

## Research reveals likely housing winners and losers

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There is a great deal of uncertainty and speculation about the direction of the housing market in the UK and the USA -- both for home-owners and renters. Social Scientists funded by the Economic and Social Research Council have devised a mathematical model to provide some foresight into changes into the housing market. The model could be beneficial to central banks and ministries of finance that have an interest in the effects of the housing market on their economies.

The Financial Markets Group at the London School of Economics carried out the research. It developed a life-cycle model to investigate how prices of housing (purchasing and renting), the overall economy and wealth distribution react to changes in technology and financial conditions.

The project's theoretical model was solved numerically in Fortran 90 - a programming language ideally suited to numeric computation. The data came from the US Survey of Consumer Finances and the aggregate data was derived from the US Flow of Funds Accounts and the National Income and Product Accounts.

There were a number of conclusions from the investigation, including:

• stricter limitations on land development result in less residential building, which tends to push up rental and purchase prices;



- availability of land for residential development is more important than availability of capital in determining house price trends, especially in built up urban and metropolitan areas;
- people saving to buy a house in a market with less abundant land need larger down payments relative to their income. They take longer to save up and so buy a house later in life - resulting in lower home-ownership rates;
- where land availability is the important factor in the rate of house building, there is greater sensitivity of house prices and rents to the availability of jobs and world interest rates;
- surprisingly, relaxing borrowing constraints had little impact on housing prices (house purchase and rentals), but did increase home-ownership rates;
- as a general rule, when house prices rise, house buyers such as young worker-tenants lose out, whereas house sellers such as retiree homeowners make gains.

"The research illustrates how constraints on the supply of land, for instance through zoning restrictions, can have major implications for household welfare through their effect on house prices and individual home ownership," said Dr Alex Michaelides who led the research. "Our work can also be used to determine more accurately the component of house prices driven by fundamentals. It can therefore provide a better understanding of the house price component that can be attributed to a housing bubble, which can be a useful policy tool."

The model mirrored the life-cycle choices of homeowners and renters and was used to:



- provide a detailed account of the impact land availability has on the <u>housing market</u>, including land shortages in cities, and restrictions on residential development;
- investigate the housing decisions made by people at different stages in their lives, against a backdrop of movement in the housing market due to factors such as availability of credit, changing interest rates, employment opportunities and growth in the economy;
- evaluate how people's standard of living and welfare respond to such fluctuating factors.

As a result of this research the model can be used to better understand drivers and fluctuations in the housing market.

## Provided by Economic & Social Research Council

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