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Analyzing the Demand Side Approach to Housing the Nation's Poor, Using Grand Rapids Data

by John W. Reifel

Editor's note: This article discusses one aspect of a major study recently completed by Associate Professor John W. Reifel, of the Economics Department. The work was funded by a grant from the U.S. Department of Housing and Urban Development.

The Housing Act of 1949 established as a national goal the "provision and availability of a decent home and suitable living environment for every American family." In recent years a major policy debate has been waged as to whether a demand side or a supply side approach would be more efficient at helping the country meet the 1949 goal. A supply side approach increases the housing stock through programs that subsidize new construction or rehabilitation of existing units. A demand side approach directly subsidizes poor households financially to enable them to rent or purchase larger and better quality housing.

Historically, this country has relied on a supply side approach toward improving housing conditions for the poor. Public housing, below market interest rate subsidy programs, and the New Construction component of the Section 8 Housing Program have generated new housing specifically for the poor. Financially overshadowing these programs, however, have been the federal income tax provisions that subsidize homeowners by allowing them to exclude from income the potential rental value of housing services received, yet itemize as deductions the mortgage interest and property tax costs of generating the services. In fact, the annual cost to the Treasury of these tax provisions, the bulk of which are realized by middle- and upper-income homeowners, exceeds all of the U.S. Department of Housing and Urban Development (H.U.D.) spending on construction specifically designed for poor households. These tax break subsidies to homeowners lead to improved housing conditions for poor households through a filtering process. Over long periods of time, as housing units age and the neighborhoods deteriorate, individual housing units frequently filter down from the middle- and upper-income households who built them to households with successively lower economic status. If the neighborhood continues to decline, eventually the poor are able to move in when those who are economically better off vacate their houses and move to a better neighborhood. Economists have observed that this supply side approach is a very slow and indirect way to improve housing conditions for households currently living in units with serious deficiencies.

In recent years many economists have advocated a policy switch to a demand side approach. Subsidizing the buying power of poor households would provide them with the purchasing power to re-enter the housing market

and rent or buy better quality units. Slum housing exists not because landlords take advantage of poor tenants but rather because landlords are business people who, in order to avoid economic losses, must provide a level of services that matches the low-rent-paying ability of their tenants. If the rent-paying ability of the poor were to be raised by a housing allowance, they would shop for better housing. Competition among the many suppliers in any given housing market would assure that higher rents would buy better housing and not simply inflate profits of housing suppliers. A demand side approach would be more efficient at meeting the national housing goal because subsidy dollars would go directly to the poor, who would be able to afford better quality housing immediately. This approach would avoid the current difficulties, especially in evidence in the suburbs, of selecting sites for public housing developments. Also, since the mobility of the poor would be increased, it would tend to reduce economic and racial segregation. Finally, since improving existing units is cheaper than new construction, it should be less expensive per poor household served.

Note that the Existing Housing component of the Section 8 Housing Program, begun in 1974, has many elements similar to a demand side program. The major differences are that under Section 8 households do not have an incentive to find least cost units (because they must always pay 25 percent of their income) and the subsidy (the difference between rent and 25 percent of income) is paid directly to the landlord.

The income elasticity of demand for housing is a key policy variable in the demand side approach. This elasticity is calculated as the percentage increase in housing consumption that results from an increase in income divided by the percentage increase in income. For example, consider a household with an \$800 a month income that currently pays \$200 a month in rent. If, when that household receives an unrestricted monthly housing allowance of \$100, the household moves to a larger or better quality unit costing \$250 a month, that household's income elasticity of demand would be 2 [calculated as $(50/200)/(100/800) = 2$]. Theoretically, the income elasticity of demand for housing can vary from 0 (no response) to infinity. The larger the elasticity, the more of any unrestricted housing allowance that will go toward improved housing.

It would, of course, be possible to design the program to require that all housing allowance subsidies go for housing. Though this is politically appealing to legislators and their constituents who care about poor housing but do not care to subsidize television sets or cars for poor households, such restrictions violate the economic principle of consumer

sovereignty. The overall level of satisfaction for a society, given any particular income distribution (including the dollar value of subsidies) will be maximized when individuals are free to choose how resources are to be used. Realistically speaking, in order for a demand side approach to be politically acceptable, more stringent restrictions would have to be placed on how the housing allowances may be used the smaller the income elasticity of demand for housing is, especially if it is inelastic (less than 1.0). The current federal deficit dictates these restrictions because Congress has refused to pass a negative income tax (essentially a program of unrestricted income transfers) even when the Federal budget deficits were low and Presidents Nixon and Carter supported it.

When this debate about the demand side approach began back in the 1970's, the primitive studies available at that time yielded estimates of income elasticity that ranged from .2 to 2.1. The methodologies employed in the studies differed in important ways. Some studies were based on either mean or median values for census tracts or cities (aggregated data) and others were based on observations of individual households (micro data). Some were based on the household's current income, which often fluctuates widely from year to year, and others were based on unobserved permanent income, the stable income a household expects to average over time based on its human capital. Some studies analyzed the behavior of owners; others analyzed the behavior of renters. Not all the studies took into account the fact that households do not instantaneously change their housing con-

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MEMO

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sumption the moment their economic circumstances change. Neither did all of the studies take into account the demographic characteristics of the household such as size and race.

To get a more precise estimate of the income elasticity of demand for housing and to test how housing allowance programs with various types of restrictions might work, H.U.D. funded several experiments. Its major experiment, called the Experimental Housing Allowance Program (E.H.A.P.), funded programs in 12 cities that tested alternative versions and aspects of a housing allowance demand side program. The income elasticity of demand for housing estimates derived from E.H.A.P., which analyzed only renter households, did not exceed .72. This indicated that the elasticity is quite inelastic. In addition to this major experiment, H.U.D. funded several other studies including mine.

The Census Bureau administered the 44-page Annual Housing Survey to 5,000 households in the Grand Rapids SMSA during the 12-month period beginning in March, 1976, and ending in February, 1977. The survey includes extensive questions on housing consumption and household income, precisely what is needed to calculate the income elasticity of demand, but, since the data is collected under the promise of confidentiality, the information is available to the public only in summary reports. I obtained the Census Bureau's agreement that they would conduct requested tests by agreeing to supply to them micro data on the exterior of the Grand Rapids housing units (which I had helped the Kent County Health Department to collect in 1976) and individual 1976 crime totals for each of Grand Rapids' 32 police districts (which I calculated from a printout of all 1976 crimes supplied by the Police Department).

The data tape which the Census Bureau created from matching and merging the three separate data sources gave complete micro household data on 530 owner-occupied units and 275 renter-occupied units in Grand Rapids.

Determining the income elasticity of demand for housing requires the creation and statistical estimation of models of household demand for housing. The necessary models were created and estimated. For owner units housing consumption was measured as the reported market value of the house and lot. For renter units housing consumption was measured as a standardized gross rent that included contract rent plus additional monthly payment for utilities. Household income was defined alternatively as either total current income received by all household members or as a permanent income proxy created by a prediction equation based on the household head's education, age, sex, and race.

The major finding of my study indicated that the income elasticity of demand for housing was quite inelastic (less than 1.0). Income elasticity estimates based on owner units ranged from .459 to .198, while estimates based on renter units ranged from .251 to .156. Since the housing demand behavior of low-income households is particularly relevant for policy purposes, separate analyses were conducted for the 88 owner and the 116 renter household subsamples whose incomes did not exceed approximately 150 percent of the appropriate official 1976 poverty thresholds. All of the income elasticity estimates for low-income owners and renters were quite inelastic, ranging from .342 to .145. Evidence was found to support the hypothesis that among owner households, those headed by single adults have smaller in-

come elasticity of demand for housing than those whose heads are married. For renters, the more individuals in the household, the more rent was paid. If the head of a renter household was black, that had no statistically significant effect on amount of rent paid. For owners, most of the estimated models revealed that having larger households had no effect on the value of the housing units owned. If the head of an owner household was black, most of the estimated models revealed that the value of the housing unit was significantly less. This could result from black owners preferring lower quality housing than whites, from racially discriminatory housing practices, or from whites' willingness to pay a premium to live in racially segregated neighborhoods.

When households spend more on housing, what housing characteristics do they purchase more of? Though the E.H.A.P. did not attempt to answer this question, my study specifically examined the demands for rooms and for neighborhoods with low crime rates. The income elasticities of demand for these specific housing characteristics were found to be inelastic in all cases except for one demand for low crime model where the elasticity was -1.001.

The primary policy implication of all of this analysis is that a demand side approach to improving housing conditions for the poor will work only if conditions or restrictions are placed on how housing allowance dollars may be used. For example, some large percentage, such as 70 or 90 percent, of the subsidy dollars must be allocated to improved housing. Or, receipt of the housing allowance could be made conditional on the household living in a unit that meets certain minimum standards. The E.H.A.P. tested 17 different possible program designs.

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