Caution on housing cost ratios in Census output

Measures comparing housing costs to income data compiled from the Census are subject to a number of significant limitations which are briefly described below.

1 Census household income as a denominator

The Census collects individual income in ranges, so before these can be summed to a family or household level, a specific dollar amount needs to be imputed for each person. Median incomes for each range, derived using data from the 2003-04 Survey of Income and Housing, are used for this purpose in compiling family and household income measures in output from the 2006 Census.

The Census method used to input personal income values within reported individual income ranges was selected as the best practical approximation that would result in the majority of households being included in the same Census household income range that would have been derived had individuals reported their incomes in dollar amounts rather than in ranges. The approximation is expected to generally support analyses looking at various other characteristics of both persons and households in terms of broad household income ranges.

However, the imputation used in deriving household incomes is likely to understate some household incomes, for lower household incomes in general but particularly for single income households. Single income households with lower income levels (such as single parent families where the principal source of income is government benefits, and sole person households where the resident is aged 65 years and over and the principal source of income is government benefits) are most affected by the imputation methodology understating their incomes. For example, for single parent family households with the parent under 45 years of age, analysis shows that nearly twice as many such households were likely to be allocated to the low income range of $250 to $349 per week than would have been the case had incomes been reported in dollar amounts (with fewer than expected households in higher income ranges). Similarly for sole person households where the resident is aged 65 years and over, analysis shows that the number of households were likely to be allocated to the low income range of $250 to $349 per week was about 15% higher than would have been the case had incomes been reported in dollar amounts.

Another issue with the use of the imputed income measures as denominators is that the income ranges are very wide making ratio analysis very difficult to interpret. For example, for the household income range of $250 to $349, even for those households that are reasonably placed in this range, any error in allocation within the range can be relatively very large. Therefore a fixed housing costs amount could result in an income ratio that is in the range of 14% to 20%.

A more general issue with Census individual income reporting is that studies have shown that individuals tend to understate their incomes compared with the amounts that would be reported in surveys designed specifically to measure incomes.

For the above reasons, care should be exercised in any use of Census household income information that relies on the imputed value rather than the broad range within which that imputed value lies. In particular, the ratio of Census reported housing costs to Census imputed incomes may significantly overstate that ratio for lower income households and for single person households. This caution extends to comparisons of housing costs to income ratios across geography where the socio-demographic characteristics such as income, age and family and household composition vary across those geographies.

2 Housing costs to income ratios

ABS has no standard measures of housing affordability or housing stress. However, where housing costs to income is considered by a client to be useful in this context, ABS advises that the client:

- Follow the usual practice of limiting the analysis to lower income households ie those in the range from the 10th percentile to the 40th percentile of equivalised disposable household income. Very low incomes in the bottom decile are very problematic for such analysis. These issues are discussed in Housing Occupancy and Costs (2003-04), Explanatory notes paragraphs 14-21.

Census data do not provide disposable incomes, and users may wish to use the second release variable 'equivalised gross household income'.
Some of the issues in this analysis, in addition to the discussion of incomes above, include the following:

- Households are often reimbursed some of their housing costs, but these reimbursements may not be offset in housing costs reported in the Census but included instead in income. Employer subsidies and Commonwealth Rent Assistance (CRA) are examples where the housing costs to income ratio is significantly affected by the default treatment of these amounts in Census reporting. This is particularly important when comparing ratios for households in public housing with those who are in receipt of CRA;

- Reported mortgage repayments would normally include both an interest component and a principal or capital component. For some analyses repayments of principal may be considered a form of saving rather than a housing cost;

- Householder preferences may influence how much they spend on housing costs. For example, some people may choose to live in an area with high housing costs because it is close to their place of employment. Some people choose to incur higher housing costs because they prefer a higher standard of housing instead of other consumption possibilities;

- High mortgage repayments may reflect a choice to purchase an expensive home, or pay off a mortgage faster, as a form of investment.

Together these issues mean that there is a lack of comparability of housing costs to income ratios across tenure and landlord types.