

Estimating household incomes

By Bob Line

Estimating incomes is a perennial problem for many social researchers, and surveys and incomes data can be expensive and take considerable resources to commission and manage. But maybe there is now a possibility that generally available free data sources could be used for the construction of a model giving both averages and profiles at a detailed spatial levels.

The components are :-

Census data at Output Area level:-

- table CAS46 – socio-economic classification (NS-SeC) of Household Reference Person (HRP) by tenure
- table CAS118, which is also about car use, and gives number of workers per household

This may be a bit small for many purposes, so aggregating them to whatever boundaries you want, like ward, parish, or your own neighbourhood structure, is often helpful.

Then link this occupation type with ASHE (Annual Survey of Hours and Earnings) to attribute a combined household income to the socio-economic profile for each aggregated spatial unit.

ASHE (Annual Survey of Hours and Earnings)

This gives a regional breakdown of earnings by occupation type, and a local authority breakdown. So a typical earnings level can be attributed to each socio-economic group from the regional tables, and this then weighted by any substantial local authority variation.

The average number of workers per household, or if required even more accurate estimates of numbers of earners in each household in each Output Area, can thus be used to derive broad household incomes. The socio-economic classification can also allow a broad split for other factors, such as tenure or employment.

ONS produce a matrix which gives the combinations of SOC codes and Employment Status, available at :- http://www.statistics.gov.uk/methods_quality/ns_sec/derivation_tables.asp

This says "NS-SEC category is allocated by using a combination of information about occupation coded to occupational unit group (OUG) level of the Standard Occupational Classification 2000, plus information about employment status and size of organisation in the form of an employment status variable."

Income from other sources such as benefits and pensions is another problem, but the most common benefits can be added in from current rates and attributed to the socio-economic groups most likely to be on benefits. This of course makes it all more complicated, and spreadsheets bigger, and many versions and refinements may be needed to get something that captures as much as you want. But by building it slowly it is possible to produce something that looks right and checks out against other estimates.

The model then needs testing and calibrating. Other sources such as CACI Paycheck could help here if you have some, or ONS have now produced new model-based estimates of income for Wards, 2001/02. Go to www.neighbourhood.statistics.gov.uk, choose 'view or download data by topic', select 'Economic Deprivation', and look for 'Model-Based Estimates of Incomes for Wards'.

'Reality testing' against local knowledge to see if the patterns and estimated income levels make sense is also always useful.

An online map giving some early results is at

http://www.blinehousing.info/SouthEast/rural/SVG/SE_parish_hhld_modelled_incomes.htm

in the convenient SVG (Scalar Vector Graphics) format. So far it seems to check out on local perceptions. It may be crude and have many flaws, but sometimes researchers working on practical projects for local government, such as housing affordability or economic development, needs something rather than nothing, and you have to start somewhere.

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