

Estimation of Dwelling Services in the National Accounts

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Expenditure on Dwelling Services

- Actual expenditures
- Imputed rents of owner-occupiers
 - Standard procedure
 - Rents of owner-occupied dwellings are equal to actual rents of similar dwellings
 - User cost
 - Rents of owner-occupied dwellings equal total of:
 - Repairs and maintenance
 - Net insurance premiums
 - Other taxes on production
 - Consumption of fixed capital
 - Net operating surplus

Three problems in applying User Cost Method

- Net capital stock of dwellings
- Consumption of fixed capital
- Net operating surplus

Net capital stock of dwellings

- Recommended method is to use the Perpetual Inventory Method
- An alternative is to estimate the net capital stock by assuming that
 - Growth of dwellings since the census equals the population growth rate.
 - Current market price equals half the price of a newly built dwelling.

Consumption of Fixed Capital

- Geometric depreciation – D / T with declining balance rate (D) set at 1.6 and T is the service life
- Consumption of fixed capital equals:
 - (Net capital stock of dwellings) X ($1.6 / T$)
- For example:
 - $T=40; D/T=0.04$ $T=50; D/T=0.032$ $T=60; D/T=0.027$ etc.

Net Operating Surplus

- The net operating surplus is the rate of return on the capital invested by the owner-occupier
- Choice of rates
 - Interest rate on dwelling loans?
 - Interest rate on long-term bonds?
- Some OECD countries use a fixed rate of 2.5%
 - Net operating surplus = (net value of the housing stock) X (0.025)

Value added

- Actual rents
 - Value added = gross rents actually paid *minus* repairs and maintenance *minus* net insurance
- Imputed rents calculated by user cost
 - Value added = other taxes on production *plus* consumption of fixed capital *plus* net operating surplus

Cost of a new dwelling and average value of all dwellings

The average age (A) of the dwellings in a stock can be written as:

$$A = \frac{1}{T} \sum_{i=1}^T i (1 + r)^{i-1}$$

where: T is the service life of dwellings,
 r is the annual rate of growth in the stock of dwellings, and
 i takes the values of $1, 2, 3, \dots, T$