findings

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Explaining regional house prices and consumption

The importance of housing impacts on the national economy has been demonstrated in a number of recent JRF studies. This analysis of house prices and consumer spending in the eleven standard UK regions between 1972 and 1991 finds that the interaction of the housing market and the economy at the regional level is dramatic and helps explain differences in regional economic performance. The study by John Muellbauer, Nuffield College, Oxford, and Anthony Murphy, University College, Dublin, indicates that:

- **In addition to income, demography and housing supply, financial and speculative factors play an important role in explaining the volatility of UK house prices and that the impact of these differs in each region.**

- **One important reason that regional differences in house prices exceed those in incomes is that the 'income elasticity' for housing is about two. This means that a ten per cent increase in the income differential leads to a twenty per cent increase in house price differences.**

- **Movements in regional house prices tend to be self-reinforcing because:**
  - **Expectations of the financial gains or losses to be had from changing house values tend to extrapolate past capital gains or losses.**
  - **Higher house prices increase deposits for trading up while lower house prices or negative equity do the opposite.**
  - **Rising house prices feed into incomes; they put pressure on pay, they increase the available collateral for small businesses, and greater housing wealth stimulates consumption of locally produced goods and services, generating local income and employment. Higher incomes feed back into higher house prices.**

- **South East leadership in the house price cycle is partly a result of financial factors having greater impact than elsewhere.**

- **Financial liberalisation has tended to increase both the spendability of illiquid wealth and the drag on spending from debt.**

- **Changes in illiquid assets such as housing and stocks and shares had an increasing impact on consumption over the eighties and now has about a third of the effect from changes in net liquid assets.**

- **Every £ of debt now decreases spending about three times as much as every £ of housing or other illiquid wealth increases it.**

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Housing and the economy

This study forms part of the large JRF programme of research on Housing and the National Economy. It involved building regional econometric models for the eleven standard regions of the UK to explain house prices and consumption at the regional level. The models cover the period 1972 to 1991.

House prices

Changes in house prices can best be explained by changes in factors that affect demand, given the regional supply of housing - as long as account is taken of time-lags and the possibility that prices may not clear the market in the very short run.

The models built for this project suggest that regional differences in house prices from the UK average are related to the following factors within the region and adjoining regions:

- income;
- the rate of return attained from owner-occupation (adjusted for time lags);
- the rate of acceleration of the unemployment rate in the South East (with a different impact in different regions).

and within the region:

- regional population relative to the regional housing stock (both owner-occupied and rental);
- the cost of servicing mortgage debt relative to income;
- an index of financial liberalisation (with a different impact in different regions);
- the mortgage stock/income ratio;
- income inequality.

Using the models allows some answers to five questions that are particularly in need of explanation:

1. why geographical differences in house-prices are so much greater than those in income;
2. why the North-South difference in house prices widened in the 1980s;
3. why the South leads the house-price cycle;
4. why upswings in house prices tend to be self-reinforcing;
5. why the downswing in the South East was sharper than elsewhere in the economy.

Why regional differences in house prices exceed those in incomes

One important reason for this is that the ‘income elasticity’ for housing is about two. This means that a ten per cent increase in the income differential leads to a twenty per cent increase in house price differences.

Why the North-South difference in house prices widened in the 1980s

Financial factors, represented in the regional models by the mortgage stock-to-income ratio and the index of financial liberalisation, boosted house prices in the South East in particular. The differential impact of the index of financial liberalisation probably also proxies the rise in employment in financial services, which stimulates housing demand partly because of the prevalence of subsidised mortgages for employees in this sector.

The rise in relative incomes explains only part of the house price increases in the South East. Expectations of price rises based on recent experience is also very important in explaining house price increases in the South East in that a rate-of-return measure based on the current year’s interest rate and the previous year’s appreciation in the price of houses is very significant. This means that once the housing market begins to rise, this rise tends to be self-reinforcing.

Why the South East leads the house-price cycle

For some regions, especially the South West and East Anglia which adjoin the South East, the rate-of-return effect in *adjoining* regions dominates the *within*-region effect. Commuting and relocation possibilities transmit house price shocks across regions. South East leadership is partly the result of the greater impact of financial factors in the South East and the role played by financial shocks in the house-price cycle.

Why upswings in house prices tend to be self-reinforcing

In addition to the rate-of-return effect and the effect of higher house prices in lubricating the trading-up process, house price increases are self-reinforcing because, in the short run, regional incomes rise following regional house price appreciation. This occurs for a variety of reasons:

- House price increases affect the local cost of living and this is eventually reflected in pay.
- Higher house prices discourage people from living in the region, thus restricting the supply of

labour and putting upward pressure on pay.

- Greater levels of housing collateral finance small businesses.
- Feelings of greater wealth encourage consumption which feeds back into regional incomes by increasing demand for locally produced goods and services.

Why the downswing in the South East was sharper than elsewhere in the economy

In addition to the rate-of-return effects, interest rates also affect house prices weighted by the previous year's mortgage stock-to-income ratio. This ratio increased particularly sharply in the southern regions which experienced sharp rises in indebtedness in the 1980s. The dramatic increases in interest rates between 1988 and 1990 therefore impacted particularly sharply on these regions. (This also helps explain why falls in interest rates since 1990 have resulted in the South East beginning to lead some house price recovery.)

Housing wealth, mortgage debt and consumption

An analysis of regional consumer spending between 1972 and 1991 confirms the impact of housing wealth and mortgage debt on consumption. Estimates of regional housing wealth have been made from data on the regional owner-occupied housing stock and regional house prices. Estimates of regional mortgage stock have been made by apportioning the national mortgage stock on the basis of regional shares of mortgage payments. Other assets and debts have been apportioned on the basis of regional shares of property income in total income.

To examine the impact of the housing market on consumer expenditure, a comprehensive regional model has been built which gives appropriate weight to all the other influences. This finds that consumer expenditure at the regional level responds to income and wealth changes, with 45 per cent of the effects being felt after one year and 70 per cent within two years. This is somewhat slower than for the UK as a whole.

Housing influences on consumption

Changes in illiquid assets such as housing and stocks and shares now have about a third of the effect on consumption from changes in net liquid assets. Financial liberalisation appears to have increased both the spendability of illiquid wealth and the drag on spending from debt.

As real house prices increase there is an increase in housing wealth, which drives up consumer spending. However, there is an offsetting negative effect in that first-time buyers and prospective first-time buyers have to pay more or save more as a result of the price rises. This negative effect, however, appears to be weaker than in other countries.

For given interest rates, lenders have somewhat tightened up credit and are taking a more systematic approach to risk assessment. This partial reversal of financial liberalisation will imply a lower overall increase in consumption for each percentage point increase in real house prices than occurred in the late 1980s.

The change in interest rates on borrowing, weighted by the debt/income ratio, also has a significant impact on consumption. Consumer spending in the South East, South West and East Anglia, where debt/income ratios rose dramatically in the mid-1980s was therefore most heavily cut when interest rates rose between 1988 and 1990, and was then held down further by the massive fall in real asset values, particularly in housing.

Non-housing influences on consumption

An important influence on consumption in each region in the short run is the rate of change of unemployment within the region *and* in the South East. This suggests some leading indicator role for the South East in consumption as well as in house prices. However, the consumption model also incorporates important income expectations effects.

Doubts

This research on regional consumption and on regional house prices throws major doubts on the CSO's regional accounts measures of personal disposable income. The New Earnings Survey data gives a better explanation of changes in consumption and house prices due to changes in income.

About the study

The major sources of data used in the model for this project were: CSO regional accounts data, New Earnings Survey data, CSO personal sector wealth data, DoE (Department of the Environment) data on regional house prices, housing stocks, and population, FES (Family Expenditure Survey) and GHS (General Household Survey) on regional mortgage payments, Department of Employment regional unemployment data.

Further information

Contact John Muellbauer, Nuffield College, Oxford OX1 1NF, Fax 0865- 278621 for copies of Explaining Regional House Prices in the UK and Explaining Regional Consumption in the UK by John Muellbauer, Nuffield College, Oxford and Anthony Murphy, University College, Dublin.

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For further details on these and other *Findings* contact Sally Corrie on 0904 654328 (direct line for publication queries only).

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