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Housing the Urban Poor

A Critical Evaluation of Federal

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CHAPTER 4

Distributing the Housing Benefits

One of the reasons for governmental adoption of a housing policy is to alter the distribution of income. . . . Americans with low incomes are not the sole or even the primary beneficiaries of the most important housing programs. By far the largest and most significant form of public aid to housing is contained in the Internal Revenue Code, which in 1970 allowed nearly $10 billion in tax benefits to homeowners who were predominantly in the middle and upper income brackets. Low-rent public housing was a distant second.

Henry J. Aaron,
Shelter and Subsidies

The erratic political fortunes of the major federal housing programs can be attributed to many factors, including the lack of consensus about policy objectives, changing national priorities, fluctuations in the economy, and program mismanagement, to name only a few. Increasingly, however, public sentiment, in both its positive and negative expressions, also reveals an awareness that the choice of housing policy may significantly alter the distribution of family income and the incidence of social benefits.

Of course, economists have long recognized that whenever the public sector intervenes in the private economy, each family finds that, to some extent, its income position relative to others is altered by the tax payment it makes to support that intervention and by the value of the benefits it may receive in return from various government expenditures or transfer payments. Moreover, in a liberal democracy such as ours, most voters would concede that taxes and public spending should narrow rather than widen disparities in family living conditions and should reduce rather than aggravate inequalities brought about by the private market. However, the redistributive potential of housing subsidies has never been realized for a variety of reasons: the close identification of housing itself with social status and self-concept, the difficulty of attaching dollar values to housing conditions and to their social and environmental consequences, the extent of both legitimate and self-serving interests with a stake in the status quo and hence the politically volatile nature of redistribution issues associated with housing programs (or, for that matter, any government policy). These difficulties have found expression in a number of exaggerated but disquieting stereotypes: at one extreme, the corrupt housing administrator using his position to line his pockets, and the wily contractor spiriting off windfall profits from newly constructed "instant slums"; at the other extreme, the undeserving loafers and the welfare chiselers moving into "penthouses for the poor," free to loll about the swimming pools all day while honest men work for their living. Even though ethnic jealousies and racial antagonisms help shape these stereotypes, they also contain several elements of fact and, as such, reflect legitimate discontent. It is difficult for even the most benevolent of taxpayers to accept a program that moves a poor or moderate-income family into better-quality housing (at a subsidized rent) than he himself can afford. Nor can one find any ready justification for allowing a high percentage of tax dollars intended for needy families to be diverted into the hands of administrative intermediaries or of well-to-do professionals who purchase tax-exempt bonds or participate in real estate syndicates.

Even if an effective majority agreed that housing subsidies should not be used to widen disparities in family income and living conditions, it would be difficult to reach a consensus on the redistributive effect that subsidies should have or on the most effective means for achieving that end. When funds are too limited to go around, which poor families should get housing assistance—the poorest, who can contribute virtually nothing to rental costs, or the "moderately" poor, who can contribute a greater portion of their rents and be rehoused with smaller subsidies? Should the distribution of aid depend on socioeconomic characteristics—age, race, family size, welfare dependency, and the like—or should it be based solely on adjusted income? To what extent can the redistributive function of housing subsidies be used to achieve social and economic goals such as locational mobility, the integration of individual and minority groups into the larger community, the maintenance of social order and family stability, or the strengthening of neighborhood coherence? How efficient are present subsidy programs with respect to redistributive objectives? Is the use of existing housing a more effective means of achieving equality in living conditions than the construction of new dwellings?

As briefly noted in Chapter 1, the redistributive effects of housing programs can be measured in two ways: first, in terms of the extent to which persons of equivalent economic status are treated equally (*horizontal* *equity*) and, second, the extent to which persons of unequal status are treated in accordance with their relative position (*vertical equity*). If the intended beneficiaries of a given federal program are assumed to be in some sense "equal," housing assistance under that program may be considered horizontally inequitable to the extent that it provides some members of the target group with more assistance than others. Similarly, a housing program is judged vertically inequitable if a substantial proportion of its benefits are diverted to individuals outside the target population.

Horizontal Equity: Serving the Neediest Households

The initial difficulty in applying the concept of horizontal equity to housing (a difficulty going directly to the question of which families should be benefited) is selecting a standard of eligibility that categorizes the needy in an operational way. To a certain extent, the choice of a standard is necessarily a subjective one, but if we agree on the desirability of helping those families who without subsidy would in all likelihood be obliged to live in substandard housing, then there are some relatively objective measures of "need."

Those Least Able to Compete for Private Housing

Family income—the most inevitable criterion—has been a factor in the eligibility formulas of virtually all federal housing programs.[1] Most efforts to include equity considerations in public investment analyses have generally relied on the single variable of economic class (as measured by income status) to provide a distributive weight for benefit-cost calculations. However, other household characteristics besides income constrict a family's housing choice and therefore merit some consideration. One such characteristic is racial or ethnic identity; for example, most studies on residence and race distinguish one housing market for white families, allowing them to locate anywhere throughout the metropolitan area, and other, separate

1. Substandard housing is not inhabited solely by low-income households, but the proportion of families living in substandard conditions is highest among the lowest-income groups. In an analysis of U.S. housing needs for the 1968 Kaiser Committee report, for example, G. E. Tempo estimated that approximately 15 percent of white households and 36 percent of nonwhite households with less than $4,000 income per annum were occupying substandard housing. For marginally higher income groups the percentage occupying substandard dwellings was significantly lower.

markets for blacks and other minorities restricted to particular geographic areas where prices are higher for any given quality of housing.[2] In recent years the enactment and enforcement of fair housing laws have helped moderate the most blatant forms of discrimination such as racially restrictive covenants, but collusive real estate practices, restricted flows of information, and private exclusionary practices continue to frustrate the ability of nonwhites to find standard housing at normal market rents. In a recent study of housing market discrimination, for example, Rapkin found that blacks spending the same rent as whites for the same number of rooms obtain a significantly higher proportion of substandard units.[3]

Family size also restricts housing choice, especially among low-income consumers, as evidenced by the unusually low vacancy rates (the lowest of any identifiable submarket) for large-unit dwellings in both federally assisted and private rental housing. Families with a large number of children have special space requirements that can be satisfied only at the cost of higher rent payments. Moreover, such families often encounter resistance from landlords who fear the maintenance and management problems associated with minors and from local governments which anticipate added burdens on school facilities and public services. Private developers rarely feel that the costs of accommodating large families are offset by higher rentals; thus little if any housing is expressly constructed for this submarket, and existing supplies fall well below the demand. Even in government-supported housing, fixed development cost ceilings per room act to limit the supply of large units.[4]

Two additional factors that help to explain a household's living conditions are old age and welfare status. Elderly households are relatively immobile because of psychological and social attachments to a certain neigh-

2. See, for example, Davis McEntire, *Residence and Race* (Berkeley: University of California Press, 1960); Chester Rapkin, "Price Discrimination Against Negroes in the Rental Housing Market," in John F. Kain, ed., *Race and Poverty: The Economics of Discrimination* (Englewood Cliffs, N.J.: Prentice-Hall, 1969); John F. Kain and John M. Quigley, "Housing Market Discrimination, Homeownership, and Savings Behavior," *The American Economic Review*, Vol. 62, No. 3 (June 1972).
3. Rapkin, "Price Discrimination Against Negroes," pp. 116–117.
4. The inadequate supply of units with many bedrooms in public housing has been well publicized. The situation in some cities is so desperate that households with nine to twelve members are forced to live in three- and four-bedroom units.

borhood, health disabilities, and the need for access to public transportation, health facilities, and shopping. This immobility severely limits their housing options. In the case of welfare families, their ability to obtain decent housing is constrained by landlord hostility as well as the impermanence of the welfare status itself. Studies indicate that welfare tenants face discrimination not unlike that endured by blacks and other minorities; in many cases, the quality of housing they inhabit is significantly inferior to that obtained by unassisted households below the poverty line.[5]

By including all of these household characteristics (family income, race, family size, welfare status, and age) as independent variables in a statistical, generalized linear probability model, we can construct a profile of the households most disadvantaged in their housing search or, in other words, with the highest probability of living in substandard housing in the absence of governmental assistance.[6] The degree to which housing subsidies reach those in the greatest need provides some measure of the horizontal equity achieved in federal housing aid. It is this statistical measure, in fact, which provides the equity weight $(1 + x)$ for our formal benefit-cost calculation.

The actual results from our probability model, illustrated with the use of Boston data, are set forth in the technical note at the end of the chapter. The findings suggest that much of a tenant's housing disadvantage (the additional probability that he will occupy substandard housing if unaided) can be explained in terms of the two tenant characteristics that dominate the composite indices: race and welfare status. Since the rent supplement program has the highest percentage of blacks and welfare recipients—those with the most serious housing disadvantage in Boston—the average rent supplement family is the most likely to live in substandard housing in the absence of federal assistance. This means that, in terms of at least one measure of horizontal equity, the rent supplement program has been most

5. See George S. Sternlieb and Bernard P. Indik, *The Ecology of Welfare: Housing and the Welfare Crisis in New York City* (New Brunswick, N.J.: Transaction Books, 1973).
6. Other household characteristics such as consumer tastes and stage in life cycle also contribute to a family's housing demand. But the lack of pertinent data on these variables precludes their inclusion in the probability model. It is possible that the omission of these important independent variables may create some specification error.

equitable.[7] Public housing, however, was more effective in aiding unusually poor families, primarily because of the very low rents (that is, the larger subsidy per recipient) it makes available.

The rent supplement and public housing programs have both concentrated on new construction, primarily the development of large multiple-unit projects in undesirable areas of the city. As a result, they have reinforced the economic and racial segregation of those low-income families least able to bear the multiple disadvantages associated with poverty. Poor black and welfare families have been concentrated in the worst neighborhoods; thus many of the inherent problems of poverty and ghettoization are compounded.

By contrast, the leased housing program (and other schemes that allow for the use of housing already in existence) distribute both the burden of poverty and the benefits of subsidized housing more equitably. The standing stock costs less to use, and consequently a larger portion of the needy may be served for any given public expenditure. Since most leased housing is drawn from the existing stock (and therefore unconstrained by the cost ceilings applied to new public housing construction), it offers more opportunity for meeting the special needs of extra-large families. And perhaps most important, the use of existing units permits wider dispersal of the disadvantaged throughout the housing market, thereby minimizing the social costs of poverty for all. A family moving into a leased housing unit is indistinguishable from any other newcomer to a neighborhood and therefore is accepted matter-of-factly by the same local residents who would rally in arms at the suggestion that public housing be built in their midst.

Determining Eligibility

It might be argued that the measurement of horizontal equity, viewed solely in terms of the socioeconomic characteristics of the tenants, is an unsatisfactory method of evaluating subsidy programs. For one thing, the

7. Again, it should be noted that the Boston results are somewhat idiosyncratic. In Boston, since the rent supplement–rehabilitation units were part of a larger-scale FHA rehabilitation program, the selection of tenants was circumscribed by a local policy giving priority to displaced tenants. In other communities, where such a policy does not exist, the choice of tenants is the responsibility of the private landlord. We can surmise, therefore, that Boston's rent supplement projects are rehousing tenants with relatively more serious housing needs than are projects in other communities.

statistical probability that a subsidized tenant would live in substandard housing in the absence of government assistance logically depends on the conditions of the local housing market (housing supply) as well as on the tenants' household characteristics (housing demand). However, since the short-run supply of housing is relatively fixed, the individual household must deal with the housing supply as given, and one may reasonably assume that the statistical probabilities depend on tenant characteristics (that is, demand conditions) alone. Another possible criticism of our horizontal equity measure is that eligibility for housing subsidy programs is primarily a function of household income. Therefore it may be unfair to judge a program's equitability in terms of standards it was never intended to meet. An adequate reply to this criticism requires a closer look at tenant selection as actually applied over the years. For the most part, subsidized housing programs do, in fact, serve a severely disadvantaged low-income clientele. In 1970, 57 percent of the families living in public housing had annual incomes under $3,000, and less than 1 percent earned more than $7,500.[8] The average annual income for public housing tenants under sixty-five years old was $3,636 in 1970. However, in 1970, only 1.4 percent of the families eligible for low-rent public housing received any assistance. Combined, leased housing and rent supplements aided less than 0.1 percent in the lowest income category.

The fact that only a limited portion of the poor have benefited from existing subsidy programs suggests that income is not, and indeed has never been, the sole criterion used for distributing housing aid. Other criteria have reflected some widely held attitudes toward the poor, for example, the tendency of our culture to equate chronic poverty with a failure of moral will—the "God helps those who help themselves" tenet of the Protestant work ethic. The public housing program, during its initial years under the Roosevelt Administration, was aimed primarily at assisting "the deserving poor"—in other words, those "honest" families betrayed by circumstance and only temporarily in need of assistance until "back on their feet again."

A number of gaps in program coverage have their origin in the highly charged and polarized atmosphere that envelops any legislative proposal

8. Derived from data supplied by HUD and cited by Henry J. Aaron, *Shelter and Subsidies* (Washington, D.C.: Brookings Institution, 1972), Chapters 7 and 8.

having potential impact on the distribution of income. Most important pieces of housing legislation have received congressional approval only as the result of hasty compromise among a variety of interests. The effects of this improvisation has revealed itself in the patchwork assembly of the bills in their final form: omnibus in content; their provisions often inconsistent in spirit, scope, and level of detail; their language needlessly rigid and specific in one place, vague and ambiguous in another.

Government Regulations

The legislative history of the rent supplement program amply illustrates the politics of redistribution. Perhaps the most disputed issue that emerged during congressional hearings concerned the definition of eligible tenants. Initially, the Johnson Administration had proposed legislation to provide rent supplements to moderate- and middle-income families—that is, those with incomes above the admission ceilings for public housing yet below the amount necessary to compete for standard units in the private market. However, the Senate Banking and Currency Committee objected, insisting that the income standards should be the same as those for public housing. Ultimately the position of the Senate committee prevailed, resulting in a housing program for the poor rather than for the lower middle class.

This congressional victory seemed to assure the redistributive character of the rent supplement program, but the legislators—as a concession to various political pressures—then proceeded to restrict eligibility to select groups in the low-income population judged by specific criteria to be unfortunate or deserving. As the program now operates, prospective tenants are required to demonstrate their neediness by meeting separate eligibility tests with respect to total family assets, gross household income, and certain categorical restrictions.[9]

The income and asset limitations provide a test of financial need. A rent supplement applicant must have a maximum gross income no higher than the amount allowed for admission to public housing in the same locality, that is, at least 20 percent below the income necessary to rent safe and

9. This discussion of tenant eligibility relies on a more exhaustive account found in U.S., Department of Housing and Urban Development, Federal Housing Administration, *Rent Supplement Program: Public Information Guide and Instruction Handbook,* Report No. 2504 (Washington, D.C.: U.S. Government Printing Office, 1966), pp. 10–12.

sanitary housing in the local private market. In addition, his total assets cannot exceed $2,000 unless he is sixty-two years of age or older, in which case the total cannot surpass $5,000.[10] The higher asset allowance for the elderly takes into account their reliance upon savings, as a supplement to social security and retirement pensions, to pay current living expenses.

However, in addition to satisfying these financial criteria, the applicant for rent supplements must qualify under one of the following categories of the "deserving" poor: displaced by government action, head of household or spouse sixty-two years of age or older, head of household or spouse physically handicapped, living in substandard housing, or occupying dwelling units destroyed or extensively damaged by natural disaster. Here the rationale of Congress and HUD appears to be that these categories single out groups who are clearly the victims of circumstances, their housing plight a misfortune for which they cannot be held personally responsible. Little if any controversy attends housing assistance for persons within such categories; after all, who would begrudge the elderly, the handicapped, or the evacuee?

Local Politics

General eligibility requirements for each of the subsidy programs are prescribed by Congress, usually in terms of income limits.[11] Federal law prohibits racial discrimination and provides that priority be given to households displaced by urban renewal or slum clearance. But within these federal constraints, responsibility for establishing priorities and selecting tenants from the long lists of applicants is at the discretion of local authorities, subject, in some instances, to negotiation with private owners.[12]

10. Ibid., p. 11.
11. Public housing units are intended, for example, for families with an equivalent annual income of $6,500 or less for a family of four. The statutory and contractual requirements relating to leased housing eligibility are nearly the same as those applicable to public housing and other programs authorized under the U.S. Housing Act. Exceptions are the congressional waiver of the 20 percent rent gap requirement for Section 23 short-term leasing and the waiver of the Workable Program requirement. See U.S., Department of Housing and Urban Development, *Low Rent Housing Leased Housing Handbook,* Transmittal No. 2, RHA 7430. 1, November 28, 1969.
12. Normally, leased housing agreements provide for one of the following procedures: selection by the local authority; selection by the local authority subject to the approval of the owner; selection by the owner subject to the approval of the local authority; selection by the owner from a list of eligible applicants supplied by the local authority. See ibid., Chapter 3, Section 2, and Chapter 4, Section 1.

Standards of selection (and consequently the distribution of benefits) may vary considerably from city to city. Screening procedures are rarely made explicit and, even where clearly stated, may be altered or ignored in practice. Of course, this degree of administrative discretion allows opportunity for a humane flexibility but also risks favoritism, discrimination, and other forms of abuse. The short-term leasing program is particularly suited, for example, to meeting immediate relocation needs or emergency situations, such as fires or floods.[13]

Civil liberties groups have decried discrimination against welfare recipients, Negroes, and Spanish Americans, and even drug addicts and prostitutes.[14] On the other hand, tenant associations in public housing, when given a voice in management, have often demanded selection criteria designed to keep "troublemakers" out.

Most local housing officials place a high value on conventional good behavior by tenants, and, despite a congressional mandate to scatter the leased units throughout the community, many exclude "undesirable" families from middle-income areas. In some communities, housing authority staff and private owners clearly select those families considered acceptable to neighborhood residents. Even after a concerted attempt to eliminate the use of good-behavior standards (including stability of employment history, freedom from drug addiction, good housekeeping habits, presence of a father in the home), the New York City Housing Authority has continued to apply an admissions policy favoring "better families" and the maintenance of a "good family environment." [15]

Of course, the concern of local authorities and tenants is an understandable and, to some extent, a legitimate one. Concentrating a larger number of "problem families" (those with special disabilities, broken families, and

13. In 1970, 1,085 or 57.8 percent of the housing units under lease in Boston were used to house more than 700 families displaced during the FHA-sponsored Boston Urban Rehabilitation Program.

14. For a detailed discussion of the controversy in Congress that centered around tenant selection priorities in public housing, see Robert Moore Fisher, *Twenty Years of Public Housing* (New York: Harper & Row, 1958), pp. 241–242.

15. Gilbert Y. Steiner, *The State of Welfare* (Washington, D.C.: Brookings Institution, 1971), pp. 173–178. See also Roger Starr, "Which of the Poor Shall Live in Public Housing?" *Public Interest,* No. 23 (Spring 1971), and the reply by Al Hirshem and Vivian N. Brown, "Too Poor for Public Housing: Roger Starr's Poverty Preferences," *Social Policy,* May–June 1972.

several generations of welfare dependents) in a single project has, in many instances, proved self-defeating. However, in other cases, selection practices have been arbitrary, moralistic, unnecessarily exclusive, and unrelated to reliable indicators of potential problems.

Housing Authority Finances

Another outcome of the conflict between the redistributive intent of the housing programs and the local administrative stake in "good" results has been the use of selection criteria having more to do with the financial condition of the local housing authorities than with the relative need of the applicants.

The single largest subsidy program, conventional public housing, is run by the nearly 2,200 local housing authorities in the nation. Under this program tenant payments are expected to meet maintenance, replacement, and operating costs. But in recent years, an ever wider disparity between escalating operating costs and relatively stable rent-rolls has brought many local housing authorities to the verge of fiscal collapse (and, in the case of St. Louis, to an actual declaration of bankruptcy).[16]

In some extreme situations, local housing authorities are still paying off loans on housing projects that have become virtually uninhabitable because of neighborhood crime and vandalism. With operating costs increasing faster than tenant incomes, authorities have been left with the brutal choice of either concentrating assistance on the poorest families, who can't afford rents sufficient to cover management costs, but whose need is presumably greatest, or spreading assistance among families whose deprivation is less severe, but whose rent contributions will help stabilize the LHA's financial position.

Precarious finances, administrative anxieties, and conflicting political pressures are unavoidable facts of life for any subsidy program and, by themselves, do not comprise an indictment of present LHA operations. But the critical points are that many of the poorest families are excluded by existing programs, and that since the federal resources allocated to housing are not sufficient to aid all the needy, other criteria besides income alone have had to be used in selecting subsidy recipients from among the larger

16. For a lucid discussion of the fiscal plight of local housing authorities, see Albert Walsh, "Is Public Housing Headed for a Fiscal Crisis?" *Journal of Housing,* No. 2 (February 1969), p. 71.

target population. The supplementary criteria used in the past have not always been ideal from an economic and social point of view. It can be argued that since there is more social value in assisting those households least able to compete for standard housing on the private market, the government is justified in providing adequate housing for those with the most urgent needs. The argument that there is more social value in assisting households least able to compete for standard housing on the private market is consistent with principles of welfare economics, because it assumes that the very poor receive more satisfaction from a marginal improvement in their housing condition than do families relatively better off. Moreover, since the severely disadvantaged do not represent a market for real estate interests, this strategy minimizes one political problem inherent in housing programs: the potential competition between publicly subsidized rents and those supplied by the unassisted private market.

Differential Benefit Levels

As noted in Chapter 3, not only do the programs reach a small fraction of those in need, but even among those assisted the levels of benefits differ. Since the rent charged a subsidized tenant is based on his ability to pay rather than on the market rent of the unit he occupies, participants in the various subsidy programs pay roughly the same dollar amount for their housing. However, in exchange for these comparable payments, they obtain units (and neighborhoods) of markedly different quality. These variations in quality, as measured by differences in resource costs, reflect horizontal inequities in the design of the subsidy programs.

One way to measure the degree of such inequity is by comparing the market rental of units occupied by subsidized tenants with the mean rent for "standard" private dwellings paid by other low-income households in the same local housing market. Instead of assisting the maximum number of poor households possible with a given budgetary or resource expenditure, the new construction programs—Section 236 and conventional public housing—provide services far in excess of the minimum acceptable quality. As Table 4.1 indicates, only the leasing of existing dwellings makes standard housing available at resource costs comparable to rents of low-income standard units in the same private market (or to the Bureau of Labor Statistics' lower-income family budget).

Of course, ideally, one would like to offer to all families the highest hous-

Table 4.1 Horizontal Equity: Comparative Monthly Cost of Federally Assisted Rental Housing (Two-Bedroom Units), Boston, 1970

Program	Median Monthly Resource Cost	Monthly Resource Cost Divided by Boston Survey Low-Rent Standard Housing Cost ($129)
New Construction		
Conventional public housing	$215.50	1.7
Turnkey public housing	202.50	1.6
Leased housing	207.00	1.6
Section 236–rent supplements	190.00	1.5
Existing Housing Stock		
Leasing existing units	137.00	1.1
Leased housing with rehabilitation	174.00	1.4
Section 236–rent supplements with rehabilitation	180.00	1.4
Private Market Low-Rent Housing		
Standard housing[a]	129.00	1.0
BLS lower family budget[b]	136.00	

a. Derived from the Boston Area Survey, M.I.T.-Harvard Joint Center for Urban Studies, *How the People See Their City: Boston 1969* (Cambridge, Mass., 1970).
b. U.S., Department of Labor, Bureau of Labor Statistics, "Three Budgets for an Urban Family of Four Persons, 1969–1970," Supplement to Bulletin 1570-5 (Washington, D.C.: U.S. Government Printing Office, 1970), Table A-1. Housing includes shelter, household operations, and household furnishings. All families with the lower budget are assumed to be renters. In spring 1970 the average cost of a lower budget for a family of four persons living in urban areas of the U.S. was $6,960.

ing consumption benefits possible. But it is hard to justify moving a fortunate few into brand-new dwellings while the vast majority of eligible families receive absolutely no direct relief at all. Wider awareness of these horizontal inequities has made subsidy programs for new construction increasingly controversial: newspapers across the country have exposed the grosser examples of maldistribution. HUD officials and members of Congress have received streams of complaints from families not receiving assistance and wondering why they must pay taxes to assist others in their neighborhoods who are in comparable financial circumstances.[17] Thus the

17. We assume that the political process behaves in accord with Pareto optimality; that is, we expect that indirect beneficiaries will not value increments in subsidized housing services beyond a certain amount. For example, nontenants will not receive psychological satisfaction if subsidized tenants are provided luxurious penthouses. In this case Pareto optimality is not achieved, since the combined benefit to tenants and nontenants falls short of the government subsidy cost. The Section 236 program with rent supplements for low-income families may be an example of this situation.

status of existing subsidy programs is compromised not only by the empirical measure of their inequities but also by their new political vulnerability in the wake of these disclosures.

Vertical Equity: Diverting Subsidies from the Poor

Any public policy calling for the redistribution of social welfare benefits (whether they are income or in-kind services such as housing) makes an implicit normative judgment that those fortunate enough to enjoy life's luxuries should help those denied its necessities. Almost by definition, this policy embraces as its means "taking from the rich to give to the poor," either by direct transfers or by transfers in kind. Vertical equity is the measure of a program's performance in assessing its costs on those most able to pay and distributing its benefits to those in sorest need.

With any redistributive program it is necessary to ask what proportion of the intended benefits actually reaches the poor and how much is siphoned off by individuals outside the target population. Is the net transfer effect progressive rather than regressive? How much so and with what qualifications? One of the telling arguments made for housing allowances, rent certificates, and income maintenance schemes is that virtually every dollar of government aid reaches the target group. Although these demand strategies require some expenditure on administrative support and program monitoring, the amount of resources deflected to the nonpoor should be minimal.

The Cost of Public Intermediaries

The analysis of how benefits are allocated under existing production programs provides some basis for assessing vertical equity since a large portion of subsidy dollars is diverted to intermediaries. In the case of conventional public housing, for example, the local housing authority negotiates, contracts, and monitors construction activities, and operates and manages housing units. Moreover, capital is raised through the sale of tax-exempt bonds to high-income investors. Under the leased public housing program, the same housing authority selects tenants, inspects dwelling units, and negotiates with landlords for the lease of private dwellings. With the Section 236–rent supplement program, a portion of the subsidy funds is kept to pay salaries and administrative expenses, as it passes through the hands of FHA administrators and local sponsors.

The Cost of Raising Capital through Preferential Tax Treatment
Diversion of federal housing funds to the nonpoor also results from the use of high-income investors as a source of development capital. In the case of conventional or turnkey public housing, the federal government raises capital through the sale of housing authority 40-year serial bonds. Interest payments on these bonds are exempt from federal income taxation in order to facilitate their sale on the most favorable terms. The net cost of issuing these tax-exempt bonds is the difference between the loss of federal revenue on the tax-exempt interest payments and the interest cost saving that results because the payments for retiring the bonds are less than those for retiring fully taxable bonds.[18] For privately owned units—either constructed or rehabilitated in conjunction with the leased housing and rent supplement programs—accelerated depreciation provisions offer high-income investors a means of sheltering income from federal taxation. The syndication of these tax shelters is a costly method of raising development capital and results in additional forgone federal revenue. Thus, as the data in Table 4.2 indicate, the share of the total direct benefits received by the poor (one measure of vertical equity) varies among the alternative housing strategies, with the target groups receiving their largest share of the subsidy dollar through programs relying on the use of the existing housing stock.[19]

The Redistributive Goal
One of the major problems highlighted in the President's *Third Annual Report on National Housing Goals* (1971) was "the need to deal with inequities which arise when some families receive subsidies and others do not, the inevitable result of having to allocate scarce resources." To a limited extent, Congress has sought to deal with these inequities in straightforward terms, by imposing low-income limits for program eligibility and attempt-

18. For a detailed explanation of this cost estimate, see Arthur P. Solomon, "The Cost Effectiveness of Subsidized Housing," Working Paper No. 5 (Cambridge, Mass.: MIT-Harvard Joint Center for Urban Studies, 1972), Appendix A, mimeographed.
19. In a study of how the direct benefits of public housing are distributed, Bish found that the poor and near poor received nearly 80 percent of the subsidy. See R. L. Bish, "Public Housing: The Magnitude and Distribution of Direct Benefits and Effects on Housing Consumption," *Journal of Regional Science*, Vol. 9 (December 1969), pp. 27–39. This is an overestimate, however, since the cost of the income tax subsidy associated with the interest payment exemption on the public housing serial bonds is not included in the Bish analysis.

Table 4.2 Vertical Equity: Allocation of Federal Housing Subsidies to Tenants, Intermediaries, and Investors, Boston, 1970[a]

Program	Tenant Consumption Benefit		Government Intermediaries[b]		Investors and Syndicators[c]	
New Construction						
Conventional public housing	64%	($60.00)	24%	($22.00)	12%	($11.00)
Leased housing	79	(98.00)	17	(13.00)	4	(4.50)
Section 236–rent supplements	81	(107.00)	15	(5.50)	4	(4.50)
Simple unweighted mean	79					
Existing Housing Stock						
Leasing existing units	81	(55.00)	19	(13.00)	0[d]	(0)[d]
Leased housing with rehabilitation	79	(79.00)	13	(13.00)	7	(7.50)
Section 236–rent supplement with rehabilitation	83	(93.00)	10	(5.50)	7	(7.50)
Simple unweighted mean	82					
Housing allowances[e]	90					

a. The allocation of benefits is derived from Chapter 3.
b. The amount diverted to federal and local intermediaries is based on the program's respective administrative costs.
c. The share of the total costs diverted to high-income investors and financial syndicators is based on estimates of forgone federal revenue from accelerated depreciation and tax-exempt bonds.
d. Because many structures containing existing units have been under the same ownership for at least five to ten years, it is assumed that the cost of any tax shelter from an earlier syndicate is no longer incurred.
e. In the case of housing allowances, the direct tenant consumption benefit is likely to approach 80–90 percent, depending upon the type of administrative and monitoring mechanisms adopted.

ing to ensure that the neediest families receive priority. But lowering eligibility limits without simultaneously increasing the amount of the subsidy may, in effect, force local housing authorities into insolvency.

Ideally, the equity problems should be solved by increasing appropriations sufficiently to provide an adequate subsidy for all those eligible by some reasonable definition of need. As the President's Committee on Urban Housing (the Kaiser Committee) concluded, government assistance should be provided to all persons—regardless of family size, age, mental status, or health—who are unable to afford the cost of modest, decent, safe, and sanitary housing. However, as long as the nation is either unwilling or unable to allocate the funds required to meet this goal, the equity problem must be approached through improved allocation of whatever resources happen to be available. While recognizing that there is no single, unambiguous measure of poverty or individual need, we must try to channel limited funds to those most disadvantaged by the private housing market. This will require careful analysis of the probability that, in the absence of government aid, a family with given characteristics would be condemned by the market to live in substandard housing. It will also require a major restructuring of our housing subsidy programs—away from the existing miscellany of selection criteria, which leaves many needy families without any assistance whatsoever, and away from the new construction orientation, which grants excessive benefits to a few and deposits too much of the subsidy dollar into the pockets of the nonpoor.

Technical Note: The Housing Condition Probability Model

Through the application of a statistical, generalized linear model, it is possible to determine the likelihood that a household, with a specified set of characteristics, will live in substandard housing in the absence of government subsidies. The results of this type of analysis provide some measure of the extent to which federal housing subsidies are reaching those with the highest probability of living in deficient units, one of our measures of horizontal equity.

For this purpose a dichotomous dependent variable of housing condition, which takes on the value of zero (0) when the housing units are classified as standard and one (1) when the units are deteriorated or dilapidated, is regressed across the independent variable representing the household characteristics discussed in the chapter. The following equation is used:[20]

$$X = \alpha + b_1 Y + b_2 N + b_3 B + b_4 W + b_5 E + b_6 L + b_7 P, \tag{4.1}$$

where

X = the probability of living in substandard housing,

α = the intercept or mean value of the independent variables that are not included in the housing condition model,

20. The variables for mean household size (N) and extra-large families (L), and for mean gross income (Y), and unusually poor families (P) are highly collinear (that is, as the values of both variables change, the values remain proportional). However, the dummy variables for extra-large and unusually poor households are included because the federal government provides local housing authorities with additional financial support for these specially disadvantaged groups. Welfare status and income are also highly collinear.

$b_1 \ldots b_7$ = the regression coefficients for the respective household characteristics,

Y = the gross income of the household,

N = the household size,

B = a dummy or dichotomous variable for tenant race (1 = nonwhite head of household; 0 = white head of household),

W = a dummy variable for welfare status (1 = household receiving some welfare assistance; 0 = no welfare assistance),

E = a dummy variable for the elderly (1 = household head 65 years of age or over; 0 = household head under 65),

L = a dummy variable for extra-large families (1 = 6 members or over; 0 = under 6),

P = dummy variable for unusually poor families (1 = under $3,000 gross income; 0 = $3,000 or over).

Numerical values for the explanatory or independent variables are taken from the tenant application forms for each household. The regression coefficients indicate the additional probability of living in substandard housing as explained by the associated independent variable once other variables have been accounted for. If, for example, the coefficient for a continuous variable like family size is 0.04, then the probability of living in substandard conditions increases by 4 percent with each additional family member. With a dummy variable like race, if the coefficient is 0.12, then the probability of a nonwhite family living in substandard housing is 12 percent above that of a white family, all other factors being equal. (These interpretations, of course, assume linear relationships.)

Using the data for the city of Boston,[21] we show some representative output from the generalized least-square model[22] in Table 4.3. Most regression

21. Data used for the regression are from the Boston Area Survey, MIT-Harvard Joint Center for Urban Studies, *How the People See Their City: Boston 1969* (Cambridge, Mass., 1970).

22. For a binary regression analysis we cannot use ordinary least squares (OLS) since it violates the homoscedasticity criterion as the variance of the error term is not random. Instead, the variance of the error term varies with the predicted value of each observation, for example, if the predicted value is E_{yt}, then the variance is $E_{yt}(1 - E_{yt})$. However,

Table 4.3 Families Living in Substandard Housing, Boston, 1970

Tenant Characteristic	Percentages and Averages	Regression Coefficients	t-Statistic	Indices
Family size	3.0	0.002	0.296	0.0060
Nonwhite families	20.0%	0.078	3.275[a]	0.0165
Welfare status	21.0%	0.162	3.604[a]	0.0340
Family income (in dollars)	$7,700	−0.000004	3.250[a]	−0.0310
Extra-large families	11.0%	0.057	1.392	0.0063
Unusually poor families	8.0%	0.034	1.739	0.0030
Elderly households	10.0%	0.062	3.341[a]	0.0620
Total (composite index)				0.0959[b]

Intercept 0.1743 (t-statistic 5.103)[a]

Degrees of freedom 0.1792

a. Coefficient different from 0 at 0.01 level. The t-statistic provides a measure of statistical confidence for each independent variable. (For a technical definition of the use and meaning of the t-statistic, see any elementary statistics text.)
b. The composite index is computed by multiplying the value of each independent variable by its associated regression coefficient (the fitted coefficients from the housing condition probability model) and summing the individual indices.

coefficients in our model are statistically significant, and their signs are consistent with expectations. Greater family size and lower income as well as minority, elderly, and welfare status each correlate positively with substandard housing conditions.

Using socioeconomic data and the estimated regression coefficients for a particular city, we can estimate the probability of an average urban household living in substandard housing. This probability—when compared to that of the average subsidized tenant living in substandard housing if he were to be denied government assistance—offers a means for evaluating the performance of existing programs with respect to reaching those with the most serious housing needs.

First, appropriate percentages and mean values for each household characteristic (average family size, mean family income, and so forth) are calcu-

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we are able to correct for homoscedasticity by using a generalized least-squares regression model. Another difficulty worth mentioning is the unit probability problem associated with the type of model used in this study. Admittedly, with the use of this equation, the probability of living in substandard housing for given individuals might fall outside the zero-to-one range; however, our estimates concern groups rather than individuals. If we use the mean socioeconomic characteristics of the tenants in each subsidized program, it is highly unlikely that the equation would result in a probability falling outside the zero-to-one range.

lated for a given city and then multiplied by their respective regression coefficients. The products are summed to determine a composite index for the city. The addition of this index to the intercept (the mean value of excluded variables) determines the probability of living in substandard housing. In Boston, for example, adding the value of the intercept, 0.1743, to the composite index for the city, 0.0959, indicates a probability of 0.27; in other words, the average household in Boston has about one chance in four of living in substandard housing (see Table 4.3). Next, the probability that the average tenant in each of the three subsidy programs would live in substandard housing in the absence of government assistance is computed in a similar manner. Each of these probabilities is then subtracted from the mean probability for the average household in the city. The difference between the probability for the average household in a city and the probability for the average tenant in each federally assisted housing program represents the "additional" probability that a subsidized tenant would live in substandard housing without government assistance. In other words, the additional probability of subsidized tenants living in substandard dwellings—over and above that of the average city dweller—reflects the relative disadvantage those tenants would face in competing for standard housing on the private market. This provides a statistical measure of distributive equity, the measure used for weighting the housing benefit in the benefit-cost model. To illustrate, calculations are made using Boston data as summarized in Table 4.4. The degree of local discretion permitted in the selection of tenants for the subsidized housing programs suggests that the distributive weights determined for the Boston programs will not be universally applicable. However, the results do contribute to understanding how benefits are distributed in one particular city, and, more important, the methodology used is generally applicable to other cities and housing markets.

By applying the regression coefficients for Boston to the respective tenant characteristics and then summing the products, composite indices are derived for the city's public housing, leased housing, and rent supplement programs. (See Table 4.5.) The intercept for Boston (0.1743) is added to each index to find the probability that the average subsidized tenant would live in substandard housing in the absence of government assistance. Since the intercepts are the same, the distributive weight is computed by subtract-

Table 4.4 Tenant Characteristics, Boston, 1970

Tenant Characteristic	City	Public Housing	Leased Housing	Section 236–Rent Supplements
Mean family size	3.0	3.1	3.1	3.8
Percent nonwhite	20.0	41.0	72.0	100.0
Percent welfare recipients	21.0	32.0	52.0	89.1
Median household income	\$7,700	\$3,680	\$3,353	\$3,468
Percent extra-large families	11.0	17.0	20.0	19.2
Percent unusually poor families	8.0	69.0	48.0	53.9
Percent elderly	10.0	31.0	24.0	6.8

The sources of these statistics are as follows:
Public Housing: Boston Housing Authority, "Federally Aided Developments Tenant Status Report," June 1969, mimeographed.
Leased Housing: Boston Housing Authority, "Report on Leased Housing Programs as of April 1970," mimeographed, and BHA Tenant Application Forms.
Section 236–Rent Supplement: FHA Boston Insuring Office, Application for Tenant Eligibility for Rent Supplement, FHA Form No. 2501.

Table 4.5 Distributive Weights for Subsidized Housing Programs, Boston, 1970

Tenant Characteristics	Regression Coefficient	Public Housing Indices	Leased Housing Indices	Section 236–Rent Supplement Indices	Boston Indices
Mean family size	0.002	0.0062	0.0062	0.0076	0.0060
Nonwhite households	0.078	0.0320	0.0562	0.0780	0.0165
Welfare families	0.162	0.0518	0.0842	0.1141	0.0340
Mean family income	−0.000004	−0.0015	−0.0134	−0.0139	−0.0310
Extra-large families	0.057	0.0097	0.0114	0.0108	0.0063
Unusually poor families	0.034	0.0235	0.0163	0.0184	0.0030
Elderly households	0.062	0.0192	0.0149	0.0043	0.0620
Composite indices		0.1439	0.1758	0.2492	0.0959
Distributive weight (composite index for housing programs)		0.0480	0.0799	0.1533	

ing the composite values for each program from the composite value for the entire city. For example, if the probability for the average Boston household is 0.27 and the probability for the average rent supplement tenant is 0.42, then, in the absence of the government subsidy, the average family in a rent supplement unit has a 15 percent (0.42–0.27) higher likelihood of living in substandard housing than does the average Boston household.