TAX INCENTIVES FOR LOW INCOME HOUSING *

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A. Introduction

It is fashionable to argue that more low-income housing is an urgent necessity. This immediately raises two questions: (1) Is the need for housing more urgent than other needs of poor groups? Why is there so much concern with low-income housing, and (until recently) little with low-income food, low-income clothing, low-income medical care? Why don’t we worry about low-income income? (2) In trying to raise the standard of living of the low-income groups, is it relatively cheap to do this through promoting increases in consumption of low-income housing? Or is it cheaper to raise standards of living other ways?

We will argue in this paper that housing may have some special features which call for market intervention, but that correcting distribution of income through subsidizing housing is questionable in theory and nil in practice.

The housing problem deserves specific attention because there are many dimensions which differ from conventional commodities. The four important problems considered here are externalities, social priorities, discrimination and poverty. First, housing services have a very large component of neighborhood effects, or in economists’ jargon, external economies. In those areas most likely to be populated by the poor, houses are crowded and the nature of the environment substantially influences the value of the unit. Second, many feel that decent housing is a special kind of service that is a social right of every family. Even if the family cannot afford a car or good entertainment, society places a premium on decent dwellings and is willing to provide it. Third, the housing market is one which is particularly subject to discrimination. Fourth, since housing comprises a very large part of the consumer budget, there is a high correlation between income and the quality of housing.

There are other questions which will arise in the course of the discussion, but these four seem the most important.

* The author is Assistant Professor of Economics, Yale University. This paper is a slightly condensed version of the longer paper which was prepared for the September 1968 meetings of the National Tax Association. The longer version is available on request from the author. Grateful appreciation for inspiration and discussion is directed toward Peter Mieszkowski, Joseph Bell and Geoffrey Woglom provided very helpful assistance.
B. The Goals of Tax Policy

Before proceeding to discuss concrete problems in the housing market, we will make a few dogmatic statements about the goals of tax policy. These goals will be taken for granted in the following sections.

It is generally thought that, in the absence of a variety of either market imperfections or of an improper distribution of income, like those noted above, private markets function in an efficient manner.¹ A market functions efficiently when marginal social benefit equals marginal social costs. It follows from this that—aside from the revenue needs of a government to which we return—differential taxation should only be applied to those areas where either there is a redistributonal intent or where the market is functioning imperfectly. The personal income tax is an obvious example of a redistributive tax. Examples of taxes which are designed to correct imperfections in the marketplace are taxes on nuisances or subsidies to projects which yield high social benefits like research and development.

Three corollaries of this assertion are that (1) markets which function more or less properly should not be subject to differential taxation; (2) markets which function improperly should be subject to differential taxation or subsidies so as to correct the improper level of economic activity; and (3) redistributonal taxes should be imposed in such a way that they minimize the allocational distortions.

A rough look at property and housing taxation leads one to believe that the above corollaries have been significantly violated, perhaps a great deal of the time. More specifically, most of the housing subsidies have been aimed at markets which do not need subsidies, and very little has been aimed at that which does; most of the taxation has been aimed at areas which need subsidies.

Having outlined these goals of tax policy we sketch the criteria used for choosing between the different goals. Roughly, we choose the principles of benefit-cost analysis for evaluating different programs, with one notable exception that we add explicitly the goals of income redistribution into society’s preferences.²

¹ For the conventional wisdom on tax policy, see Richard Musgrave, The Theory of Public Expenditures.
² In choosing between different programs, we make the following assumptions. Individual preferences among different goods and services are important, and the weights which individuals place on different goods will be accepted by government decisionmakers. Furthermore, we assume that there is no systematic bias one way or another in the structure of social costs, so that market costs of goods and services in other industries reflect true social scarcities. Given these assumptions, if the distribution of income is correct, then properly functioning markets will produce the correct amount of goods and services and distribute them equitably.

If these assumptions are accepted, then we can also specify what are the losses (and potential gains) from imperfect markets. When markets do not function efficiently, marginal social costs do not equal marginal
Under the assumptions made above and further that there are no social costs or political obstacles to appropriating funds then the budgetary cost is irrelevant except insofar as it is a measure of resource cost.

At least under certain circumstances some consideration should be made to budget cost. There is a scarce pool of funds available for housing programs, and to ignore this constraint would be naïve. Even when this is granted, however, the proper criterion for evaluating programs is still not simply budget cost. Rather, it is to determine the net increase in real income associated with each program and then to pick these programs which, while staying within the available budget, maximize the increase in real income.

A Model of the Housing Industry

We can now turn to the model used in exploring the problem of tax incentives for low-income housing. Roughly speaking, we use a model of a competitive industry with two sectors, in long-run economic equilibrium. We can show the effect of these problems on price and quantity in both markets and also the effect on the real income of the two sets of consumers. The most important result is the effect on real income. After the results of the problems have been shown in the model, we can then try different tax or subsidy schemes to correct the problems. The long-run effect of different schemes can be traced out in the model. Finally we can use the values for parameters to indicate the quantitative impact of different housing problems and the cost of each.

Figure 1 shows the supply and demand for housing in market 1, which we will call the low-income housing market. The demand curve, marked \( D_1 \), shows the relationship between the price of low-income housing, \( p_1 \), and the amount consumers buy at that price, \( x_1 \). The schedule marked \( S_1 \) in Figure 1 is the supply schedule, which shows the amount of low-income housing which will be provided for a given price. The demand and supply curves for the second market, the high-income housing market, are not shown. The intersection of social benefits. Depending on the discrepancy between the two and on the degree of necessity of the good (elasticity of demand, in economists parlance) there will be a net social loss in dollar terms. By reallocating incentives — say, by pushing more resources into the housing industry — the total real income of consumers can be increased.

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3 The assumption that there is a single uni-dimensional thing called "housing" is generally unwarranted. Clearly there are several dimensions on both the demand and the supply side, such as cubic feet, square feet, quality of construction, maintenance, amenities, and so forth. Since these will usually be imperfect substitutes on both the demand and supply side, any attempt to use an aggregate stock of housing will cause aggregation errors. We must simply make an assumption that this error is insignificant and hope that it is justified.
the two schedules gives the equilibrium price and quantity of the two kinds of housing, where equilibrium value are shown with bars above the variables.

In algebraic terms we write linear supply and demand schedules as follows: The demand for low-income housing is given by

\[ P_1 = a_0 - a_1 x_1 + a_2 p_2 \]

and the supply for low income housing is:

\[ P_1 = b_0 + b_1 x_1 + b_2 p_2 \]

Note that in addition to the terms involving own price and quantity, there are terms involving the price of high-income housing, the \( b_2 \) and \( a_2 \).

![Figure 1. Low-Income Housing Market](image)

These terms denote that as the price of the other type of housing changes some consumers may leave the low income housing market and enter the high-income housing market, or that some low-income housing may be converted or high-income housing may filter down to the low-income market. Demand and supply, respectively, for the second market are given by:

\[ P_2 = c_0 - c_1 x_2 + c_2 p_1 \]

\[ P_2 = d_0 + d_1 x_2 + d_2 p_1 \]

If we solve these equations for equilibrium price and quantity, in terms of the parameters, the a's and so on, we get the following equilibrium values:
\[
(5) \quad p_1 = \frac{(d_1 + b_1) (a_1 c_0 + c_1 a_0) + (d_0 b_1 + d_1 b_0) (a_1 c_2 + c_1 a_2)}{(a_1 + c_1) (d_1 + b_1)} - \frac{(a_2 c_2 + c_1 a_2) (d_1 b_2 + d_2 b_1)}{(a_1 + c_1) (d_1 + b_1)}
\]

\[
(6) \quad p_2 = \frac{(a_1 + c_1) (d_0 b_1 + d_1 b_0) + (d_1 b_2 + d_2 b_1) (a_1 c_0 + c_1 a_0)}{(a_1 + c_1) (d_1 + b_1)} - \frac{(a_1 c_2 + c_1 a_2) (d_1 b_2 + d_2 b_1)}{(a_1 + c_1) (d_1 + b_1)}
\]

The important new twist is that we can now introduce neighborhood effects, discrimination, etc. into the model. These can be accomplished by a slight modification of the diagrams. The easiest to understand is discrimination. Assume that all housing is exactly alike, so the supply curves for each industry are the same. In one market, the Negro market, landlords discriminate by charging 10% higher rents. In Figure 2 we show the effect of discrimination in market 1. Since the supply curve has shifted up 10 percent from \( S_0 S_1 \) to \( S_0' S_1' \) the new equilibrium has now given the nonwhites less housing (from \( x_1 \) to \( x_1' \)) at higher prices (\( p_1 \) to \( p_1' \)). Discrimination will act exactly like a discriminatory tax on nonwhites renting or buying housing.

There will usually be effects on the other markets, such as the high-income markets, since a higher price in the Negro market means that resources will flow from the other market since there is a higher price. Although Figure 2 does not show these movements, they can be traced in equations (5) and (6) with no difficulty.

The model used here is also helpful for analyzing the effects of externalities (or neighborhood effects). An externality is very similar to discrimination in that it can be seen as shifting the supply curve up. For example, assume that the social cost of low-income housing cost is only fifty percent of the private cost due to external effects. This means that because a private developer can, say, appropriate only half the benefits of a well-built structure, the other half accruing to neighboring structures in the form of lower fire and vandalism hazards, more attractive surroundings, and so forth. This would mean that whereas the true supply curve for a properly functioning market were at \( S_0 S_2 \), the actual supply curve due to external effects is ten percent higher, at \( S_0' S_2' \). The net response of the low-income housing market in this case is exactly the same as the discrimination analyzed above.

Simulation in the Housing Market

In the present section we (i) give the parameter estimates used in the simulations and (ii) give some illustrative results of different "problems" and policies on price, output, and real income. We reserve for the last sections the conclusions for tax policy.

The parameter estimates used for the central results (those cited in this section) are as follows.
**Demand.** Estimates of demand relations are probably the firmest of our parameter estimates. Most studies show own-price elasticities of expenditures on housing of about 0.8. In addition we need cross-elasticities in certain cases, so we assume cross elasticities are 0.4. We assume these hold for all groups of consumers.

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5 Price elasticities are measures of the responsiveness of quantity purchased when price is varied; more precisely, elasticity = \( - \frac{\text{percentage change in quantity}}{\text{percentage change in price}} \).

6 Finally we should take into account the fact that the rental on a unit is different from the price. Thus if houses depreciate by 2 percent per year and if the real interest rate is 8 percent, then the competitive annual rental is 10 percent of the cost. Since the elasticity of the rental with respect to the price is one, the price-elasticity of demand for services equals the rental-elasticity of demand for services. Actual rentals probably are close to this, so the distinction between services and stock should cause no difficulties.
Supply. There are, to my knowledge, no serious estimates of elasticity of supply of housing. We do have some strong a priori notions, however. In the first place, we have the following important relation between supply elasticity of housing and its components, land and structures, in a competitive market

\[ E_H = \frac{1}{S_L/E_L + S_s/E_s} \]

where \( E_H \) is elasticity of supply of housing, \( E_L \) is elasticity of supply of land, \( E_s \) is elasticity of supply of structures, \( S_L \) is ratio of cost of land to cost of house, and \( S_s \) is ratio of cost of structure to the cost of the house. If the market for structures is working fairly well, we suspect that in the long run a small rise in the price of structures will bring forth a large supply of structures, so we would think that \( E_s \) is very high.\(^7\) To simplify, assume it is infinite, so we get

\[ E_H = \frac{E_L}{S_L} \]

We can further simplify by assuming the cost of land is about a third of total cost, so we get as a final approximation:

\[ E_H = 3E_L \]

The clear point is that in central city locations where most land is used up (this does not always apply to ghetto areas), \( E_L \) will be very low and \( E_H \) will be low. It does not seem unreasonable to assume \( E_H \) of 0.3 for central city areas. For suburban locations, where cheap land is still available, \( E_H \) should be in the order of 2.0.

Cross-elasticities of supply will be important in determining the final market equilibrium. If the two markets are of approximately the same size then cross-elasticities of one-half own-elasticities and opposite in size are not unreasonably large (perfect capital markets implies that the cross-elasticity of the structures component is infinity).

Problem coefficients. We will analyze specifically three problems, discrimination, externalities, and an undesirable distribution of income.

1. Discrimination. There is not a great deal of information about the quantitative amount of discrimination. Some studies indicate that non-whites pay between 10% and 15% more for equivalent quality housing.\(^8\) It should be noted that the fact that some

\(^7\) In a capital perfect market \( E_s \) will be infinite. When account is taken for allocation of wealth between risky assets, \( E_s \) will be smaller.

\(^8\) One easy reference is to assume that non-whites always pay the asking price for sale of a house. Since asking price is typically 5% to 10% above transacted price, this indicates the range of discrimination in this market.

Preliminary results of a very careful study by my colleague on the effects of discrimination on rental price Peter Mieszkowski gives an estimate in the order of 15 percent.
groups pay higher rent for equivalent unit is not a foolproof sign of price discrimination. The landlord provides other services than simply space, such as maintenance, upkeep and, at the end of the tenancy, bringing the rental unit up to market. Sternlieb's data indicates that maintenance is a significant part of the rental, perhaps a third. It is sometimes alleged that price differentials reflect differences in upkeep. On this we have no data. It must be noted that there is no such justification for the difference paid for owner-occupied units. The seller is in no sense committing himself to maintenance, so the difference in transaction price must be attributed to pure discrimination.

Without much confidence we take an estimate of ten percent as the discrimination markup.

2. Externalities. Here again we have no sharp idea of the level of externality in housing. A few dogmatic remarks must suffice. In the first place, the extent of externalities are probably positively related to the density of the housing and negatively related to the quality of the housing. One would expect that the degree of externality is more or less negligible in the suburban areas. On the other hand, in central cities, it is probably significant. Secondly, we would expect that the externalities vary in a significant degree depending on the particular item under consideration.

In the absence of hard numbers, we will venture that externalities for structures range from near zero for internal, "invisible" items (like insulation in the walls) to twenty percent for exterior, highly visible expenditures like outside maintenance painting. As a rough guess, for ghetto areas a figure of ten percent does not seem unreasonable for the degree of externality but we allow a figure three times as high in simulations. This means that to provide a structure which is, from the point of view of the neighborhood as a whole, worth $10,000 a private party would require a compensation of $11,000.

3. Distribution of income. Housing is one of the goods which is thought to be an absolute necessity. Therefore, public policy (if not public practice) states those who are too poor to have most anything should at least be provided with decent housing. This policy raises a serious question because it is not at all clear why we should provide low-income housing instead of low-income income. If we are trying to use low-cost housing to redistribute real income to the poor, this reflects some kind of admission that the present distribution of income is inadequate.

Sternlieb, Tenement Landlord.
Simulations

1. We first examine in detail the problem of externalities, (case I).
   Under the assumption made above that externalities raise the supply curve by ten percent in central cities and do not cause difficulties in suburban areas, we can determine the results on central city versus suburban property.

   Under the assumptions made above the market distortion does not appear to be serious. The new prices and quantities can be calculated from equations (5) and (6) above. City dwellers find that their price has risen by about 2 percent and that they have about 1.5 percent less housing. Suburban dwellers are the main beneficiaries of this, with suburban prices declining somewhat less than one percent and the quantity of suburban housing increasing negligibly. The real income of city dwellers 10 declines approximately 2/3 of one percent, with the real income of suburbanites rising by about this (absolute) amount. These results are shown in Table 1.

   The effect of these rather substantial externalities appears to be surprisingly low. The reason for this is that the supply of housing in city areas is so price inelastic (unresponsive to price). Under these conditions the losses are quite mild. Even when externalities raise the supply curve by as much as 30 percent, the real income of city dwellers declines by less than 2 percent.

   One may question these results on several grounds. If the own-elasticities are too low and the cross-elasticities too high, this will bias the distortion in a downward direction. If there were no cross-elasticity and if supply were perfectly elastic, then a 10 percent externality would lead to a 10 percent price rise, a 8 percent fall in quantity, and a one-half percent fall in real income.

   Table 1. — Simulation of Externalities
   [1.00 = Price, Quantity, and Real Income with Externalities]

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Central City</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Price</td>
<td>Quantity</td>
</tr>
<tr>
<td></td>
<td>1.020</td>
<td>0.985</td>
</tr>
<tr>
<td></td>
<td>Real Income</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.994</td>
<td></td>
</tr>
</tbody>
</table>

   Source: parameters cited in text. The population is assumed to be evenly distributed between city and suburb.

   10 We assume, here and below, that housing expenditures are one-quarter of consumption expenditures.
2. Having given the general methodology, we can give estimates for other "problems" more concisely. The second problem area is discrimination. We assume for the moment that the population of non-whites is distributed in the same general geographic manner rather than concentrated in ghetto areas. We take the average of suburban and urban coefficients to be typical value.\textsuperscript{11} In this case we find that the consequences of general discrimination are more serious than externalities in central city areas. Table 2 shows the equilibrium prices and quantities in white and non-white markets if discrimination of 10% exists.

The result of discrimination is roughly that a price differential exists which is about one-half the amount of discrimination. Real income of non-whites declines about 1.3%. It should be noted that the effect of discrimination is probably more severe than externalities because, by assumption, the discriminated market has a higher elasticity of supply.

The next examples will be combinations of the problems examined above.

4. We assume that non-whites are not only discriminated against but also live in central city areas plagued by serious externalities. In this case, actually we find that the effects are no more serious than if non-whites are broadly scattered geographically. Table 4 shows the effect on the two markets.

The findings in Table 3 are quite surprising. They show that the problem of discrimination is not compounded by externalities if these externalities occur in central city areas where the supply of housing is quite inelastic.

These four cases cannot approach a realistic description of the housing problem. They do suggest, however, that in and of themselves imperfections in the housing market such as discrimination and externalities are not likely to lead to major changes in the amount of housing or in real income.

G. Tax Policy (I): Simulation of Optimal Policy

Having completed what is an extended discussion of the cause and effects of imperfections in the housing market we now turn to a discussion of the role of tax policy in promoting a more perfect market. In the present section we give a brief application of the housing model by "solving" the model for the optimal tax to correct the market imperfections.

1. In certain respects externalities are the easiest problem to correct. Since externalities represent a divergence between private and social rate of return, the easiest way to correct the externalities

\textsuperscript{11} Thus demand elasticities are the same, while supply elasticities are 0.5 in non-white areas and 1.0 in white areas.
TABLE 2. — Simulation of Price and Quantity under Discrimination
[1.000 = Price and Quantity with no Discrimination]

<table>
<thead>
<tr>
<th></th>
<th>Non-White Market</th>
<th></th>
<th>White Market</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>1.04</td>
<td></td>
<td>0.99</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>0.97</td>
<td></td>
<td>1.01</td>
<td></td>
</tr>
<tr>
<td>Real Income</td>
<td>0.987</td>
<td></td>
<td>1.001</td>
<td></td>
</tr>
</tbody>
</table>

Source: parameters cited in the text. Non-whites are assumed to comprise one-tenth of population.

TABLE 3. — Simulation of Price, Quantity, and Real Income
Under Discrimination in Central Cities
[1.00 = Value without problems]

<table>
<thead>
<tr>
<th></th>
<th>Non-Whites, central city</th>
<th></th>
<th>Whites, Suburbia</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>1.04</td>
<td></td>
<td>0.99</td>
<td></td>
</tr>
<tr>
<td>Quantity</td>
<td>0.97</td>
<td></td>
<td>1.01</td>
<td></td>
</tr>
<tr>
<td>Real Income</td>
<td>0.987</td>
<td></td>
<td>1.001</td>
<td></td>
</tr>
</tbody>
</table>

is through subsidies which bring the two back in line. Let us designate two markets—city and suburb—with externalities raising the price in the former by 10%.

The first thing to recognize is that once the problem has been located, and if it can be isolated, then either a producer subsidy or a consumer subsidy will give the desired results. Thus if externalities are causing blight in central cities, it does not matter if these are corrected by the proper subsidy to producers in urban areas or rent supplements to consumers in urban areas. More concretely, under the parameters assumed in case 1 of section either a producer’s subsidy of 10% or a rent supplement of about 13% would bring the market back to the desired equilibrium. This is then the first principle of fiscal economics: one can impose the tax on either producer or consumer.

The choice between programs such as rent supplements or producers’ subsidies must rest on how finely they can be tailored to the problem; put differently, minimize loopholes.

2. In our example discrimination requires, to be efficient, that those who are discriminated against receive producer subsidies of ten percent, or rent supplements of approximately the same amount.
This policy raises significant administrative and legal questions. (Does the Fourteenth Amendment prohibit discriminating in favor of non-whites?)

3. In the case of discrimination and externalities a producers' subsidy of 20% or a rent supplement of 26% would be necessary to meet the need.

4. If the main problem is that income is too unequal then any kind of housing subsidies is quite inefficient.

This point is important and should be stressed. If public authorities think that income is too inequitably distributed, they can increase the real income of the poor by almost a dollar for every budget dollar spent. If this is spent on housing, its result is less efficient. Table 4 illustrates how costly it is to raise real income by spending on various income-in-kind or other goodspecific programs. We assume in Program A that only the poor have subsidized housing, while in Program B the entire housing market is subsidized, say, by interest subsidies. By comparison we show a negative income tax.

The results of this experiment are quite striking. A negative income tax appears to be approximately four times as efficient in redistributing income as low-income housing. General housing subsidies are virtually worthless.

Table 4. — Efficiency of Programs for Redistributing Income

<table>
<thead>
<tr>
<th>Size of Program (As percentage of housing expenditures of the poor)</th>
<th>Negative Income Tax</th>
<th>Subsidy of Low Income Housing (Program A)</th>
<th>General Housing Subsidy (Program B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase of Real Income Efficiency*</td>
<td>Increase in Real Income Efficiency*</td>
<td>Negligible</td>
<td></td>
</tr>
<tr>
<td>10.0</td>
<td>6.0</td>
<td>80%</td>
<td>2.3</td>
</tr>
<tr>
<td>20.0</td>
<td>16.0</td>
<td>80%</td>
<td>5.2</td>
</tr>
<tr>
<td>30.0</td>
<td>24.0</td>
<td>80%</td>
<td>8.2</td>
</tr>
</tbody>
</table>

*Efficiency = (increase in real income)/(budget expenditures)

Since these results are so striking and so at variance will the conventional wisdom, a few words of explanation are helpful. Basically there is one important reason why subsidizing low-income housing is so inefficient in raising the income of the poor: subsidizing low income housing spills over to the rest of the housing market. Even when an

12 Even a negative income tax is slightly inefficient because some goods — chiefly housing — are inelastic in supply. Using the elasticity figures given above for housing, and assuming all other goods have an elasticity of ten gives the numbers in Table 4.
attempt is made to subsidize only a given sector of the housing market (say in poverty-areas) prices will fall generally and other related sectors will benefit. The most important spillover occurs because supply is inelastic. In this case prices to the poor do not fall by the amount of the subsidy (as in Figure 2). If the poor live in areas with very inelastic supply, then a subsidy program unaccompanied by heavier taxation of real estate owners is a dead giveaway.

Policy Implications

Having discussed the important economic aspects of tax policy in the housing market, we can now put the pieces together to suggest a critique of present tax policy and some thoughts for a unified tax policy for the future. In discussing fiscal incentives for low-income housing we will separate off the allocational from the distributional aspects. This reflects the two most important goals of housing policy.

Allocational Aspects

The allocational aspects of housing policy are those which affect the efficient functioning of the housing market. Our analysis suggests the following.

Although the data is rough they do seem to indicate that taken by themselves inefficiencies in the housing market are not important sources of loss of real income.

Ignoring these conclusions, it must first be noted that inefficiencies have little relation to the rationale for existing housing programs. Even in the official explanation, efficiency reasons are seldom mentioned. For example, in a rough cost-benefit analysis of housing policy, the Department of HUD could mention only “mortgage insurance or purchase” as a policy enhancing “financing of housing purchases and repairs…” If this is to be taken seriously, then the only other reasons for such a massive injection of government fiscal policy into the housing market is to accomplish distributional objectives. To this latter question we return below. Actually, there are good reasons for programs like present policies to be introduced as we will see in discussing the individual programs.

One of the important current questions is whether to have rent supplements or tax credits. As far as the allocational aspects of rent supplements are concerned, there do not seem to be any mechanisms in this program for correcting market imperfections through rent supplements; they are mainly a distributional program. In some respects they have the same problem as public housing, since the rationing of supplements is still necessary. In addition, they have features which

make them less attractive than public housing; they cannot generally use the economies of large-scale site selection and construction, and further they present the extremely difficult problem of determining a "fair market rental." Further, it is not clear that any of the current versions of rent supplements is adequate to attract a significant amount of capital. The most important objection is that, due to the desire to be economical and not provide too large a subsidy, there is an effective income floor of about $4,000 (see p. 412). This is, of course, a political objection. Overall, then, rent supplements in the current version do not have any significant allocational advantage over public housing. The one advantage which might appear (and it is extremely significant) is that, if properly designed, it could remove the stigma attached to living in public housing by removing its visibility. Since the alternative is clearly a distributational program we will, however, postpone the discussion until that section.

The other important kind of subsidy is one we will label "producers' subsidies," although it is slightly broader than that. This group of programs aims at reducing the costs of housing by making some components of the housing costs cheaper, whether by lowering interest costs, giving tax credits, or other means. This kind of incentive is a very old device and takes many forms. One of the newer proposals is the Kennedy bill (S. 2100 of the First Session of the 90th Congress), which proposed tax credits and other incentives for construction of housing in urban poverty areas. The most important difference (and attraction) of producers' subsidies is that they can be tailored to specific needs and specific sources of inefficiency. This, it seems to me, is crucial in designing proper allocational programs as opposed to distributational programs where consumer or buyer programs are needed.

Since the Kennedy bill is one of the newer and more controversial attempts to encourage low-income housing, it deserves special attention as a producer subsidy. The main features of this program are: first, that it provides tax credits between 3 and 30% for new structures; second, that these benefits would be limited to structures built in poverty areas (originally urban poverty areas); third, that the program would chiefly function by subsidizing housing for the "middle poor," with incomes between $4,000 and $7,000. In addition to the tax credits there are other provisions for accelerated depreciation.

The Kennedy bill features what appears to be a very important innovation in housing policy, that of tailoring housing subsidies to areas where imperfections in the housing market are most serious: densely populated urban areas. It seems reasonable to expect that these areas are the ones where externalities are the most serious and where, consequently, subsidies should be given for housing. There are, however, a number of accompanying problems with the Kennedy bill which make it less attractive. In the first place, although it does
tailor the subsidy to the problem by limiting the credit to poverty areas, within this broad category there should probably be further differentiation. Thus some features of housing construction have larger externalities than others and thus should be subsidized more heavily. For example, proper construction, outside appearance, good plumbing and fireproof walls are probably investments which have substantial externalities, while good appliances or air conditioning do not. This of course requires close study, but it appears that breaking down the subsidy into different components would be desirable.

There is a second serious problem, to which we return shortly, which is that there is a bias toward subsidizing construction over maintenance. By giving tax credits for the original investment, and interest subsidies as well in certain cases, there is an important bias to build more durable units and then to neglect maintenance. This may be a serious error, as noted below.

A final difficulty with producers' subsidies is the general problem of all the allocational programs: they buy efficiency in the market place at a high price in give-aways to holders of real estate. As we suggested earlier for every dollar of subsidy, only 25 cents goes to the poor in real income.

In sum, the Kennedy approach to tailoring subsidies and fiscal incentives seems an important innovation in correcting imperfections in housing markets, but some problems remain.

There are other kinds of producer subsidies which have been in existence for some time. The most pernicious is the interest rate subsidy incorporated in many programs, including the government guarantee of mortgages, the interest deduction in the personal income tax, the 221 (d) (3) program, and some aspects of the 1968 Act. I would also include in this accelerated depreciation provisions. The most serious problem with these is that they assume that the lower the interest rate the better. Implicit is the assumption that the opportunity cost, or the yield in alternative investments, is very low — one percent, perhaps. Almost all the econometric evidence that I know would lead me to think that the opportunity cost of funds is really very high, at least as high as 10 percent, perhaps as high as 20 percent. In this case by lowering the cost of investment we are taking funds from projects which are high yield projects and putting them into projects which yield as little as one percent on the margin. This program is a most serious distortion in the opposite direction from that which would be desirable.

Aside from the criticism of interest subsidies just made, there are a number of others which are at least as important. The second is that this subsidy has no relation to the inefficiencies of the housing market. In fact, it might be argued that a measure which gives incentives for making housing more durable and longer-lived (as any inter-
est rate subsidy does) has a serious difficulty. The reason is that the
difficulties in the housing market often stem from the durability of
the product. If somehow, houses should be made less durable, then
the blighted septagenarian structures carrying many of the modern
housing problems would not be around to haunt us. A third difficulty
is that these tend to subsidize initial construction as opposed to main-
tenance. Most surveys indicate that many of the problems arising in
blighted areas come not because of the inadequacy of the basic struc-
ture but because of the poor maintenance.\textsuperscript{14} If this is correct, then
subsidies should be given to maintenance and not to initial construc-
tion.

\textit{Distributional Aspects}

We were hard pressed in discussing allocational aspects to relate
current programs to allocational inefficiencies. This is not surprising,
because most housing legislation has been defended on the rationale
of raising the living standards of the poor, a distributional objective.
According to its own declaration the Housing Act of 1949 had as
objective "\ldots the realization as soon as feasible of the goal of a
decent home and a suitable living environment for every American
family\ldots" Having said that, however, housing policy has been for
the most part very regressive, paying little if no attention to the needs
of the poor, discriminating against those who could not afford a home,
and helping the great middle class.

More recently, there has been a real attempt to provide better hous-
ing for the low-income groups, or at least for the middle poor. It
is not at all clear why housing is a special or merit good. It may be
that the stress on housing is really distribution in objective, but it
comes not because there is inherently anything more important about
quality housing. Rather it is that \textit{bad housing has been a visible form
of poverty.} Bad housing is almost always the first thing that strikes
one on seeing poverty. Recently hunger has also caught the reform-
er's eye. Less visible, but perhaps as important are lack of education,
poor medical care, rats, retardation, mortality rates, unemployment,
and discrimination.

In fact, there is some evidence that good housing, by itself, solves
very few problems. Nathan Glazier has written:\textsuperscript{15}

Thus, we may observe that in preserves of technically excellent
uncrowded housing which are limited to low-income groups\ldots there is no
clear and specific relationship between the improvement in housing that
the families have experienced and other social indicators. Families in low-

\textsuperscript{14} See Sternlieb, \textit{The Tenement Landlord}.
\textsuperscript{15} Nathan Glazier, "Housing Problems and Housing Policies," \textit{The Public
Interest}, p. 22.
rent-housing projects are neither stronger nor weaker, better nor worse off—except for having better housing.

Daniel M. Wilner and his associates have written that “It is not clear . . . that the change from bad to good housing has brought with it no distinguishing alterations in relations among persons within the family.” There is thus at least some doubt whether the attempt to subsidize low-income housing (to say nothing of middle-class housing) is justified by what we know of either the preferences of the poor or the effects of bad housing.

Waving this objection, which is at least debatable, it is plausible that a housing policy will be agreed upon which desires to subsidize low-income housing. The important question is how that is best done. The first fact to note is that the current programs are extremely spotty with respect to this goal. A chart appearing in HOUSING AND URBAN DEVELOPING LEGISLATION OF 1968, p. 287 shows the distribution of programs among the poor of different incomes. It is clear that between 0 and $1400 income and from $4200 and $5200 there is very little available except at market rents. The spotty evidence on the amount of subsidy indicates that it is substantial for public housing—thirty percent or so—and much less under the rent supplement and P.H., 222 (d)(3)—slightly over ten percent. The subsidy then rises to about fifteen percent for the median owner-occupied dwellings, and to 33 percent for those with incomes over $50,000. Obviously, the present subsidy, from zero for the extremely poor to fifteen percent for the middle class to more than thirty percent for the rich is highly regressive and inequitable.

One answer to the problem is quite simple, although it represents a sizable change from present policy. If the distributional objective is to make sure that the poor have decent housing, and further to make sure that the middle and upper classes do not benefit more than the poor, then the best policy is that which is beginning to be seen in the rent-supplement approach. It is a graduated ad valorem subsidy for housing, or a policy of “rent rebates.” Table 5 gives a hypothetical schedule of rent rebates, which is as attractive as any low-income housing subsidy presently available. The Table shows the percentage of housing expenditures to be rebated, and a very simple way of calculating the rent rebate. It might be simpler to use the rent rebate in conjunction with the personal income tax as either a graduated deduction or as a tax credit. It would be especially attractive to use with the personal income tax if a negative income tax were instituted, since the rebate would dovetail easily into that program. To be fair, the rent rebate would require putting imputed rent from owner-occupied housing into adjusted gross income.

The important argument for a rent rebate scheme like the present one is that it avoids many of the issues which allocational-distributional
programs get stuck in: the problems of defining a fair rental value of making sure that the benefits do not spill over into the other markets and do not arise. It also would have the advantage of having an even incidence, since there is no need to identify and separate out the different markets as producers' subsidies or rent supplements do.

A final measure to alleviate the problem of low income housing from a distributional point of view is a straight negative income tax. This is a program which guarantees poor families a minimum income level plus a percentage of all income earned and otherwise gained.\textsuperscript{16} The important advantage of a negative income tax is that (much like a rent rebate) it decreases greatly the equity of the tax system for lower income classes. A second feature, especially attractive from the point of view of distributional objectives mentioned above, is that it does not discriminate in favor of housing and against other goods and services the wage a rent rebate does. Rather it allows the poor to increase their command over goods and services. In light of the fact, mentioned above, that any program of subsidization of low-income housing has an inevitable tendency to spill over to other markets and has an efficiency (in terms of dollars of redistribution per dollar of expenditure) in the order of 25 percent, a negative income is a much more efficient device for redistributing income than a rent rebate.

<table>
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<th>Income</th>
<th>Percentage Rebate (Tax)</th>
<th>Gross Annual Rental *</th>
<th>Rebate (Tax)</th>
<th>Net Rental</th>
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<td>100</td>
<td>40</td>
<td>60</td>
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<td>1000-2000</td>
<td>30</td>
<td>300</td>
<td>90</td>
<td>210</td>
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<td>0</td>
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</table>

\textsuperscript{16} At 20\% of average income in class.

Summary

The present critique of current and proposed housing policies is a rough attempt to rationalize the existence of the myriad programs now existing. The general conclusion is that the programs are ill-conceived,

generally unrelated to the needs of the market, mostly regressive, and spotty in their incidence. We do not disagree with the contention that there are substantial externalities in central city areas, which logically call for subsidies tailored to the specific externality. For the most part, however, the policies should be slanted to a distributional objective. In the latter case, a simple ad valorem graduated subsidy, or rent rebate, would be the simplest and most equitable way of promoting low income housing.

The crisis of the cities is in part the crisis of housing. It should not be thought that simply bringing the level of housing to a higher standard will by itself solve much, but it is probably true that it is a necessary condition for breaking the vicious circle of urban poverty.

**Chairman White:** Our last discussant is Gerard Brannon, Director of the Office of Tax Analysis, U.S. Treasury Department. Dr. Brannon has served the Treasury with great skill since 1963, helping to shape its policies and policy pronouncements including those on tax treatment of real estate and low income housing. Previously he served as staff economist for the House Ways and Means Committee and the Joint Committee on Internal Revenue. He has been a Littauer Fellow at Harvard University and Lecturer at the Graduate School of Georgetown University. Dr. Brannon will discuss Professor Nordhaus’s paper.

**Mr. Brannon:** Prof. Nordhaus, in his wide ranging paper, has made a number of stimulating contributions to the discussion of housing policy. I will resist the temptation to make detailed comments at a number of points in order to explore in greater depth a few public finance issues that the paper raises.

As a matter of principle, Nordhaus argues that tax and expenditure policy should be concerned with income redistribution and with offsetting market imperfections. Also, he argues that income redistribution efforts should be designed to avoid affecting efficient market mechanisms.

I find this general statement satisfactory although a housing man would take some pains to say that housing policy is not intended for redistribution, but only for affecting markets. The facts are, however, that funds for low-income housing in the Budget are competitive with other anti-poverty programs, and since housing is such a large component of low-income budgets, housing policy will considerably affect the magnitude of needed income redistribution programs.

Nordhaus observes, as others have done, that there has been relatively little effort in the cost-benefit analysis work to integrate income redistribution policy and reallocation policy. The two ought to be integrated. We would take different views toward correcting a defect
in the housing market if it involved overpricing or underpricing of low-income housing.

The appropriate way is to recognize that where an externality can be dealt with in such a way as to improve the income distribution, it should be done this way. This should not modify the operating objective of equating marginal benefits and marginal costs, excluding any benefits of the improved income distribution. One should see what can be done for the poor through correcting market defects, and then see what remains to be done by other transfers, such as a negative income tax.

This point is consistent with Nordhaus' conclusion that housing policy is a poor instrument of income redistribution policy. It needs to be supported on market efficiency considerations. Both of our formulations of this interrelationship problem rest on an implicit assumption that there exists an alternative income redistribution measure which does not involve market inefficiencies. The negative income tax would seem to meet this requirement, but this is in an early stage of research and we don't really know.

A critical part of Nordhaus' paper is his estimate of housing market versus inefficiencies. One is struck by the author's bravery in making estimates in contrast, say, to Rothenberg who devoted several hundred pages to the same subject and concluded that he had too little information to justify a general estimate. Since I am less brave than Nordhaus, I will confine myself to making a few points about his figures and then simply observe that they are one man's opinion.

I doubt that there is much value in trying to design a subsidy policy to offset the effect of housing discrimination. As Nordhaus recognizes, it is doubtful legally that we could provide such subsidies, and direct regulatory measures are available to deal with the problem. In addition, in these market defect estimates Nordhaus might have considered the inefficiency arising from the heavy impact of property taxation on housing expenditures. This has recently been investigated at some depth by Netzer who appears to find on this ground some reason for a federal policy that would reduce housing costs.

Turning from the market defect estimates, an interesting feature of Nordhaus' work is that he combines these estimates with estimates of supply and demand curves to calculate total effects. His supply curves are long run. In very general terms, this model results in a given inefficiency in one market being divided between price and quantity effects. This alone would cause a 10% distortion in the demand curve for, say, central city, low income housing to result in something like a 5% price increase and a 5% quantity decrease, a little more or less depending on the precise elasticities. Nordhaus' demand curves, however, contain fairly significant cross elasticity terms, i.e., the price of suburban housing affects the price of central
city housing. The cross elasticity terms tend to mute any influence arising in one market. This accounts for the result that a 10% demand curve distortion finally causes prices to be off by only 2%. The estimates of the supply and demand curves are again, one man's opinion.

I think that most Federal housing people would assert that the externalities involved in low income housing are considerably greater than Nordhaus estimates, which they would express as a general social concern that the poor should be well housed. Since neither side has much hard data we cannot profitably debate the issue of the degree of market inefficiency.

Some things can be said with profit, however, about the techniques to deal with market inefficiencies. Nordhaus argues that in principle producer subsidies are desirable because they can be targeted to the specific problem, low-rent, central-city housing. I find the Nordhaus argument somewhat obscure at this point. He has previously insisted that producer and consumer subsidies are no different and he recognizes, at least in the appendix, that rent supplements can be targeted to new construction or major rehabilitation of low-rent central-city housing. Nevertheless, he identifies targeting as a specific advantage of a particular producer subsidy scheme, the Kennedy bill S 2100. Since the Kennedy scheme contemplated a controlled rent, I fail to see any fundamental difference in this as a targeted subsidy from the kind of rent supplement provided in the 1968 housing legislation.

In his detailed discussion of the producer subsidy in S 2100 Nordhaus recognizes one objection that the Treasury raised to this legislation, namely, that there is inadequate flexibility and budgetary control in a subsidy program which is built into the tax law. He overlooks another point made by the Treasury, that benefits structured through increased depreciation deductions are relatively inefficient because they are of different value to different producers, depending on the tax rate bracket, and thus tend to produce more benefit for the infra marginal producer than for the marginal producer.

Nordhaus adds two interesting points of criticism, that the subsidy should be pitched to particular construction features that are apt to involve externalities, and that it should be designed to provide incentives for good maintenance.

Passing from his discussion of producer subsidies, Nordhaus has some good things to say about public housing, and some bad things to say about low interest loans, tax benefits for housing outlays, and urban renewal. The issues on these matters are well known, so I will pass on to his comments about a more general rent supplement scheme.

Nordhaus addresses the question of how one would structure a combined housing and redistribution policy if one wanted such a combination. He comes out for a rent supplement which would
match a decreasing portion of rent as income rises, a plan that might be combined with negative income tax. I do not understand his point that such a rent rebate scheme would not involve the problem of making sure that benefits do not spill over. Nevertheless, I agree with his conclusion that as a redistribution device this is less efficient than negative income tax alone.

It will be clear from my comments to this point that I believe that we desperately need more information on externalities to make rational housing policies. I would add that there is another dimension of the problem with which Nordhaus' paper does not come to grips. This is a detailed analysis of the supply side of the housing market.

Even if one argued that there were not significant externalities in housing, the diversion of some potential income redistribution money to provide targeted housing subsidies, i.e., subsidies such as rent supplements limited to new or rehabilitated housing, might still be justified on the grounds that the supply of low rent housing is extremely inelastic in the short run and thus the portion of even negative income tax payments that would go into increased rent would principally increase income of landlords. This would involve us in a detailed analysis of the filtering process. It would also involve more study of the capabilities of supply variation in the short run. (Even in the short run, upkeep levels can be advanced, minor repairs can be provided etc.)

The objective of reducing the diversion of any income supplements of the poor into increased landlord income is attractive on the surface and it also appears to be a part of the strategy reflected in the 1968 housing legislation. The promise of this policy, as I said, calls for detailed analysis of the supply situation. Would it significantly reduce the normal filtering process? Would it foreclose alternative short run supply adjustments etc.?

In passing it may be interesting to a tax audience that this concern of housing policy with possible increases in landlord income that may have a low payoff in more housing is suggestive of the Henry George concern with the function of land rents incomes. His single tax proposal grew out of concern with increased demand for items of inelastic supply.

In summary, Prof. Nordhaus has made some useful contributions to the analysis of housing policy. We still face a formidable information gap on our way to finding defensible answers.

Editors note — The views expressed by Gerard M. Brannon are not necessarily those of the Treasury Dept.