The costs of home ownership: a sample calculation

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Publisher's version / Version de l'éditeur:
https://doi.org/10.4224/20358749
Technical Note (National Research Council of Canada. Division of Building Research); no. TN-377, 1962-08-01

NATIONAL RESEARCH COUNCIL OF CANADA

DIVISION OF BUILDING RESEARCH

No. 377

TECHNICAL NOTE

NOT FOR PUBLICATION

FOR INTERNAL USE

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CHECKED BY

APPROVED BY RFL

DATE August 1962

PREPARED FOR Record Purposes

SUBJECT THE COSTS OF HOME OWNERSHIP

A SAMPLE CALCULATION

During participation in the CBC television programme "Making Ends Meet" on the subject of homes, the factors affecting the cost of home ownership were illustrated by means of a sample calculation. A number of requests have since been received for these figures and the material has therefore been prepared for distribution in this note form.

The example taken was of a house and lot costing a total of $14,000 with an assumed down-payment of $2,000 and a mortgage of $12,000 at 6½% interest for 25 years. The costs of ownership were computed on a monthly basis as shown on the next page.

It should be recognized that these figures are mainly useful as an illustration of the cost factors involved and are not necessarily representative of actual costs in any one area. This is particularly true of the items indicated under OPERATING COSTS which will naturally vary in different locations.

AMORTIZATION COSTS		
(Principal plus interest compounded semi-annually at $6\frac{1}{2}\%$ over 25 years)		$81.00
OPERATING COSTS		
Insurance	2.50	
Taxes	25.00	
Maintenance ($1\frac{1}{2}\%$ of total value)	17.50	
Heat and Water	15.00	
Light and Power	8.00	
Transportation	?.??	
		68.00
TOTAL CASH OUTLAY (excluding transportation)		$149.00 per month
INDIRECT COSTS		
Loss of income on $2,000 down-payment (invested at 5%)	8.00	
Depreciation	?.??	
		8.00
TOTAL COST OF OWNING (excluding transportation and depreciation)		$157.00 per month

The main purpose of the example is to bring out the various items that must be considered if a complete analysis of the costs of home ownership is to be attempted. It will be noted that no cost figures have been attached to the items of transportation and depreciation since these are capable of wide variation, but they are no less important in a realistic assessment of house costs—the former particularly so with new housing developments taking place at increasing distances from the city's built-up areas and often the occupant's place of employment.

It is true that the total monthly cost of owning computed above includes the enforced savings portion of the mortgage payment which at the end of 25 years results in clear title to the house. The actual value of this enforced savings is always related to the market value of the house which, in turn, is subject to the influence of such factors as inflation, condition of the house and neighbourhood, and consumer taste.

Rental vs Ownership

In any discussion of housing costs the question of a comparison between home rental and ownership inevitably arises. Such a comparison is extremely difficult even excluding the social and psychological factors which it is generally admitted exert an important influence in determining whether a family buys or rents. The question is also complicated by the fact that it is rarely possible to find rental accommodation that is identical in all respects (including both house and environment) with housing that is for sale.

One way in which the cost of home ownership may be used in this question is as a guide in establishing an equivalent rental which a family may pay and still maintain the same relative economic position as if they had bought. This equivalent rental will of course vary with the financing arrangements, interest rates, and the market value (both present and future) of the house being considered for ownership. It can be calculated for the example given as follows.

Assuming the tenant invests his down-payment of	\$2,000
After 25 years at 5% compound interest this amount appreciates to	\$7,000
If, during the same period, the owner-occupied house depreciates by 50%, it will have a market value of	\$7,000
Hence, at the end of this period the renter would have a cash equity equivalent to the value of the house. The equivalent rental would then be the owner's cash outlay of ...	\$149/month

If, on the other hand, the house retains its full value of .... $14,000 the tenant would then have to accumulate an additional $7,000 during this period to maintain the same economic position.

This would necessitate an additional regular investment at 5% compound interest of $12/month

In this case, the equivalent rental would be .... $149-$12 = $137/month

Thus, for the example quoted, and depending on the the depreciation factor for the house, the tenant who pays $137 to $149 per month rent, including all services, and who, in addition, invests his $2,000 "down-payment" would be as well off, financially, at the end of 25 years as the owner who uses the $2,000 to buy a new $14,000 home.

This simplified calculation and brief discussion of house costs is of necessity limited. A more comprehensive review of the subject is given in Technical Paper No. 60 of the Division of Building Research, by Dr R.F. Legget, entitled "The Cost of Housing", a copy of which may be obtained from the Publications Section, Division of Building Research, National Research Council, Ottawa.