

NOTEDETERMINANTS OF HOUSE PRICES

The purpose of this note is to make available the results of a statistical study which sought to examine the determinants of house prices in particular areas of Scotland over two different time periods.

To this end, a sample of 150 house purchases effected over the periods August 1973 to December 1974 and January 1975 to October 1976 in the Kilmarnock and Loudoun District of Strathclyde Region was employed. This sample encompassed four types of property, i.e. first floor flats (24%), ground floor flats (6%), semi-detached houses (43%) and detached houses (24%) while prices ranged from £2,310 to £36,000 with a median price of £8,800. The determinants examined were for the most part physical attributes of the individual houses and included:

1. Number of public rooms
2. Number of bedrooms
3. Type of property, i.e. flat, detached house etc.
4. Existence and type of central heating, i.e. nil, oil, gas, coal, electricity
5. Existence and type of garage, i.e. nil, timber, brick.
6. Estate Agent's subjective evaluation of the decorative condition of the house at the time of sale
7. Location of the property. To quantify this factor, a sample of 25 individuals was asked to grade each location on a scale from 1-5 according to whether they considered the location to be very poor, fair, good, very good, or excellent. The average of the 25 values for each location was then used as an index of the area's attractiveness.
8. Building societies' mortgage rate actually prevailing at the time of purchase.

In reality, of course, many other factors will affect the relative attractiveness of a particular property such as the size of the land associated with it, built-in features of kitchen, bathroom, existence of double-glazing etc., and external influences such as the relationship between incomes and house prices at that particular time and the relative cost of similar rented accommodation are important. Unfortunately, the size of the sample and the problem of measurement prevented the inclusion of all relevant variables. Thus the eight factors defined above were employed as the independent variables in

a cross-sectional multiple regression analysis in which the dependent variable was house price. The underlying theoretical model and regression results are not reported here but are available from the author on request. A number of interesting results emerged from this study.

Notably, the relative importance of different factors is in general very stable from period to period as shown in Table 6, i.e. buyers tend to attach the same relative importance to different factors over time and it would appear that location is the most important variable (rank 1 in both periods)

Table 6 Ranking of housing variables

Variables	1	2	3	4	5	6	7	8
Ranking in Period 1	2	3	4	7	5	6	1	8
Ranking in Period 2	5	3	2	6	4	7	1	8

NB. Observations are ranked in descending order.

An equally interesting fact to emerge is that the mortgage rate does have a statistically significant inverse relationship to price and once again it is ranked the same by buyers in both periods. Lower rates imply lower mortgage repayments suggesting that buyers can afford to pay higher prices subject to the availability of mortgage funds. When funds are scarce, mortgages are rationed and buyers can strike harder bargains although, as argued earlier, there may well be an initial surge in prices. A fall in the rate and a freer lending policy would however exert an upward pressure on prices since the housing stock can only be increased after a considerable time. However, the important point is that an acceleration of house prices does mean greater hardship for potential first time purchasers while the apparent benefit of tax free capital gains for existing owners is largely notional.

#### Acknowledgements

The author gratefully acknowledges the co-operation of Mr William MacDonald of MacDonald-Kamming Properties Limited in providing the necessary data for this study. In addition he thanks Mr David Bell of the Fraser of Allander Institute for his econometric advice.