☐ An increase in liabilities
   - ☐ No change in assets
   - ☐ An increase in assets

Discussion

The correct answers are:

- An increase in liabilities
- An increase in assets

Assets increase by the value of the home. However, this is offset by an increase in liabilities.

2. Select, from the following options, two effects of this arrangement on Piotr's balance sheet **during** the mortgage term.

   - ☐ Monthly reduction in liabilities
   - ☐ No monthly reduction in liabilities
   - ☐ Monthly increase in assets
   - ☐ No monthly increase in assets

Discussion

The correct answers are:

- No monthly reduction in liabilities
- Monthly increase in assets

With an interest-only mortgage, there is no monthly reduction in liabilities during the period of the loan. The monthly payments are made up only of interest; none of the loan is paid off.

There will be a monthly increase in assets as payments are made into the investment plan. (Although, if the value of the investments can go up and down, we cannot rule out a fall in value in some months.)

3. Select, from the following options, two effects of this arrangement on Piotr's balance sheet **at the end of** the mortgage term.

   - ☐ A reduction in liabilities
   - ☐ No change in liabilities
   - ☐ A reduction in assets
   - ☐ No change in assets

Discussion

The correct answers are:

- A reduction in liabilities
- A reduction in assets

At the end of the mortgage term, both assets and liabilities will reduce as the loan is paid off by cashing in the investment scheme. However, there will usually be no guarantee that the value of the investments is sufficient to pay off the loan in full.

5 What makes house prices change?

As house prices are such a major influence on household finances, it is useful to have an understanding of how they are determined. This may help you to be able to make well-informed judgements about how prices may respond to a wide range of possible future events.

What brings about changes in house prices, for example such as those you looked at earlier in this course? The answer is largely to do with the forces of demand and supply.

Economists have a formal definition of these terms:

- 'Demand' means the quantity of a good or service that buyers wish to purchase over a specified period of time.
- 'Supply' means the quantity of a good or service that sellers wish to sell over a specified period of time.

The idea that high demand and restricted supply lead to price rises whilst slack demand and over-supply lead to price falls is a familiar and perhaps an intuitive one, whether looking at houses, oil, coffee or any other type of goods or services. Economists, however, develop this insight more formally and make use of what is known as the demand-and-supply model. A model is a device for simplifying some aspect of the real world to help our understanding. Both natural scientists and social scientists, like economists, use modelling to help them to explain complex processes and make predictions about likely outcomes. A common example of modelling is forecasting the weather.

The remainder of this section develops the model of demand and supply in the context of the housing market, and uses it to reconsider the question we asked earlier: 'are house prices too high?'.

5.1 A model of the housing market

Figure 14 The model here is a simplified version of the housing market.

Because a model is a simplified picture of some aspect of the real world, when we model the housing market here, we are going to ignore many of the complexities of the actual markets for housing. These complexities include:

- regional variations
- the distinction between new-build homes and currently occupied properties offered for sale
- the divisions that in reality exist between the markets for properties in widely different price bands.

We ignore these complexities in the interests of gaining insight into the general principles of the impact of demand and supply on property pricing.

However, in order to give a realistic sense of such a simple model, you could imagine a medium size, relatively newly built town where all the houses are the same, with all potential buyers paying an identical price – which can however vary up and down at different times. On the supply side, there might be a number of sellers wanting to move out, depending on average market prices and some new houses could be built if conditions are favourable.

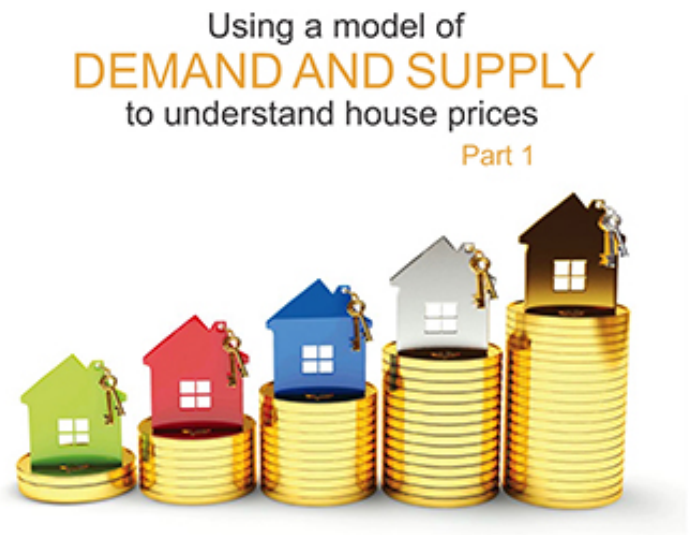
Activity 15 Identifying equilibrium price and quantity

Allow about 30 minutes

Video 3 is the first part of an explanation of the model step by step, in order to build your understanding of the main concepts used in a demand-and-supply model. Watch the video now, then answer the question that follows.

Video content is not available in this format.

Video 3: Using a model of demand and supply to understand house prices – Part 1



Open the interactive figure below in a new tab or window.

Drag and drop the letters to the corresponding point of the diagram that fits best the description.

Interactive content is not available in this format.
How buyers and sellers interact

Discussion

Point B corresponds to the equilibrium price that satisfies the same quantity (number) of buyers and sellers.

The excess number of potential sellers (quantity D minus B) have dropped out as they would have liked to sell at a higher price than at B and the excess number of potential buyers (quantity A minus B) have also dropped out as they wanted a lower price than at B.

Potential buyers at C would have been happy to buy at price C but as there were too many potential sellers at that price (price at C and price at D is the same: same horizontal dashed line) so that the price was reduced, attracting more potential buyers and making some potential buyers drop out until the number of willing buyers increased and the number of willing sellers decreased and they reached the equilibrium position B at a lower price.

5.2 The housing market – external influences

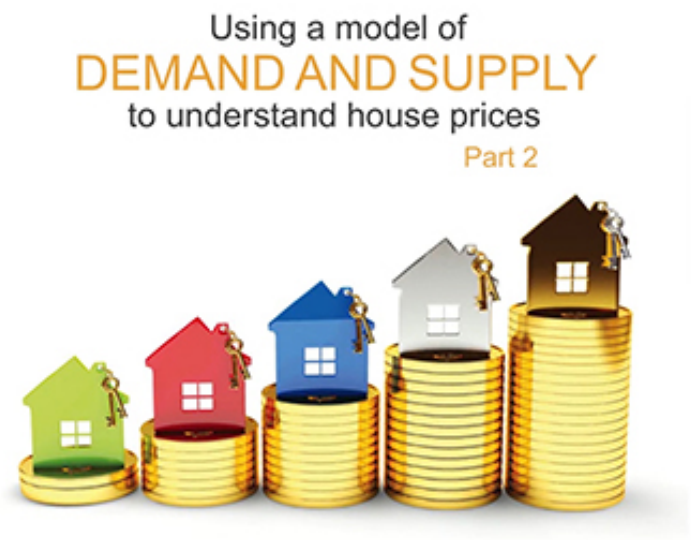
Now that you have examined how house prices and quantities of buyers and sellers influence each other, it is also possible to look at external factors affecting either prices or quantities demanded and supplied, which may change the equilibrium position.

Activity 16 The effect of selected changes on the housing market

Allow about 30 minutes

Watch Video 4, which is the second part of an explanation of the model step by step. It looks at additional factors that may affect the market equilibrium, starting from where we left the model at the end of Video 3. Once you have viewed the video, answer the following question.

Video content is not available in this format.
Video 4: Using a model of demand and supply to understand house prices – Part 2



Look at Figure 15. The three statements on the right are positioned against the wrong diagrams. Drag each of the statements to the correct demand-and-supply diagram. When you are happy with your answers, select Submit.

Interactive content is not available in this format.

Figure 15 External effects on house prices and quantities demanded and supplied

5.3 Demand and supply in action

In Figure 3 you saw that real house prices in different countries went up and down between 2006 and 2017, albeit with an upward trend after 2010 in many countries. In the next activity you'll look at news items describing some of those house price movements and try to identify whether the cause was due to changes affecting supply, demand or both.

Activity 17 Effect of demand and supply on house prices in different markets

Allow about 20 minutes

Select each headline below. For each article that goes with the headline, identify whether the factors mentioned reduce or increase demand for housing, supply of housing, or both, and describe briefly the associated impact on house prices.

Article 1: UK house prices fell in August, Halifax says

House prices fell in August, amid signs of a slowdown in sales over the summer, according to the latest figures from the UK's biggest lender.

Prices fell by 0.2% over the month to an average of £213,930, Halifax said. The drop followed a 1.1% fall in July, and pushed the annual rate of growth down to 6.9%...

Activity in the housing market has dropped off since the early months of the year, when investors brought forward purchases to beat new stamp duty rates for second homes introduced on 1 April.

Since the Brexit vote in June, there have also been signs that buyers and sellers are holding off from entering the market, with the Royal Institution of Chartered Surveyors (RICS) forecasting a sharp fall in sales as a result…

Jonathan Hopper, managing director of Garrington Property Finders, which helps wealthy clients buy homes in the South-east, said: "…With both supply and demand falling, the result is a benign stalemate – with average prices creeping up as the number of sales falls.

(Osborne, 2016)

Article 2: Brazil Real Estate To Fall 'Deeper' In 2017

Article 3: Ticking time-bomb lies under Berlin's property market

…Between 2015 and 2020 household numbers are forecast to increase by 74,000, according to the city's statistics office. Over that time, Ziegert, the estate agent, estimates that the city needs to build 20,000 new homes per year. The number of homes completed in 2015 was 10,722; over the three years before, the average was fewer than 7,000.

This scarcity has helped drive recent price gains. According to Ziegert, average prices for prime property (the top 5 per cent of the market) gained 10 per cent in the three months to June, compared with a year before. They are up 27 per cent on the same period in 2014.

…Buyers of mid-market homes, meanwhile, could be in for steep price rises. A February report from the Cologne Institute for Economic Research found that only 20 per cent of the two-bedroom flats required to satisfy demand between 2011 and 2015 had actually been built.

…Making up the shortfall in this bracket will be no easy task. Building codes — especially those enforcing energy efficiency — are getting stricter every year, says Fisher. Along with rising land prices, this is making it harder for developers to make money out of building mid-level homes.

(Cox , 2017)

Provide your answer...

Discussion

In the first article, lower demand in the UK, which reduces pressure on prices, is explained by the end of rush to beat new rules on stamp duty for second homes. In the South-East, demand and supply are both falling but demand is stronger than supply, so prices are rising slightly rather than falling.

The second article explains that lower demand for housing in Brazil is due to economic recession, high unemployment and job insecurity. This creates downward pressure on

householders' incomes, in parallel with a reduction in availability of mortgage finance and subsidies by the state. As demand shifts to the left, prices are pushed down. However the article also mentions factors that may limit falls in prices, owing to limited supply of housing, in Rio and Sao Paulo (although the factors causing such limited supply are not mentioned).

In the third article, it's suggested that higher demand for housing from an increasing Berlin population is pushing up prices as supply remains limited owing to pace of development not keeping up. Both top-end and mid-market property prices are on a steep rise. On the supply side, building more mid-market properties seems to be less attractive for developers owing to regulatory factors.

Conclusion

In this free course, *Rent or buy? The challenge of access to housing*, you have:

- explored why people aspire to buy their own home and the risks involved
- considered whether buying a home is affordable and how this relates to the wider economic, social and political climate and in turn what affects house prices
- looked at how home ownership is linked to the financial balance sheet, and different measures to summarise a household's financial position in relation to assets and liabilities
- examined a simple model of supply and demand for housing to visualise how different factors can influence house prices and the number of sellers and buyers on a specific market.

Although choices about housing are individual, tastes and conventions also reflect variations in culture and norms around the world. Our homes have a deep significance for us as well as playing a very large role in our financial arrangements.

For these reasons, decisions about where to live and whether to rent or buy are some of the most important that we make. These decisions are made within an economic and social context and are often constrained by this context. The volatility of property prices under the forces of demand and supply can mean our financial position fluctuates in ways we cannot control. Rising real prices in recent years have meant there is a large generational difference in tenure, with younger people more likely to be renters than owner-occupiers. Those who are longstanding owner-occupiers have seen their investments in property grow. For many households however, the dream of owning a property remains unachievable as they lack sufficient resources even to start building a deposit, and often rely on subsidised rent by the government to be able to live under a roof. For many more still, in less developed countries, households may own their home de facto, even if that home is a makeshift shelter in a slum.

We hear a lot in the media about a housing crisis where supply falls short of demand, and there is no doubt that government policy needs to address this so that everyone can find somewhere affordable and decent to live.

This OpenLearn course is an adapted extract from the Open University course DB125 *You and your money*.

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