A Methodology for the Assessment of the Gross National Land Value of Mainland Britain

by F. J. Jones

THE PRINCIPAL PROBLEM associated with the assessment of land values in the UK is that official statistics dealing with the subject normally use global property values which combine the value of land with that of buildings. Thus a method has to be devised for separating these two factors which must, if a proper economic analysis is to be conducted, always be considered as distinct. Furthermore, there are three broad categories of land to be taken into account: agricultural land, housing land, and industrial and commercial land.

Agricultural land offers no special difficulties of assessment because in this case alone Inland Revenue Statistics distinguish farm land from farm buildings and produce two separate lists of values. On the other hand, the problems associated with the areas of housing, and with industrial and commercial land have in the past proved progressively more difficult to deal with because these categories are calculated exclusively in the form of composite land and building assessments.

However, with housing land a hitherto unsuspected shortcut to an approximate estimate of land value for the whole of mainland Britain is now available, since new 'domestic' land sites are valued annually on what amounts to a sample basis. Similarly, the annual average density of house-building is provided, so that the average price per plot can be calculated once we know the number of houses in existence. Consequently, if we presuppose that the range of new buildings provides the same variety of land values as the range of land for older buildings, the regular updating of housing land values is simply a matter of multiplying annual average plot prices by the total number of houses.

If this seems over-simplistic, certain powerful checks are available. The Land Registry Quarterly Report provides an average cost of houses in England and Wales. We can therefore check the extra costs of labour and materials each year which is also provided and make an allowance for inflation. Then we have simply to deduct this regularly updated average building cost per house from the cost of an average house on the market, and land value per house per year is left as a residue.

It is also possible to carry out the same operation with mortgage data. These figures are supplied by the Building Societies and published in the Stationery Office's Housing and Construction reports. They provide a range of average house prices in just the same way as the Land Registry but, significantly, they are based on different sources. Moreover, an annual index of price variations for development land for housing also appears in the Housing & Construction data. It extends from 1982 to 1992 in the most recent issue. So by applying these indices to the base year's value we can obtain an incremental increase or decrease in land prices year by year. In this way the movement of land prices is dynamized and a picture of trends provided over time.

The problems associated with industrial and commercial land are much more complex. All that we have available in a comprehensive form are the non-domestic rating figures, but these fortunately include a global total for all the non-domestic rates levied annually in the UK. The major problem is once again to separate land rents from building returns.

Many types of supportive figures are also floated in commercial publications, ranging from costs per square metre in commercial centres for shops and offices to the prices of single or multiple industrial sites; but these are neither comprehensive enough nor sufficiently uncontaminated by capital returns on buildings to provide anything like an overall picture.

HOWEVER, IT IS theoretically justifiable to apply, at least temporarily, the housing land index to non-domestic rates, and this in two ways: first in the manner in which it is applied to housing to update land values annually from a fixed base; and second, in a global sense to equate the proportion of land to buildings in the non-domestic field with the known annual ratios for housing. In short, the ratio of land value to building value in both cases should in a free market be strictly proportional; and, granted the disproportionate number of offices and warehouses to industrial buildings even in the non-domestic area, the gap between the two ratios should not be very wide. Hence our formula is that non-domestic land values as a proportion of capitalized non-domestic rates are broadly equal or proportionate to housing land values as a proportion of global domestic property values.

I SHALL PUT forward here two slightly varying methodologies for producing the necessary non-domestic statistics. The first is the one adumbrated above, namely, that once we are in possession of an initial total valuation either in rental or capitalized terms from the non-domestic rate assessments, we could run the indexed slide-rule for housing over these calculations and still produce reasonably satisfactory results. The graph of the index of land values for housing in England and Wales is given in figure 1.

Following our earlier explained methodology for housing land assessments, such a guideline clearly offers us a way of revaluing all housing land annually in retrospect. There is, however, one proviso: it is that the cost of land on the open market is assumed to be the same as all other land already utilised in the same way for housing purposes in the past. This proviso seems to be a reasonable assumption in free-market conditions for all land, whether domestic or non-domestic in its zoning.

Let us now revert to our approach to the industrial and commercial sectors set out earlier. The only sure figures that we have about the sector is, we recall, the global value of non-domestic rates and their capitalization as total

land and building values. However, even using official industrial and commercial statistics alone, we can go somewhat further than this, because we have the range of categories and numbers of non-domestic buildings in them which the global data cover. We also have the total amount of rates obtained from each category, such as shops, offices, warehouses, leisure centres etc. If the highest rates are levied on the most valuable sites, a scale can be devised for all other relative land values, with the highest categories occupying the prime sites and so on down the scale. By applying such a scale, the following tentative figures representing proportions of land value to building value in the non-domestic field emerge: shops 60%, offices 40%, factories 40%, warehouses 30%; miscellaneous (other) 30%. From these figures a global but non-indexed estimate can be deduced of non-domestic land values, though the results cannot pretend to be as accurate as those of the housing market. For this reason the first method will be adopted in all future calculations, although our second graph to be presented later is based on earlier results calculated by the second method.

Finally some additional areas of non-domestic rating for industry and communications have also proved difficult. For North Sea oil and gas-fields I have been forced to rely on the rather derisory figures gained from government royalties and taxes. Likewise for roads I have had to accept the equally derisory revenue from vehicle road licences. In both these areas there is therefore a significant shortfall in potential land value. The same can be said for some other minerals besides oil; but, on the other hand, quarries, mines, railways and other similar enterprises are included in non-domestic rates.

The results of this unavoidable indirect approach are perhaps at best approximate, yet they nevertheless reveal the explosive nature of the land-value graphs which derive from them. They show that capitalist economies all have similar disruptive 'tigers in their tanks' due to the speculative land values which lurk beneath the surfaces of their economies. For the most part these disruptive forces - which inevitably trigger periodic booms and slumps - are concealed from view in the UK by being subsumed under the innocuous subhead of property values. The almost steady-state facade which results is thus falsely reassuring, and it so reduces the impact of the land cycle

that for much of the time it hardly seems to exist.

I have measured the worldwide effect of the land cycle on selected capitalist economies in a recent book, *The Chaos Makers* (Othila Press, 1997), written in collaboration with Fred Harrison. It compares the annual ratios of land-value fluctuations with the parallel fluctuations of the corresponding figures for GNP in all the sampled economies. These ratios imply the existence of dramatic fluctuations in investment in all cases, sometimes resulting in large swings towards land speculation at the expense of industry and commerce and at other times in similar swings towards productive industry at the expense of land values.

Such swings act as a barometer for the prediction of booms and slumps because they reveal crisis points emerging periodically as gross imbalances in investment trends. Moreover, the swings towards higher land prices are accompanied by rises in interest rates, because they occur at a phase in the cycle in which profits from prolonged speculative dealings in land become widespread. The reason for this is that speculative land-fever leads to an increased demand for speculative investment capital to fuel it, thereby depriving the entrepreneur of reasonably-priced development capital. As a result, capitalist economies periodically decline into deep recessions, through a relative lack of productive demand. This demand is replaced by a plethora of passive demand

bidding up the value of real estate.

By means of catastrophe theory (a mathematical method of delineating discontinuous processes) it can be demonstrated that these swings are inevitable unless an annual land-tax is applied as a type of governor to control the economic machine. Figure 2 compares the ratios of gross land-values for mainland UK with GNP. In interpreting it, one should, however, bear in mind that both booms and slumps are regarded as catastrophes since they are equally disruptive.

The additional parameter of a tax on the full annual economic values of land spread over the entire economy in these situations would according to the prescriptions of catastrophe theory rapidly restore the normal equilibrium between land and entrepreneurial investment and pave the way for a progressive economic system to emerge. Such a tax would thus have eliminated in the present instance the prolonged slump of the early nineties. Furthermore, if the tax were permanently levied as a principal feature of fiscal policy, it would ensure that the economy would no longer be troubled by slumps. It would undergo only the relatively minor dislocations occurring when major new techniques, such as the computer revolution, appear on the market and replace preceding technologies. However, after a short period of re-adjustment these innovations tend to produce far more jobs than those that have previously been lost.

FIGURE I

LAND INDICES - PRIVATE HOUSING SECTOR

England and Wales (1982 - 1992)

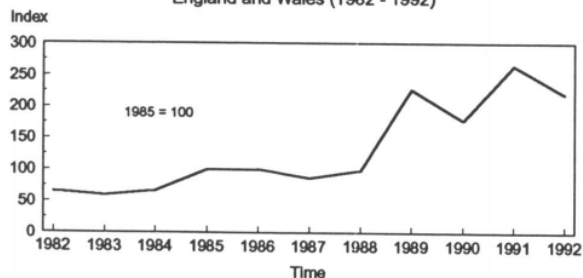
Source: Housing & Construction (HMSO) 1996, 9. 3

FIGURE II

Land values for UK less Northern Ireland

UK gross land value set against GNP

F.J.Jones & F. Harrison, The Chaos Makers, p.85.