



Housing in the Consumer Price Index

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Summary

Owner occupier housing costs represent the largest single component of the Consumer Price Index. This will continue to be the case when the new weights are introduced in 2009. These costs are currently measured by interest rates on mortgage bonds, but they are excluded from the inflation targeting measure CPIX. Interest rates are an inappropriate measure of housing costs as they reflect the cost of debt, rather than the cost of housing.

From 2009 Stats SA will apply the concept of owners' equivalent rent to the measure of housing costs. This concept reflects the cost of the accommodation services derived by owner occupiers from their own homes. It excludes, as it should, the investment component of home ownership. Owners' equivalent rent measures the opportunity cost to the owners of forgoing a rental income by living in rather than renting out the house they own.

There are three approaches to measuring owners' equivalent rent: Acquisitions, User Cost and Rental Equivalence. The first two require data that are not available in South Africa. The third approach requires data on rentals of equivalent dwellings. Not only are these data available but they can be used with no significant risk of error.

Statistics South Africa will employ the Rental Equivalence approach from January 2009. This is because the measure is conceptually clear, required data are available, and the rental sector in South Africa represents adequately the owner occupied component.

A survey of rentals initiated by Stats SA in 2005 will form the data source for owners' equivalent rent. The survey is conducted by Stats SA's CPI price collection team and is tightly managed by the Pretoria head office. Letting agents are visited on a quarterly basis and the rentals of specific dwellings are tracked over time.



A. Introduction

The Housing category in the CPI has a weight of 22,7% in the current CPI (total country). It will decrease slightly to 21,04% when the new weights are applied in 2009. Of this weight, the costs of owner occupied housing represent the greatest share. Owner occupied housing costs reflect the costs of owning and living in one's home.

This report explains the status of owner occupied housing; reflects on international practice; and identifies areas of improvement.

Following the 2006 change from postal collection to direct collection of items bought in retail stores, other components of the CPI have been placed under review. These components include education, public transport, health, and housing.

Current practice

Home owners' costs are currently measured by interest rates on mortgage bonds. This element is excluded from CPIX to avoid circularity as an increase in interest rates may increase inflation, and thus generate a further increase in interest rates. In any case, interest rates are an inappropriate measure of the costs of owner occupied housing.

The International Labour Organisation (ILO), which sets down the norms of CPI, rules out the use of interest rates as a measure of home owners' costs.

Owners' Equivalent Rent¹

The cost of housing for owner occupiers has a dual nature. It is both investment and consumption. A homeowner incurs two types of cost neither of which are directly linked to any payment:

- the capital cost, which creates a fully-owned asset at the end of the mortgage period. This is not a component of the current cost of living; and
- the cost of consuming a housing service. This is the opportunity cost caused by an owner who chooses to live in his home rather than rent it out. It is this cost that is referred to as owners' equivalent rent.

¹ Stats SA will use the term Owners' equivalent rent in this document and in future CPI publications. This follows the naming convention used in the CPI of the United States of America. There is no conceptual difference between Owners' equivalent rent and Imputed rent of owner occupiers which was used in the Income and Expenditure Survey.

B. Deriving weights for Owners' equivalent rent

The Income and Expenditure Survey (IES), published by Stats SA in March 2008, forms the basis for the CPI weights. The survey estimates the 'rent' of owner occupiers by asking households 3 questions regarding housing costs.

1. Monthly mortgage payment for the last month
 - o of which – Capital
 - o of which – Interest
2. If you were to rent this dwelling, how much would you pay for it per month?
3. What is the value of the dwelling?

Respondents had difficulty with the first two questions but were able to provide a reliable estimate of the market value of their property. The value in question was turned into a rental equivalent by a firm of property economists who conduct regular surveys for the property market and survey rentals in particular. On the basis of their work, the following weights apply to the housing category in the CPI (country wide).

Table 1. Housing weights in the 2009 CPI

Group	Weight
Actual rentals for housing	3,20
Owners' equivalent rent	11,25
Maintenance and repair	1,55
Water and other services	2,86
Electricity and other fuels	2,18
Total Housing	21,04

Additionally, the 2001 Census provides reliable estimates of different housing types broken down by owner occupiers and renters. Table 2 shows that while houses represent the majority of dwellings in both categories, flats and townhouses are used by a higher proportion of renters than owner occupiers.

Table 2. Weights for different housing types

Housing type	Owner occupiers	Renters
Houses *	91,4%	69,1%
Flats	4,0%	24,7%
Townhouses	4,6%	6,2%
Total	100%	100%

*House or brick structure on a separate stand or yard

C. Pricing owner occupied housing costs

The ILO recognises three approaches used to estimate imputed rentals for owner occupied housing:

- Acquisitions,
- User cost, and
- Rental equivalence.

The *acquisitions approach* measures changes in the price paid by householders for net acquisitions of homes, purchased from the corporate or the public sector. In practice, this means homes built by developers or the state and sold to households for the first time. It includes major additions and alterations to existing homes. Data required for this method include a measure of the change in the value of the housing stock over time; the price of new dwellings; and housing depreciation rates over time.

The *user cost approach* calculates the difference between the price paid for the asset, the value of using the dwelling over time, and the price of selling it at the end of the period of occupancy. This approach requires data on dwelling prices, the value of the housing stock, mortgage repayments and depreciation rates.

Rental equivalence values the services yielded by the use of a dwelling over a period of time by the corresponding market rental value for the same type of dwelling for the same period of time. The only data required by this approach are the rentals of dwellings similar to those inhabited by owner-occupiers.

Table 3 lists the approaches used in different countries and shows that the most common are the user cost and rental equivalence approaches.

Table 3: Approaches used by various statistical agencies

Country	Method
Australia	Acquisitions
Canada	User cost
China	User cost
Germany	Rental equivalence
Japan	Rental equivalence
Mexico	Rental equivalence
Netherlands	Rental equivalence
New Zealand	Acquisitions
Norway	Rental equivalence
Poland	Rental equivalence
Singapore	Rental equivalence
Sweden	User cost
United Kingdom	User cost
United States	Rental equivalence

D. Approach to be adopted in South Africa

Stats SA will use the rental equivalence approach to calculate the owners' equivalent rent.

The reasons for this are:

- In South Africa there are no available data on the up to date value of the housing stock. Rental data are already being collected; the approach is simpler; and in adopting it there is less room for error.
- Almost one quarter of SA households rent, as opposed to own, accommodation (Census 2001). This provides an acceptable basis for drawing comparisons between the two sectors. See table 4.

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Table 4: Owner-occupied vs. rented housing (Census 2001)

Housing type	Owned	Rented	Total
House or brick structure on a separate stand or yard	4,159,674	952,964	5,112,638
Flat in block of flats	184,107	340,543	524,650
Town/cluster/semi-detached house (simplex: duplex: triplex)	206,916	85,693	292,609
Total	4,550,697	1,379,200	5,929,897
% of total	77	23	100

E. Data source for owners' equivalent rent

Survey of rentals

In 2005, Stats SA started a survey of housing rentals. During 2006 and 2007 the survey was extended to all CPI collection areas. It is conducted on a quarterly basis by Stats SA's price collection team throughout the country. Letting agents (usually Real Estate Agents) are the respondents. A sample of actual rental properties is selected from the books of the letting agency. The rental paid for these properties is recorded each quarter for as long as the property is available for rent. Additional charges included in the rental are also recorded to facilitate the tracking of a pure rental.

Currently, the sample is equally distributed over the three major housing types. Its composition will be adjusted so that it represents the fact that houses account for the vast majority of owner occupied accommodation and flats and townhouses for a small share. Quarter four of 2007 and quarter one 2008 recorded 4601 and 4303 observations respectively. But Stats SA intends to increase the sample size to between 8000 and 10 000 dwellings over the course of 2008.

The survey is managed by a dedicated team in Head office which quality assures the results. Fieldworkers are provided with feedback concerning their quality and improvements are tracked on a monthly basis. The survey will also be subject to random audits by the CPI quality audit team.

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