

CES/AC.49/49
8 September 1993

ENGLISH
Original: FRENCH

STATISTICAL COMMISSION and
ECONOMIC COMMISSION FOR EUROPE

INTERNATIONAL LABOUR ORGANISATION

CONFERENCE OF EUROPEAN STATISTICIANS

Joint ECE/ILO Meeting on Consumer
Price Indices

(Geneva, 25-28 October 1993)

Item 5 of the provisional agenda

OWNER-OCCUPIED HOUSING: FEASIBILITY OF A COST-ORIENTED APPROACH

Document submitted by the Swiss Federal Statistics Office

GE.93-32605 (E)

TABLE OF CONTENTS

	<u>Page</u>
1. The problem	3
2. Information available	4
2.1 Overall mortgage patterns and movements in interest rates . .	4
2.2 Insurance	5
2.3 Taxes	5
2.4 Repair and upkeep costs, administrative costs, taxes and charges	6
3. Possible solutions and problems	6
3.1 Treatment of mortgage interest costs	7
3.2 Treatment of insurance	8
3.3 Treatment of taxes	8
3.4 Treatment of costs of repair and upkeep, taxes and charges .	9
4. Scope for, and consequences of, covering owner-occupied housing in the CPI	9
5. Conclusion	10

1. The problem

The purpose of including owner-occupied housing in calculations of the consumer price index must be consistent with the aim of the CPI itself (measuring variations in the prices of consumer goods). Hence the objective is to measure the effect of variations in price on the consumption (use) of individually-owned housing.

Within this setting, the dividing line between consumption and investment, and the availability of the necessary information, are the decisive criteria for the establishment of an index number.

Dividing line between consumption and investment

Investment-related elements must be discarded.

The rent paid by a tenant represents the consideration for the services provided by the housing, i.e. payment due for permitting use of the item. It generally consists of three parts: amortization of the building and interest on accounts payable, return on capital stock invested, and operating costs. For a tenant, calculated costs and expenditure on housing represent 100 per cent of consumer expenditure.

Costs and expenditure occasioned by the use of individually-owned housing comprise investment-related elements (e.g. depreciation and decline in value, return on equity, investment beyond that required for normal maintenance) and consumption or non-investment-related elements (e.g. mortgage interest, taxes, insurance, charges, running repairs, administrative costs).

Basic situation

This study attempts to flesh out the concept using cost elements suitable in that, on the one hand, tests have shown a strong correlation with the rental index and that, on the other, they represent the bulk of expenditure on individually-owned housing (according to the household budget survey and the consumer survey).

Thus constructed, an owner-occupied housing index number would include the following items with their respective weights:

Owner-occupied housing basket item	Weight 1/
Mortgage interest costs	60 per cent
Repair, maintenance, materials	20 per cent
Taxes and insurance	12 per cent
Administrative costs, charges and duties	8 per cent

1/ Estimate based chiefly on findings of a survey by the Swiss Union for Housing Improvement (USAL/SPW). The survey, spanning a dozen years (1976-1985) and a sample of around 14,000 dwellings, revealed the structure of participants housing costs (and their respective weights). The household budget survey and consumer survey being incapable of providing a more detailed cost structure, we have (cautiously!) treated the USAL structure as being similar to that of owner-occupied housing, as the chief differences between the two types of housing are to be found in financing costs and, to a lesser extent, in conditions of ownership.

Scope and significance

An index number of this kind shows variations in the consumer costs of owner-occupied housing brought about by changing prices. In other words, what influence do price variations have on what an owner must spend in order to be able to live in and maintain his dwelling? As a result, the determining values are not the amounts associated with the cost elements used to construct the index, but the "prices" of these elements.

2. Information available

To accomplish what we intended, we needed information on mortgage patterns and volumes, mortgage interest rates, insurance, taxes and the various costs associated with individually owned housing. Our approaches to the Banque nationale and a number of commercial banks and cantonal insurance and tax services yielded the findings below.

2.1 Overall mortgage patterns and movements in interest rates

Overall mortgage patterns

The information available does not admit of any one precise definition. It rarely shows how mortgage volume is divided among old and new mortgages, and does not allow a precise distinction to be drawn. Despite the lack of homogeneity in the information, however, and the difficulty of finding any unifying doctrine, the commonest way of categorizing mortgages proves to be by rank: first mortgages and second mortgages. This scheme is followed in mortgages of all kinds (e.g. fixed- or variable-rate) and various types of banks. On average, first mortgages represent two thirds of mortgage investment, the rest being made up of second and third mortgages.

Hence some simplification will be necessary, there being no detailed system of categories covering all mortgages.

Mortgage rates

The geometry of interest rates differs from bank to bank or, rather, between one type of bank and another, and changes in rates follow different time-scales. It is therefore difficult to estimate a single representative rate from the mass of information available. Here, too, in other words, despite the fact that the rates are available, some simplification will be necessary.

An average rate does exist; it is calculated by the Banque nationale suisse (BNS). This unweighted average rate represents the average interest rates (relating to construction) for first mortgages (old and new) charged by cantonal banks. According to BNS, cantonal bank rates mirror changes in the rates charged by all banks, despite the banks' abolition of the interest rate cartel.

2.2 Insurance

Preliminary remarks: insurance of several kinds can be associated with ownership of housing: private sector insurance (e.g., household insurance), and public domain or official insurance (e.g., building insurance).

We are interested only in the second type and only in building insurance, since it is mandatory and predicated on ownership of the dwelling.

Nineteen cantons have an absolute monopoly on building insurance. In the other seven, such insurance is provided by private insurers.

Generally speaking, building insurance covers fire and damage arising from natural causes. It sometimes also includes furniture.

Premiums do not differ according to type of housing. The differences that often are noted are due to the type of construction (e.g., masonry or wood) and, sometimes, special risks.

The premium is often defined as so many thousandths of the sum insured. This insured value is estimated on the basis of different building values, such as value when new, market value and current value.

As a general rule, insurance cannot be classified according to its various constituents (e.g., fire, damage arising from natural causes).

In the opinion of the establishments consulted (cantonal building insurance schemes) it is difficult to produce either a standard insurance policy per canton or one suited to the whole of Switzerland.

2.3 Taxes

Three types of tax are chiefly associated with ownership of housing: income tax, wealth tax and property tax.

In most cantons, taxation is not related to type of housing.

Housing tax (rental value) is often based on an assessed value, a land registry value, an investment value or an estimate. It may be related to the age of the building or the size of the commune. Sometimes housing tax is directly incorporated into taxation of overall income or, more broadly, overall wealth.

A number of deductions may be allowed: interest on accounts payable, upkeep and administrative costs, standard allowances, and costs associated with energy saving measures.

According to the replies we received, it is often not possible to categorize taxes by type.

2.4 Repair and upkeep costs, administrative costs, taxes and charges

Repair and upkeep are listed under the categories used in the building costs code (Code des Frais de Construction, CFC). This classification, developed by the Centre for Building Rationalization (CRB), subdivides construction items according to type of work and effective lifetime. We are interested only in items reflecting the costs of housing upkeep, not forgetting materials.

Broadly speaking, these items are masonry, painting, carpentry, glazing, cleaning, chimney sweeping, locksmithery and ironmongery. Hourly tariffs for these various kinds of work are available either from associations connected with the building sector or from the different trades in the industry. Materials prices can be ascertained from the retail trade.

Identifying administrative costs is not straightforward; on occasion, they include quantitative features that are hard to pin down.

The various community taxes and charges (on water, refuse, residence etc.) must be determined case by case, in the communes selected for calculation of the price index especially.

3. Possible solutions and problems

Variation in an owner-occupied housing index number is due to changes in the prices of the items it comprises.

Mortgage interest costs

Variations in the price of this item can derive either from changes in interest rates or from a change in the volume of credit; the volume of credit may itself be influenced either by changes in building costs and land prices, alone or combined, or by a change in the ratio of equity to outside capital, or by other factors.

Taxes

This item in the cost of owner-occupied housing can vary owing to changes in tax rates or in the assessed value of a dwelling, or as a result of a general increase in value prompted by rising construction costs.

Insurance

Increases in premium rates are one reason for changes in this cost item. There may also be variations brought about by changing construction costs or, quite simply, a re-assessment of insured value.

Repairs, upkeep, taxes and charges

Changes in the prices of materials and tariffs for maintenance and repair work produce variations in the corresponding cost item. Variations in commune taxes and charges are generally prompted by political considerations (environmental, budgetary policy, etc.).

As a general rule, we find that changes in construction costs and land prices are determining factors in the behaviour of the cost items associated with owner-occupied housing. This must be borne in mind if we wish to consider an updated situation, as with the rent index which is periodically brought up to date with the inclusion of new housing.

The ideal solution would be to be able to represent all the reasons for variations in the price of cost items. Restricted opportunities for processing and gaps in the data available make it difficult, however, to establish an owner-occupied housing index number which is uniformly and appropriately represented by all these factors explaining its behaviour. On the basis of the information available, the following solutions can be suggested:

3.1 Treatment of mortgage interest costs

Given the difficulty of rendering the diversity of mortgages (representing overall mortgage patterns and the various mortgage interest rates), we abandoned the attempt. It would have been necessary to sample the various categories of banks (according to the Banque nationale suisse classification) in a manner reflecting their respective shares of the total volume of mortgage investment, then show how the total volume of mortgages was made up before calculating an average rate or considering different rates.

This solution, in theory sound, would doubtless have provided a better representation of the mortgage market. Our experience during the survey, however, of banks' chilly answers and reluctance to provide information on the one hand, and the disparity of the information on the other, do not inspire us with optimism about the prospects for gathering data and defining a suitable scheme of categories for the total volume of mortgages.

Instead, we propose to consider the rate calculated by BNS as representative of bank-financed first mortgages overall.

Categorizing mortgages by rank is not possible because we lack information on interest rates (for second mortgages). Likewise, no categorization by mortgage age (new and old) is possible because, in this case, we lack information on the categories themselves.

The advantage of the treatment suggested is that it facilitates data gathering in so far as the data are published by an official body and are thus always available. It is, however, a clear simplification of reality, and this may prompt reservations as to its acceptability.

3.2 Treatment of insurance

We do have the opportunity to consider insurance premiums. There is no difficulty in compiling premium rates in cantons which are themselves the sole insurers, unlike cantons where insurance is handled by private insurers. In the latter, the various rates will have to be sampled.

There is no guarantee, however, that premiums are an appropriate indicator of changing insurance costs for owner-occupied housing. We have two reasons for thinking so:

Over the course of a decade, premium rates in the various cantonal building insurance schemes have shown an overall downward trend. If one considers movements in real estate prices (the combination of land prices and building prices) which determine the insured value of buildings however, it is not clear that this average decline in rates has reduced insurance costs for owner-occupied housing. In other words, the decline in premium rates has probably been offset by upward movement in the insured value of buildings, and as a result insurance costs have not "benefited".

Besides, in most cantons the insured values of buildings are indexed to the various indices of building costs. Consequently, the amounts paid by policy-holders do not necessarily decline even when premium rates fall.

On the whole, we think it reasonable not to include insurance costs in the owner-occupied housing index. We are missing a fundamental item of data, a Swiss index of building costs which would, for example, have enabled us to index premium rates.

3.3 Treatment of taxes

We also propose not to include this cost item, for reasons of methodology which can be summarized as follows:

The various types of tax are generally set, if not by using benchmarks, then by using estimated values. Hence, for example, the rental value of an owner-occupied dwelling (in the case of income tax) is often a set percentage of its assessed value. It cannot be regarded as suitable, however, because of the deductions that can be taken for maintenance costs and costs payable. Besides, assessed values can be influenced by the market value of land: an oversized plot can significantly alter assessed value without relating to the item actually consumed, the housing.

Furthermore, this cost item is hard to compile using the "compensation cost" rule when, as in the case of wealth tax, it is incorporated directly into the overall taxable item.

3.4 Treatment of costs of repair and upkeep, taxes and charges

Costs of repair and upkeep, and purchase of materials

The various entries for repairs and upkeep and purchase of materials mentioned above are already included in one way or another as varieties under the current index. Treating them as part of an owner-occupied housing index number poses no major problem, but it must be done in a manner consistent with the entries in the overall index.

Taxes and charges

We do intend to include the water, refuse-collection and cable-connection charges applied in the index communes, despite the risk of problems in defining their extent and arriving at a suitable methodological treatment that will remain reliable over the long term.

4. Scope for, and consequences of, covering owner-occupied housing in the CPI

In the light of the discussion above, we believe that one possible way of reflecting the behaviour of owner-occupied housing in the consumer price index is to consider mortgage interest costs, repair and maintenance costs, including materials purchased, and taxes and charges. Mortgage interest costs are based only on interest rates, not on other factors that might influence this item.

Such an index number would be on the following lines:

Basket item	Weight 2/
Mortgage interest rates	75 per cent
Repairs, materials, maintenance	20 per cent
Taxes and charges	5 per cent

2/ This distribution of weights is not the result of revising the earlier weightings but an empirical estimate based on the combined weights of the items in the various sources of weighting available (CPI, consumer survey, household budget survey).

Such a solution, although a severe simplification, is feasible because, on the one hand, the cost items considered admit of suitable methodological treatment (the information is available and the items measured that remain stable over time); on the other hand, the household budget survey and, better yet, the 1990 consumer survey show that mortgage interest costs bulk large in expenditure on individually owned housing.

While it may respect the relative proportions of consumer costs for owner-occupied housing, this solution does not take account of housing age or the ratio of equity to outside capital. Nor does it make allowance for the undeniable influence of changing construction and land prices, determining factors in the behaviour of the real estate market.

5. Conclusion

This is a possible way of dealing with owner-occupied housing, but it seems rather unsatisfactory both in composition and in its relationships to other factors such as construction and land prices.

These omissions weigh against it: it is unlikely that explicit inclusion of a specially designed owner-occupied housing index number in the CPI will work better as an indicator than current practice (including the share of owner-occupied housing in the weighting for rents).

Accordingly, this simplified version of the rent-equivalent approach will be used in the new consumer price index as of 1993. Specific owner-occupied housing surveys will be abandoned, and the corresponding weighting will be incorporated into the rental index number. A change in the method of treating owner-occupied housing should remain under discussion, however, and here the findings reached at the current meeting will be extremely helpful.

- - - - -