Is a Property Tax on Housing Regressive?

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By RICHARD A. MUSGRAVE*

My discussion of property tax incidence will be limited in three ways. First, I shall deal only with that half of the tax which is assessed on housing, this being the part which has received most attention in recent policy discussion. Secondly, I shall address myself to the incidence of a hypothetical national tax. While the local nature of the property tax with its jurisdictional differentials poses important additional problems, these are not central to whether the local property tax as a whole is progressive or regressive. Finally, I shall deal with differential incidence and examine the distributional consequences of substituting a uniform tax on housing for, say, a proportional income tax. Thus, the expenditure side of local finance is held constant and excluded from this analysis.

The regressive or progressive nature of such a substitution needs to be known to reassess the role of the property tax in the overall tax structure. If the burden falls on the consumers of housing services, its incidence tends to be regressive (Musgrave et al., 1951). If, instead, the burden falls on all capital income, incidence tends to be progressive and the property tax should be reclassified accordingly (Arnold Harberger and Peter Mieszkowski). While the former view was traditionally held by economists and still dominates the political forum, there is an increasing tendency among economists toward the latter approach. Hence clarification is needed.

I. Alternative Theories

I begin with the validity of alternative incidence theories or hypotheses.

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A. The Harberger-Mieszkowski Model

The new (i.e., Harberger-Mieszkowski, hereafter H-M) model postulates the classical assumption of profit maximization and perfect adjustment between various sectors of the capital market. Viewing the incidence of a uniform tax on housing capital in analogy to the corporation tax, imposition of such a tax will lead to an outflow of capital from the housing to the nonhousing sector until net returns are equalized. As a result, such burden as falls on capital is shared equally by capital in all its uses. If the capital stock is fixed and certain conditions regarding production and demand functions are met, gross factor shares of capital and labor will remain unchanged and the entire burden of the tax as viewed from the earnings side will be on capital. Additional distributional changes will result because reallocation of capital from the housing to the nonhousing sector leads to a rise in the price of housing services relative to that of other goods. Thus, there results a so-called "excise effect" which redistributes real income from consumers of housing toward consumers of other products. The net distributional effect of the tax then equals the combined earnings and excise effects.

To move from this theoretical model to the conclusion that the tax is progressive, we need only postulate that the progressive effect on the earnings side (due to a higher ratio of capital to total income at higher levels of income) more than offsets the regressive effect from the uses side (due to a lower ratio of housing to nonhousing expenditures). Since these assumptions seem reasonable, the general interpretation of

222

the H-M model has been that the tax is progressive.

Certain qualifications may be noted. A first question is whether a distinction should be drawn between land and improvement parts of the tax base. Assuming the total supply of capital to be fixed, both are similar in this respect, but the capital is spatially mobile whereas land is not. This is of obvious importance for the local property tax, but less so for a national tax. Provided that zoning imperfections are ruled out, land no less than capital can be moved from housing into other uses. The burden of the tax on land will thus be spread among land owners in general, be it in residential or other uses. With both capital and land in fixed supply, the analysis of incidence for the two factors (as distinct from the differential local tax) is essentially similar.

A second query relates to the particular nature of housing as a combined consumption and investment good. Whereas choices regarding consumption patterns and the mix of investment portfolios are usually made independently of each other, the decision to hold owner-occupied housing involves both sets of considerations. Consumers with a high consumption preference for owner-occupied (as against rental) housing derive an ownership rent and will hence place a larger part of their assets into such housing, while holding less of other assets. If the tax burden on all capital income is equalized, this does not affect their position from the earnings side; but since their housing expenditures are higher, they suffer a larger excise burden from the income uses side. This may well be a major factor contributing to the unpopularity of this tax.

The joint nature of housing as a consumption and investment good also bears on whether the tax should be thought of as a tax on housing consumption or investment. To simplify matters, suppose that housing consumption involves only capital with no maintenance costs. The tax on housing consumption would then be the same as a corresponding tax on housing property. But if the tax may be looked upon either way, which incidence pattern (consumption or property) is to be applied? The answer is either. In a situation where consumption involves the use of a capital resource only, the incidence of a consumption tax is in fact the same as that of a tax on the capital used to provide that consumption service. In this sense, the property tax may be viewed as a tax on housing consumption, but under the assumptions of the H-M model, the incidence conclusion is not changed thereby. Within the framework of the H-M model, incidence continues to be in line with the distribution of capital income, supplemented by the excise effect from the uses side.

Finally, the result may change if the assumption of variable factor supplies is introduced. Long-run incidence in this case may impose a burden on labor as well as capital, so that the progressivity of the burden distribution (not only for the property but for all progressive forms of tax) tends to be reduced. (See Martin Feldstein, Marion Krzyzaniak, and Kazuo Sato.) However, such effects take a long time to work themselves out and other policy instruments (e.g., the state of budgetary balance) may be brought into the picture to maintain the savings and growth rate.

B. Administered Pricing Models

While recognizing the admirable contribution to the theory of incidence rendered by Harberger's analysis of the corporation tax and Mieszkowski's application thereof to the property tax, I must insist that the logical consistency or beauty of such models is no proof that they describe what in fact happens. The assumptions of profit maximization and perfect capital mobility are useful, and the economist's

task would be simplified if the world in fact met these assumptions. But the Creator's concern with the happiness of economists might not have sufficed to arrange things this way. Seeing the working of the markets as I do, I must allow for the implications of alternative assumptions. The problem then becomes one of empirical evidence and not merely of logical consistency.

While such evidence on property tax incidence is scanty, some general observations may be made. Regarding the part of the tax on owner-occupied residences, I see little reason to expect that purchasers of houses possess unused market power which they release in response to the tax. Though the previously noted aspect of ownership rent becomes of increased importance—housing, for instance, provides otherwise unavailable leverage for inflation hedging—the competitive model is appropriate on the earnings side.

I feel less comfortable with this model for rental housing. While comprising only 20 percent of the total housing base, rental housing is of special concern since it weighs heavily at the lower end of the income scale. Housing markets, especially for low-income housing in central city settings, may well be markets where landlords act as restrained monopolists (being threatened by rent control and/or public rage) who find it justified to raise rents as taxes are increased, or where tax increases may act as a signal to landlord-oligopolists to raise rents. Rate reductions in turn may or may not have opposite effects. While the fact that rental contracts or rent controls frequently allow for tax increases is no proof that the tax is passed on to consumers through the mechanism of imperfect markets, it at least raises such suspicion. Given inelastic demand for low cost housing and a relatively elastic short-run supply through varying levels of maintenance,

these possibilities cannot be ruled out. I would suspect that a substantial amount of initial shifting into higher rentals does in fact result. This being the case, I do not accept the extreme assumption that no part of the tax is shifted to the tenants. Rather, I prefer to allocate a substantial part of the tax on this basis.

Consumer burdens resulting from *this* type of shifting, moreover, must *not* be confused with the excise burden of the H-M model. The latter operates as a consequence of the capital flow induced by the initial burdening of capital income in the taxed sector and involves a redistribution between consumers of housing services and of other products. The burden-shifting now visualized involves an initial passing on of the burden from landlords (on whom the statutory burden rests) to tenants. Landlords effect this by drawing on previously unrealized monopoly power, thus leaving capital income initially free of burden (or in any case with a lesser burden) and involving a burdening of tenants rather than a redistribution among consumers. While further shifts in capital allocation and excise effects will follow, the end result will differ (i.e., leave a heavier burden on tenants and be more regressive) from that under the H-M model.

The decisive difference between this and the H-M model, therefore, is not between partial and general equilibrium analysis, but between models that do and others that do not require profit-maximizing behavior and perfect capital mobility. A theory which allows for imperfections and unconventional firm behavior, I insist, can be the first move in a general equilibrium analysis no less than one which rules them out. The outcome of the model depends on its behavioral assumptions, including those which determine the initial response to the tax. It is, after all, but a dispensing machine, where the juice you draw depends

on which button you push. While model builders like to assume away imperfections and market behavior not aimed at profit maximization, it does not follow that no such things exist. It just means that the economist's job is more difficult and that an understanding of institutions becomes more important.

C. Addendum

Thus far the discussion has concerned a nationwide and uniform tax on housing. Before proceeding, I note briefly what will happen if other features of the existing property tax are allowed for.

Local Tax

The property tax is not nationwide but differs by jurisdictions. While the average effective rate of tax may be treated in terms of a national tax, departures therefrom exert a second type of excise effect. Generated by the movement of capital toward low rate jurisdictions, this is the excise effect emphasized in Mieszkowski's formulation. On the earnings side of incidence, the net rent of land and the wages of immobile labor will fall in high and rise in low tax jurisdictions. On the uses side, the excise effect burdens immobile consumers of housing services in high tax jurisdictions. While it is reasonable to expect these interjurisdictional excise effects to be regressive, they are not likely to change the general conclusion reached for a national tax. All this, of course, is compatible with the possibility that the incidence of a local tax increase, taken by itself, will differ from that of a national tax or, for that matter, of an increase in the average rate of local taxes.

Tax on Nonhousing Property

The property tax is not a tax on housing only. Nearly one-half of the revenue is collected from business property other than rental. As a result, the interindustry excise

effect becomes less significant. However, the question of market structure now arises not only in the rental market but in other industries as well. While I retain my suspicion that a substantial part of the corporation tax is shifted, I find less basis for this with regard to the business part of the property tax. Property tax revenue tends to be derived less heavily from large corporations which are more likely to possess powers of administrative pricing. This suggests a lesser shifting rate. Accordingly, I would not now assume that the tax is fully passed on to consumers, as we did in our estimates of some twenty years ago (Musgrave et al. 1951). At the same time, circumstances which might lead the corporation tax to be shifted (in my sense of administered price adjustments) cannot be excluded from this case. I therefore continue to consider some allowance for shifting—involving, say, one-third of the tax on nonhousing property—to be a less extreme and more plausible assumption than the zero rate implied in the H-M model. As a result, I would expect the tax on nonhousing property to be less progressive than that on owner-occupied residence, though more progressive than that on rental housing.

Assessment Differentials

While the actual tax is more general than a tax on housing, it is by no means as general (even within any one jurisdiction) as would be a uniform tax on all property. Business property on the whole tends to be taxed more heavily than residential property; and low-income rental housing may be assessed more heavily (relative to property value, though not necessarily relative to rental income) than are higher income residences. Such differentials further qualify the incidence conclusions with the net effect on progressivity unclear in its direction.

II. Patterns of Incidence under Alternative Theories

I now turn to the alternative patterns of burden distribution which result under the various hypotheses.

A. *Comparative Patterns: Cross-Section Data*

Table 1 shows such burden distributions based on annual cross-section data. Allocation by capital income (Column II) gives the most progressive result, but even here the property tax is by no means progressive throughout. In fact, it is progressive for only the top 20 percent of households and regressive at the lower end. In Column III, where a hypothetical excise effect is allowed for, the falling segment of the U-shape reaches higher, but the change is not significant except for the bottom of the scale.[1] While the total amount of excise

[1] The excise effect (equal to the difference between Columns II and III) is computed as the difference between the burden component obtained by allocating $10 billion in line with housing expenditures and the benefit component obtained by allocating the same amount in line with nonhousing consumption expenditures. This $10 billion reflects the estimated increase in the cost of housing outlays due to the price rise of housing services. This amount is based on the following procedure and certain simplifying assumptions regarding production and demand functions (Harberger, p. 219):

a. If we take the observed value of the housing stock after imposition of the tax to be $750 billion and assume a net rate of return of 6 percent, the net return is $45 billion. Adding the yield of a housing tax of $15 billion, we obtain a gross return of $60 billion. Relating this to the housing stock of $750 billion, we get a gross yield on housing capital of 8 percent.

b. If the value of nonhousing capital is estimated at $1,000 billion, the value of the total capital stock is $1,750 billion. Applying the tax yield of $15 billion to this total, we get a tax rate of .86 percent. If we assume again a net yield of 6 percent, the gross yield on total capital is 6.86 percent.

c. The housing excise therefore equals $8-6.86=1.14$ percent.

d. Under the assumption of unit elasticity of substitution between capital and labor in both the housing and the nonhousing sectors, and of unit elasticity of demand, the increase in housing cost may be estimated by applying the 1.14 percent excise rate to the housing stock of $750 billion, given an excise cost to consumers of housing services of $8.5 billion.

may well be substantial (taken here at $10 billion), the distributive effects tend to wash out because the pattern of burden distribution (in line with expenditures on housing services) is largely offset by that of gain distribution (in line with other consumer expenditures). If we use a mixed pattern where the tax on owner-occupied residences is allocated by all capital income while that on rental housing is imputed to tenants (Column IV), the distribution becomes regressive through 95 percent of the scale, with only the upper 5 percent progressive. Full allocation by housing consumption (Column V) renders the tax regressive throughout the scale.

The evidence is that under almost any assumption, including Column II, the tax on housing property remains regressive over the lower to middle end of the income scale. This differs sharply from the effective rate pattern of an equal yield-income tax (see Column VI), which is distinctly progressive over this range. To put the matter differently, it may be noted that under both taxes the top quartile of taxpayers bears about two-thirds of the burden. The respective property tax shares for the first, second, and third quartiles are 4, 12, and 17 percent for the property tax (allocated by capital incomè) as against 2, 8, and 23 percent for the income tax. To the extent that concern with progression is pointed toward the lower-middle rather than the upper range, this hardly makes the housing tax a desirable form of taxation. As far as the lower end of the scale is concerned, the crucial distinction between taxes lies not so much in the particular base which is chosen (i.e., capital versus

e. Alternatively, the 1.14 percent may be applied to the value of the housing stock, K, as it would have been in the absence of tax. Computed as $750 \times .08 = K \times .0686$, the housing base is now $874 billion and the excise burden becomes 1.14 percent thereof or $10 billion. The illustration of Table 1 uses the upper limit figure of $10 billion.

TABLE 1—INCIDENCE OF PROPERTY TAX ON HOUSING, 1968 LEVELS[a]

Income Brackets[b]	Percent of Families I	Tax as Percent of Income				
		Property Tax on Housing Allocated by[c]				Equal Yield Income Tax[h] VI
		All Capital Income[d] II	All Capital Income with Excise Effect[e] III	Mixed[f] IV	Housing Expenditures[g] V	
0– 4,000	19.9	1.2	1.7	3.2	4.1	0.4
4,000– 5,700	9.6	2.0	2.2	3.0	3.0	0.5
5,700– 7,900	11.5	1.7	1.7	2.3	2.5	1.1
7,900–10,400	12.4	1.1	1.1	1.7	2.3	1.3
10,400–12,500	12.9	0.9	0.8	1.2	2.2	1.4
12,500–17,500	20.0	1.2	1.1	1.3	1.8	1.8
17,500–22,600	8.2	1.5	1.4	1.0	1.4	1.9
22,600–35,500	3.2	2.6	2.5	2.0	0.9	2.3
35,500–92,000	1.7	3.3	3.3	2.5	0.6	2.7
92,000 and over	0.6	4.5	4.5	3.4	0.5	3.3
Total	100.0	1.8	1.8	1.8	1.8	1.8

[a] Based on Musgrave et al., forthcoming.

[b] Income, estimated at $772 billion for 1968, is defined to include money income plus corporate profits before tax less dividends, plus imputed income, wage supplements, interest on insurance, and capital gains.

[c] Of total property tax revenue of $29.9 billion, an estimated $13.8 billion is derived from residential housing, including $9.6 billion from owner-occupied homes and $4.2 billion from rental property.

[d] Tax burden allocated in line with the distribution of all capital income.

[e] Same as Column II plus effective net excise rate. The total amount of the excise burden or subsidy is set at $10 billion and the net rate is obtained as the excess of the loss (computed by allocating $10 billion in line with housing expenditures) over the gain (computed by allocating a similar amount in line with other consumption expenditures). In allocating the loss component, $7 billion is assigned to owner-occupied housing and $3 billion to rental housing.

[f] The tax on owner-occupied housing is allocated in line with all capital income and the tax on rental housing is allocated by rental expenditures.

[g] Allocated in line with housing expenditures, with $9.6 billion distributed by owner-occupied housing and $4.2 billion by rental housing.

[h] Obtained by allocating $13.8 billion in line with distribution of federal income tax burden.

other income, or income versus consumption) but in whether an initial level of tax-free base is allowed for. Use of an effective device (be it a credit, vanishing exemption, or form of circuit breaker) is thus of major importance for the property tax under all these assumptions. At the same time, it may be noted that the appropriate design of such allowance will differ depending on which incidence hypothesis is chosen.

At the other end of the scale the prop-
erty tax is clearly an effective way of
reaching high incomes. Yet an *in rem* tax
on real property is hardly a sensible way of
reaching capital income in the higher
brackets. A fuller taxation of such income
under the individual income tax, or else a
personal tax on net worth (combining
housing with other parts of the balance
sheet), would surely be a superior ap-
proach.

B. *Gross vs. Net Burden*

It must be noted, however, that the
burden distribution of the property tax
differs greatly depending on whether it is
seen in gross or net terms. Since the prop-
erty tax may be deducted from taxable in-
come under the federal income tax, the net
tax in most cases is less than the gross tax.
And since income tax savings per dollar of
property tax rise with the taxpayer's in-
come, the ratio of net to gross property tax
declines as the taxpayer moves into higher
rate brackets. To restate Column II of
Table 1 in net terms would require no
change at the bottom of the scale, since
such households are not subject to indi-
vidual income tax, but the net burden at
the upper end of the scale might drop to as
little as 1.3 percent. Since it is the net
burden that matters if we take a national
view of the tax structure, patterns such as
those given in Table 1 (and generally used
in burden estimates) exaggerate the pro-
gressive nature of the burden imposed by
such taxes as the property tax, just as they
understate the regressive nature of other
taxes such as the sales tax. As far as *net*
burden goes, the only effective way to
strengthen the progressivity of state and
local taxes is to disallow their deduction or
to substitute a credit for a deduction ap-
proach under the federal income tax.

C. *Annual vs. Lifetime Data*

The above results were based on budget

patterns drawn from annual cross-section
data. The question remains how the pat-
terns would differ if lifetime data were
used instead. There is reason to expect that
the use of lifetime patterns would render
the burden distribution less regressive or
more progressive. As regards allocation by
capital income, it seems reasonable to ex-
pect that the high ratio of capital income
among low income recipients reflects the
role of the aged, so that the importance of
capital income for low-income families
would be less if viewed on a lifetime basis.
Regarding allocation by housing expendi-
ture, it also appears that the income elas-
ticity of demand for housing is higher on a
lifetime than on an annual cross-section
basis (Frank de Leeuw and S. J. Maisel
and A. Burnham). Once more use of life-
time data would render the distribution
more progressive or less regressive.

Even if it turns out that allocation by
lifetime data (under either the Column II
or Column V interpretation) renders the
tax less regressive for the lower half of the
population, it is not obvious which should
be considered the relevant finding. On the
one hand, there is an obvious case in tax
equity for relating progressive rates to a
longer period than annual income, with
lifetime averaging the ultimate extension
of this principle. On the other hand, the
lifetime view can be carried too far. While
the aged poor should not be given pref-
erence over other poor who are not aged, I
would hesitate to argue that, since the
aged poor should have known better in
distributing the consumption pattern of
their lifetime earnings, cross-section re-
gressivity poses no problem.

However this may be, the property tax
will be with us for a long time and will con-
tinue to provide a major share of state and
local tax revenue. The issue, therefore, is
one of reform rather than replacement, and
in this context the design of an effective
policy of low-income relief is the major

problem. Given progress in this direction, especially if combined with substitution of a federal credit for deduction, I would concur that the property tax on housing should be transferred from the regressive to the progressive column.

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