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SUBSIDIZED HOUSING AND WORK AMONG WELFARE RECIPIENTS¹

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ABSTRACT

This paper examines the impact of subsidized housing on the number of hours worked by female recipients of public assistance. An analysis of a California survey finds an income effect in lowering hours worked, but the magnitude is small. The empirical results also reveal that those in Section 8 housing work considerably more than those renting in the private market or residing in public housing. This finding holds after controlling for observable personal characteristics and accounting for the income effect. Additional analysis comparing only those in the two housing programs shows a consistent and robust difference with those in Section 8 working more. There are two explanations for this result. The first is that the finding is a statistical artifact caused by programmatic creaming of or self selection among applicants. The second and more plausible explanation is that Section 8 housing offers recipients residential choice and mobility that improve opportunities for employment.

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SUBSIDIZED HOUSING AND WORK AMONG WELFARE RECIPIENTS

INTRODUCTION This nation is engaged in a debate that can radically change social policy: the outcome can transform welfare programs from providing income maintenance to promoting economic self-sufficiency. The public believes that government should help those requiring temporary assistance but is frustrated by a welfare system that perpetuates long-term dependency on public assistance (Ellwood 1988). The goal espoused by politicians across the ideological spectrum is to transition recipients to paid employment. The proposed reforms have focused on Aid to Families with Dependent Children (AFDC), which was established in 1935 to provide income support to children of widows and has expanded dramatically since the 1960s. By the early 1990s, this program covered five million adults and nine million children at a cost of approximately \$23 billion a year (Committee on Ways and Means 1993). AFDC-FG (Family Group), which is dominated by female-headed households, accounts for over nine-tenths of all AFDC cases.

While the political debate focuses on public assistance, the U.S. system of means-tested benefits is based on more than one program. For example, participation in AFDC usually translates directly into participation in Medicaid, the publicly provided health insurance for the poor. There are other benefits. In the 1980s, at least four-fifths of AFDC recipients received food stamps, and over one-third received housing assistance.¹ These statistics reveal a considerable variation in total

¹ These estimates are based on data from Moffitt (1992) and Blank and Ruggles (1993). Only rough proportions are presented because the prevalence of multi-program participation changed significantly over time.

benefits received by those on AFDC.²

One important policy question is whether participation in multiple programs compounds the disincentive to work and consequently contributes to welfare dependency. One would expect this to be the case given the economic literature on the impact of transfer payments on individual behavior. Both the size of the guarantee grant and the implicit tax on earnings due to a reduction in benefit negatively influence employment (Ashenfelter 1983). Empirical studies confirm that welfare payments reduce hours worked, but the impacts are moderate.³ In-kind benefits can also affect welfare and work dynamics. For example, a higher expected value from Medicaid, which varies with expected needs for health-care services, increases the likelihood of being on AFDC and decreases the likelihood of working (Moffitt and Wolfe 1992).

Based on this economic literature, we expect that housing assistance would generate additional disincentives to work. A rent subsidy has an income effect because participation in a housing program increases disposable income. The additional income can be substantial relative to AFDC benefits. There is also a price-effect. In California, the effective tax rate through tax reduction is about 90 percent on earnings for most recipients⁴ (Keane and Moffitt 1994). This

² There is also a significant variation across states, which set benefit levels independently.

³ For a summary of the literature, see Moffitt 1992. Interestingly, temporal changes in the grant level or benefit-reduction rate have mixed effects on work and do not account for the changes in spell duration (Moffitt 1992; Hoynes and MaCurdy 1994). In the 1960s, benefits and enrollment rose simultaneously, giving credence to the work-disincentive argument; however, since the 1970s, real benefits have declined in value while total enrollment in means-tested programs has continued to rise.

⁴ The effective tax is not linear. The implicit tax on the first few hours is low because recipients are allowed to deduct job-related costs and exempt earnings from the calculations of benefits: 1) an automatic \$90 work deduction, 2) a general \$30 deduction, 3) a one-third disregard for earnings above the first two deductions, and 4) a child-care deduction. At the other end of the spectrum, the effective rate drops dramatically because the individual is no longer

implicit tax applies to both those with and without housing assistance. For those in subsidized housing, there is an additional tax because rent payments are pegged to net income. The actual tax is difficult to determine precisely given the complexity of the rules, but the additional price-effect associated with a rent subsidy is likely to be insignificant given the already huge implicit tax on AFDC benefits. We would, then, expect that subsidized housing works primarily through the income-effect as a disincentive to work.

It is possible to test the effect of housing assistance because rent subsidy is not an entitlement. AFDC recipients are eligible given their low income, but only a fraction receives assistance due to a severely limited supply.⁵ Approximately five million subsidized housing units serve less than a third of those with very low income.⁶ The gap between available supply and the pool of eligible people creates a long queue for subsidized housing.⁷ For welfare recipients (and other poor households), the gap has increased with the growth of the welfare roll and a concomitant decline in federal support for subsidized housing. As stated earlier, roughly four-tenths of AFDC

eligible for AFDC and begins paying the usual taxes on earnings.

⁵ Compared to other in-kind benefits, the usage of housing assistance is far less correlated with the usage of AFDC (Blank and Ruggles 1993).

⁶ The most current estimates show that there are 1.4 million units in public-housing projects, 1.8 million units in other project-based housing, and 1.5 million households receiving tenant-based assistance, which is a subsidy given to individuals that can be used in the private market (Peiser, Baer, and Fairman 1993; Stegman 1995). For a history of the construction of assisted housing, see Connerly 1992.

⁷ San Bernardino County in California, for example, had over 13,000 on the waiting list and only 40 vacancies in April 1995. Information on subsidized housing in four Californian counties was collected through telephone interviews with directors and key staff persons of housing authorities: Steve Renehan of Los Angeles City Housing Authority (March 30, 1995), Susan Benner of San Bernardino County (April 3, 1995), Judy Dustin and Louise Spitzer of San Joaquin County (April 3, 1995), and Karin Euspon of Oakland City (April 4, 1995).

recipients received some housing assistance in 1984, but by the late 1980s, only three-tenths of AFDC recipients participated in a housing assistance program.⁸ In the 1994 California sample of AFDC recipients analyzed later in the paper, less than a quarter of the respondents resided in a subsidized unit.

Along with not being an entitlement, subsidized housing is also not a homogenous good. There are two major federally supported housing programs: public housing and Section 8 housing. For both programs, the Department of Housing and Urban Development (HUD) determines the income limit for applicants based on a percentage of the median family income within the city or region. In either program, a participant typically pays no more than 30 percent of net income. Despite their similarities, there are substantial differences between the two programs. Under the public housing program, which was established as a part of the Housing Act of 1937 (Public Law 75-412), units are supplied directly by local agencies. The federal government covers 90 percent of the cost of a project through a low-interest loan for 60 years and gives each local housing authority funds to cover operating costs. The units constructed under this program are concentrated in large-scale housing projects located in low-income neighborhoods.⁹ Under Section 8 Housing, which was enacted in 1974 as an amendment to the Housing Act of 1937, the private market

⁸ This is based on Blank and Ruggles' analysis of monthly participation patterns, and the three-tenths figure refers to the number of months when AFDC and housing assistance are observed as a proportion of all observed months on AFDC (Blank and Ruggles 1993).

⁹ See Bauman (1987), Bratt (1989), and Keating (1994). Although these large-scale developments dominated construction prior to the 1980s, many public-housing agencies have more recently built units in small developments scattered throughout the urban areas. However, the bulk of the existing public-housing units were built in the earlier time period. Despite the financial incentives, many smaller cities and suburban jurisdictions have not participated in the program.

supplies the housing units.¹⁰ The program is administered by local public-housing agencies under contract with HUD¹¹, and low-income households are given vouchers or certificates to be used in the private rental market.¹² While public housing units have fixed locations, Section 8 housing can be located anywhere in the local agency's service area, constrained only by how much a household can and is willing to spend. The difference in the two approaches in federal housing suggests that there are variations in program-specific effects beyond the income effect. The analysis presented in this paper reveals a substantial program-specific effect.

The rest of the paper is organized into four parts. Part one discusses the California data set used in this study, which shows that subsidized housing lowers rents by roughly \$200 a month, a considerable amount for those on public assistance. Part two presents estimates of the independent impacts of subsidized housing on hours worked. The major findings are that, after controlling for other factors, Section 8 residents work more than those renting in the private market, and public housing residents work similar number of hours as those renting in the private housing market. Part three presents an additional analysis comparing only the participants in the two housing programs. The results consistently show a consistently higher estimated number of hours worked by those in Section 8 housing. There are plausible explanations for the observed outcome. The first is that the

¹⁰ Some Section 8 funds have gone to the development of housing projects operated by nonprofit groups and for-profit developers, but many of these projects have been constructed for the elderly.

¹¹ This information is based on Kennedy and Finkel (1994) and Leger and Kennedy (1990).

¹² A participant in the Certificate program pays either 10 percent of gross income or 30 percent of net income, and the program pays the difference between that amount and the "fair market rent." Tenants using a Voucher pay the difference between their total rent and a fixed amount known as the "payment standard." Leger and Kennedy's study (1990) finds that the average rents of recipients using Vouchers are 6 percent higher than those using Certificates.

finding is a statistical artifact caused by programmatic creaming of or self selection among applicants. The second and more plausible explanation is that Section 8 housing offers recipients residential choice and mobility that improve opportunities for employment.

DATA The data for this study come from a survey sponsored by California's Department of Social Services and conducted by the Survey Research Center, University of California, Berkeley.¹³ The survey, which was conducted between October 20, 1993 and September 30, 1994, contains over five hundred items, including questions on housing, rent payment, and employment. The sample was drawn from those on welfare in December 1992, based on stratified sampling of recipients from four counties, with an oversampling of two-parent (AFDC-UP) cases. Alameda (which contains the city of Oakland) and Los Angeles are highly urbanized counties. San Bernardino County is an urbanizing area east of Los Angeles, and San Joaquin County is an agriculturally-based metropolitan area with Stockton as its largest city. The questionnaire was administered over the telephone in English and Spanish, and a total of 2,214 interviews were completed.

This paper uses a subsample of the interviews based on the following criteria: an active

¹³ The survey is a part of an evaluation of the state's Assistance Payments Demonstration Project (APDP), which altered the AFDC program in 1992 (Schink and Snow 1994; Survey Research Center 1994). The major components of APDP are a 5.8 percent reduction in benefits and new work incentives. This includes eliminating the four-month limitation on the \$30 and one-third income disregard and increasing the needs standard to allow higher earnings. The income disregard is the proportion of the earnings that is not "taxed" by a reduction in benefits, and a higher needs standard raises the earnings threshold that makes a person ineligible for AFDC benefits. As a part of the federal waiver that allowed California to implement these reforms, the state is required to undertake an evaluation of the impacts of these changes. Analysis done by the author indicates that at the time of the survey, there was no statistical difference in outcomes for those in control and experimental groups after controlling for individual characteristics; therefore, the analysis in this study does not include programmatic status as an independent variable.

single-parent (AFDC-FG) case with a female head of the household between the ages of 18 and 54, who was a renter at the time of the interview. This sample represents the welfare population that is at the heart of the current debate over welfare reform. A total of 1,111 observations meet these criteria. The key variable of interest pertains to rent subsidy. Interviewees were asked two questions:

1) Is your place in a public housing project, is it owned by the local housing authority, or some other public agency?

2) Is current place covered by Section 8?

The survey treated the two categories (Section 8 and public housing) as mutually exclusive, that is, a respondent cannot respond positively to both questions.¹⁴ According to the responses, the weighted distribution of the sample is 10 percent in Section 8 housing, 13 percent in public housing, and the remainder in private-market housing.

The figures in Table 1 show substantial differences in the rents paid by three groups: renters in the private rental market, Section 8 renters, and public housing residents. Not surprisingly, those in assisted housing paid less than those without subsidy. The average for those with Section 8 is only 53 percent of the average for those without subsidy, and the corresponding figure for those in public housing is 58 percent.¹⁵

¹⁴ It is possible that respondents residing in a subsidized apartment complex operated by a for-profit or nonprofit organization could give a positive response to the first question. This raises the possibility that the public-housing category is imprecise, but there is no independent means to determine the prevalence of response error.

¹⁵ The three groups do not fall into mutually exclusive rental categories. The distribution by rent categories shows some overlap in monthly payments. While an overwhelming majority of those with rent subsidy paid less than \$250, only a small minority of those without subsidy fell into this category. At the same time, among those who paid \$250 or less, the numbers are roughly equally divided among the three groups.

Table 1: Reported Rents

	Private Market	Section 8	Public Housing
Mean Monthly Rent	\$426	\$227	\$246
Distribution by Rent Level			
\$0-200	10%	56%	62%
\$201-400	40%	28%	19%
\$401 or more	51%	16%	19%
Mean Bedrooms	2.0	2.5	2.4
Mean Persons	4.4	3.7	4.0

The observed difference in rents paid by those with and without subsidized housing is a biased measurement of the rent subsidy because housing units are not comparable. Those with a subsidy lived in slightly larger units, a consequence of a higher purchasing power for those with Section 8 or the minimum standards set by public-housing regulations. The larger units for those in subsidized units are not due to larger household sizes -- in fact, the average household size for those in the private rental market is the largest among the three groups. The first column of figures in Table 2 represents the unadjusted differences in mean rents for those in subsidized housing and those in the private rental market.¹⁶ The difference in average rents increases by about a tenth after controlling for unit-related characteristics (number of bedrooms, who pays the utility bill, years in unit, and county), and by a fifth after controlling both unit and personal characteristics (race, age, presence of an infant, and household size).

¹⁶ Regression results are available from author.

Table 2: Differences in Average Rents

	Unadjusted	Adjusted for Unit Characteristics	Adjusted for Unit and Personal Characteristics
Private Market and Section 8	-\$199	-\$219	-\$242
Private Market and Public Housing	-\$180	-\$201	-\$211

The analysis indicates that reported rents understate the size of the subsidy, but the bias is moderate. The measurement problem, however, is not due solely to variations in the housing characteristics. Ideally, the subsidy effect is measured by the difference between the rent paid and the unobserved value to a renter.¹⁷ The latter is affected by both the characteristics of the unit and characteristics of the neighborhood. Unfortunately, there is no information on the latter.

QUANTITATIVE IMPACT ON LABOR SUPPLY Table 3 provides an overview of employment levels during the month prior to the survey. One striking difference is the substantially higher employment rate of those in Section 8 housing, which is over ten percentage points above the rates for those in public housing or the private rental market. There are also substantial variations in the average number of hours worked, as reported in the second row. The mean for

¹⁷ More technically, the net benefit is the difference in consumer surplus between residing in a subsidized unit and in a market unit. It is unclear how best to estimate the value of rent subsidies. The problem is both conceptual and empirical. What is reported in most data sets, including the one used for this paper, is the rent paid rather than the subsidy's value. Even the concept of a prevailing market rate is not useful. There is no market rate for units directly provided by government agencies, and worse, the private market does not produce equivalent units given the unique nature of public housing, which is discussed later. For those who receive a subsidy that is spent in the private market, the prevailing rate is not a measure of a participant's willingness to pay because the housing program distorts housing choice by lowering the effective price for participants.

those in the private market is only 63 percent of the mean for those in Section 8, and the comparable percentage for those in public housing is even lower, 35 percent. This pattern is consistent with the hypothesized positive effect of Section 8 and negative effect of public housing. The ranking of averages based on only those who had worked is not the same, with the mean for those in the private rental market being larger than that for those in Section 8. These conditional means, however, do not imply that the supply of labor from welfare recipients in the private rental market is greater. Instead, the change in ranking is a statistical artifact generated by the selection of only those who had worked.

Table 3: Employment Outcomes

	Private Market	Section 8	Public Housing
Percent Worked Last Month	16%	29%	18%
Average Hours (including zeros)	12.3	19.3	6.5
Average Hours (excluding zeros)	75.2	66.0	36.0

The means do not provide an adequate test of the impact of subsidized housing on labor supply because the populations are not comparable. For example, there are considerable disparities in the average numbers of years on welfare: eight years for those in Section 8, seven years for those in public housing, and five years for those in the private rental market. These differences are not surprising given the long waiting list for subsidized housing, which generates a correlation between time on welfare and time before being accepted into a housing program.¹⁸ A multi-logit analysis

¹⁸ The correlation is not perfect since the timing of entry into AFDC does not necessarily coincide with applying for subsidized housing. An individual could apply for a housing program

of the determinants of participation in housing programs indicates that the likelihood of participating increases with years on welfare, age, education, being minority, and residing in certain counties.¹⁹ Analytically, all these factors can affect the number of hours worked, and their effects should be separated from the effects of subsidized housing.

OLS (ordinary least squares) regression is commonly used to control for other independent factors, but this approach can produce biased or inefficient estimators. Estimates based on the entire sample are plagued by a specification error associated with the presence of the large number of zero observations, and a conditional regression model using only the non-zero observations suffers from potential sample-selection bias. To overcome these problems, a Tobit model is used, which is defined as:

$$Hr_i = B * X_i + e_i \text{ if } Hr_i > 0$$

$$Hr_i = 0 \text{ if } Hr_i = 0$$

Hr is the hours worked during the reporting month, X is the vector of independent variables, and B is the vector of estimated coefficients. The model is estimated using maximum likelihood, and the procedure accounts for left censoring the dependent variable. Based on the literature, this study uses the following independent variables: years of schooling, age, the presence of an infant (ages 0 to 2), years on welfare, the presence of a health problem that "limits the kind or amount of work," county of residence, and racial classification. Time on welfare is calculated for the most recent spell, and longer spells should be negatively related to work. It is expected that the presence of an

prior to being on AFDC-FG, or a recipient could delay applying for a housing program well after entering welfare. Moreover, the time on a waiting list varies greatly across counties, depending on the supply and demand for subsidized housing and the rent levels in the private market.

¹⁹ Results are available from author.

infant or a health problem would hinder a recipient from undertaking job-search and accepting offers. On the other hand, a greater amount of human capital (measured by years of schooling and age) would lead to higher wage offers, which in turn increase the likelihood of being employed.²⁰ County dummies are included to capture variations across local economies, and race dummies are included to capture racial variations in employment opportunities.

The effects of subsidized housing are included as two variables. The first is the monthly rent variable. As argued earlier, lower rent levels increase disposable income, and this should have a negative impact on work effort. The income effect, however, is not limited to housing subsidies.²¹ There is considerable variation in rent levels by metropolitan areas, across neighborhoods within a metropolitan area, length of tenure, and other factors. Since AFDC benefit levels are set uniformly for the whole state, there are corresponding differences in disposable income associated with prevailing rent levels in the private housing market. Dummy variables for participation in Section 8 and public housing are used to capture programmatic effects beyond the income effect. As noted earlier, the two programs function in disparate fashions, with public housing being supplied by local agencies at fixed locations and Section 8 housing being supplied by the private sector.

Table 4: Results of Regression Models of Hours Worked

²⁰ Given the lack of continuous employment for this population (Harris 1993), this study does not use a variable based on the calculated potential years of labor market experience, which is included in most labor-market models.

²¹ Differences in housing costs across regions also affect non-AFDC individuals. For example, one empirical study shows that inter-metropolitan variation in rents affects household formation (Haurin, Hendershott and Kim 1993).

Variable	Estimated Coefficients		
	OLS Entire Sample	Tobit Entire Sample	Tobit Long-term Sample
Constant	-18.45**	-249.4***	-317.9***
Years of Schooling	0.93**	4.8**	8.2***
Years on Welfare	-0.71***	-4.0***	-5.0***
Age	0.53***	2.6***	3.7***
Health Problem With Infant	-10.74***	-38.4**	-43.2**
Asian	-1.96	-21.1*	-25.9*
Black	6.01	17.5	26.5
Latino	2.13	-4.0	20.1
Section 8 Public Housing	5.90*	22.4	33.6*
Alameda	11.30***	59.8***	62.2***
San Bernardino	-1.24	15.0	25.6
San Joaquin	-5.72	-11.9	-32.0
Monthly Rent (X100)	-2.24	-17.1	-8.6
	3.21	19.3	32.4
	1.79***	5.7*	3.5
Sample Size	1,111	1,111	760
Log Likelihood	n.a.	-1,417.7	-940.7
Adjusted R-square	0.03	n.a.	n.a.

* p<.10 ** p<.05 *** p<.01

Long-term sample includes those on welfare for three or more years.

Table 4 reports the results for the OLS and Tobit models estimated with the entire sample. The parameters for the two models differ because the OLS coefficients are estimated over the entire sample and Tobit coefficients are estimated over the sample with non-zero hours. The Tobit coefficients can be related to the OLS coefficients by adjusting the former by the probability of having worked, which is approximately one-fifth. With this adjustment, the key coefficients in both models are roughly the same, indicating that the results are not sensitive to the underlying mathematical specification. The third model is a Tobit model estimated for long-term AFDC-FC

recipients, that is, those who had been on welfare for at least three years. As indicated earlier, those with housing assistance are more likely to be long-term recipients, and this model restricts the analysis to more closely matched samples. Although there are differences between the estimated coefficients for this model and the Tobit using the full sample, most of the statistically significant variables are comparable.

The following discussion focuses on the Tobit model using the full sample. Most of the estimated coefficients are consistent with the literature. Education and age increase the number of hours worked. Years on welfare, the presence of a health problem, and the presence of an infant decrease the number of hours worked. The parameters indicate variation by race and county of residents, but the coefficients are not statistically different.²² The effects of subsidized housing operate through the rent variable (the income effect) and the two program variables (other program-specific effects). The rent variable is positive and statistically significant at the .10 level (t-value=1.73). The small value of the coefficient and its marginal statistical significance are not surprising given the high effective tax on earnings, which substantially lowers the economic attractiveness of working.²³ A decrease of \$200 in rent, which is slightly more than the unadjusted difference between the average rent paid by those in the private market and those in subsidized

²² The statistical test is based on whether the hours worked for an included group are different from the hours worked by the excluded group (whites and residents of Los Angeles County). Other pair-wise comparisons indicate statistical significant differences, for example, in the comparison of residents of Alameda County and San Joaquin County. A joint test of the three county variables based on the change in the log likelihood indicates that this set of variables together is not statistically significant. A parallel test of the three race variables accepts the joint hypothesis at the .10 statistically level.

²³ The effect of rent levels is not driven just by subsidies. A separate OLS regression of only those in the private rental market produced a statistically significant and slightly higher coefficient for the rent variable.

housing, would decrease the effective labor supply by about 11 hours per month. The Section-8 variable is positive, sizeable and highly statistically significant, indicating that those in this housing program worked 60 more hours than those in the private rental market, *ceteris paribus*. The public-housing variable is positive but not statistically significant (t-value=0.82).

Table 5
Tobit Estimates of Impact on Hours Worked

	Net Impact Section 8	Net Impact Public Housing
Model II Estimates in Table 4		
Observed rent differences	48	5
Adjusted rent differences	45	3
Alternative Specifications		
With age squared	47	4
With welfare-years squared	46	3
With car ownership	38	3

Estimates for alternative specifications use the higher adjusted rent differences. The base comparison group is composed of those in the private rental market.

Alternative specifications of the Tobit model generate roughly the same results for the rent and housing-program variables. Table 5 uses the estimated parameters to calculate the net impact on hours worked. The rent differentials are taken from the numbers reported in Table 2, and the higher differences are based on adjustments for both unit and personal characteristics. For all practical purposes, the estimated net impact of public housing on hours worked is not different from zero. The estimated net impact of Section 8 is sizeable and positive for all specifications, with the smallest estimate coming from the model that includes car ownership. Car ownership among welfare recipients is instrumental to finding and holding a job; however, this variable may be

endogenous to employment outcomes (Ong 1995).

PROGRAMMATIC COMPARISON: The above results show disparate outcomes by housing program. Although the comparison could be confounded by including those in the private rental market, additional analysis of only those in subsidized housing shows similar results. Given the small sample size (255 total for both housing programs), OLS models with limited number of independent variables are used. The results are reported in Table 6. Because those in Section 8 housing tend to be better educated (by a half year) and older (by four years) than public housing residents, separate estimates are made for those with no more than a high school education and for those no more than 30 years old.²⁴ The row denoted as “no controls” reports the differences in the observed means. The standard human capital models include schooling, age and age squared. The stepwise regressions include as potential independent factors all of the variables listed in Table 4 (excluding the public-housing variable). The results indicate a consistent pattern of Section 8 residents working more than public housing residents, and the difference is greater for those with less human capital.

The favorable outcome for Section 8 residents could be due to a bias in program participation, that is, there is a common underlying personal factor tied to both participating in Section 8 housing and to working more hours. Consequently, the reported empirical results are capturing the effect of a personal characteristic rather than an independent effect of Section 8

²⁴ There are other differences such as the presence of an infant, but these factors are correlated with age and schooling. Results from logit regressions indicate that only age and schooling are statistically significant in differentiating those in public housing and Section 8. Using the subsample minimizes the schooling and age differences so that the difference in means are not statistically significant.

housing.²⁵ If the personal characteristic is observed, then its effect can be empirically separated. As reported earlier, there are statistical differences in age and schooling between those in the two housing programs. If participation in Section 8 relative to public housing is causally influenced by these two factors, we can address this by using a recursive system that allows age and schooling to operate directly on hours worked and indirectly through Section 8. At best, this approach explains only an eighth of the reported results for the Section 8 variables, leaving the bulk of the effect not explained by observed characteristics.²⁶

Table 6 OLS Estimates
 Additional Hours Worked by Section 8 Residents Relative to Public Housing Residents

	Total Sample	Less Educated Sample	Younger Sample
No Controls	12.8**	13.8**	24.4**
Standard Human Capital Variables	12.3**	14.1**	22.9**
Stepwise Regression	12.8**	13.4**	21.8**
Sample Size	255	182	120

** p<.01

²⁵ Technically, there is an omitted variable that is correlated with the Section-8 variable; consequently, the estimated coefficient for the included variable is capturing the effects of the unobserved personal characteristic.

²⁶ Participation is modeled using logit with age and schooling as the independent variables. An alternate specification with additional variables (presence of an infant and years on welfare) produced very similar coefficients for age and schooling. The indirect effect of age and schooling on the hours-worked equation is estimated first by calculating the impact on the probability of being in Section 8 for four additional years of age and a half year of schooling around the mean probability. The four years of age and half year of schooling are the observed difference between those in Section 8 and those in public housing. The result is an increase of .13, which is about one-eighth of the total impact of Section 8 on hours worked.

While observed differences in personal characteristics do not explain much of the Section-8 effect, there may be unobserved differences. The question, then, is whether there is any evidence of systematic bias in participation in one program versus another. Administrative procedures are a possible source of bias because they are clearly important beyond establishing eligibility. The literature indicates that the allocation of scarce housing assistance is governed more by administrative rules and time on the waiting list than by economic choice on the part of individuals (Keane and Moffit 1994). It is well known that rules and procedures frequently operate to cream the “best” applicants into social service and training programs. There is, however, little evidence of administrative channeling of applicants who are more likely to work into one housing program over another. In many localities, including those in California, both programs are managed by a single agency. Such an administrative structure creates in practice a single housing program that allocates the first available slot to the applicant at the top of a very long waiting list. This process, then, is more random than systematic in assigning applicants to the two housing programs.

The administrative process, however, does not eliminate possible systematic differences in rejecting an offer, thus introducing self selection. The rejection rate for public housing may be higher than that for Section 8 housing because the literature suggests that there is a difference in the relative value of the two housing programs.²⁷ While the cost to those in public housing is roughly the same as to those in Section 8 housing, the latter is preferred by AFDC tenants because the units are safer and better maintained (Edin and Jencks 1993). Rejecting an offer of housing assistance,

²⁷ There is evidence that among the poor, there are differences in the “taste” for subsidized housing that can affect participation. Crews' study (1995) indicates those with a weak preference for housing (that is, those with a lower propensity to spend on housing) have a higher probability of being in subsidized housing. Unfortunately, the Crews study does not differentiate between those in public housing and Section 8 housing.

however, can carry a high cost in some situations because an applicant can be dropped to the bottom of the waiting list for not accepting an offer. We found evidence of this policy in our interviews, but it is not known if this practice is common to all local agencies or is rigorously enforced.

Assuming there is a systematic bias in program participation, we are still left with the question regarding the nature of the unobserved underlying personal behavior. Literally, the hypothetical assertion paints a welfare recipient who maximizes total benefits through seeking Section-8 housing assistance and who also is more inclined to work. This depiction would undercut the simple assertion that multiple-program participation creates welfare dependency. Another way of describing the phenomenon is to argue that the motivation and ability to seek and find housing in a private market is tied to the motivation and ability to seek and find employment in the labor market. Again, the implication is that multi-program participation and higher total benefits are not simply and causally linked to welfare dependency. While we cannot reject these hypothesized portraits of some unobserved individual characteristic, it is also plausible that Section 8 has an independent and instrumental effect in increasing employment opportunities.

The element of choice in residential location offered by Section 8 housing can enable households to move to neighborhoods that offer greater employment opportunities. This is not to deny that some participants limit their search because of a desire to remain in a familiar environment, concerns about moving to unfamiliar neighborhoods, discriminatory practices by landlords, and limits on the size of the subsidy. Nonetheless, interviews in the four California counties indicate that Section 8 housing units are widely dispersed. For example, the housing authorities in San Joaquin County and the city of Stockton state that there is little difference in the geographic distribution of Section 8 housing and all non-subsidized rental housing. Moreover,

dispersion is encouraged by local agencies. San Bernardino County prohibits recipients from renting in "bad areas," and the Oakland PHA (Public Housing Authority) encourages participants to look in "non-traditional" areas, such as suburban neighborhoods.

Where one lives can have a tremendous impact on employment. One major problem facing many welfare recipients is residing in low-income, minority communities that lack easy access to jobs due to a spatial and skills mismatch (Kain 1975; Kasarda 1980). These residents have become economically isolated with the movement of firms to the suburbs and the high-skill requirements of the jobs remaining in the central business districts. The difficulties of finding work are further aggravated by a practice by employers outside the inner-city to avoid these neighborhoods in their recruitment and hiring of workers (Kirschenman and Neckerman 1991). Osterman (1991) finds that in low-income neighborhoods with high employment ratios, which he interprets as a proxy for the availability of jobs, there are relatively fewer households on welfare.²⁸ Rosenbaum and Popkin (1991) and Rosenbaum (1995) also find that location matters in an analysis of Chicago's Gautreaux program, which moved low-income black families into suburban housing. Compared to those who remained in the inner-city, those in the Gautreaux program were more likely to be employed, an outcome attributed to the greater number of jobs in the suburbs.²⁹

²⁸ The percentage of households with working heads is not the best proxy for determining job rich areas. This measure reflects the employment behavior of individuals and not necessarily the location of jobs. Moreover, the employment rate is an endogenous variable since a higher employment rate would translate into fewer people eligible for welfare. The relationship between the local employment opportunities and welfare usage is a complicated one. Welfare recipients may be more likely to find jobs in neighborhoods rich with employment opportunities; however, high employment rates may also stigmatize welfare usage, thus lowering participation in AFDC.

²⁹ Moving to the suburb, however, also generated problems. Many experienced difficulties adjusting to their new predominantly white environment and felt isolated from their old social and familial networks. These observations come from remarks made at the workshop

CONCLUSION The results of the above analysis strongly indicate that the impact of subsidized housing on AFDC recipients is not limited to the predicted economic response. The analysis does find an income effect, although it is small. The estimated "other programmatic effects," as captured by the dummy variables, are interesting and unexpected. Residents in public housing worked fewer hours than those without any housing assistance, but this is due to the composition of the residents. They are more likely to have personal characteristics that adversely affect employment, such as long-term use of welfare and being a member of a minority group. In other words, residing in public housing in itself does not have an independent effect. The phenomenon is not place *per se* but people; consequently, there is no support for the belief that public housing projects are a breeding ground for dysfunctional work-related behavior. One implication is that we cannot eliminate social and economic problems by simply eliminating public housing projects.³⁰ There is one caveat: the outcome from this study may not be applicable to metropolitan areas outside of California. While most public housing projects in California cities are located in poor neighborhoods, the level of poverty of these communities does not approach their counterparts in older urbanized areas. There are far fewer neighborhoods with extremely high poverty rates (40 percent or higher) in California cities than in Eastern and Midwestern cities. This difference in neighborhood context may translate into difference in the development of what is

on "Urban Poverty and Civil Rights" sponsored by the Leadership Conference Education Fund and held April 8 and 9, 1995 at Greenbrier, West Virginia. Mary Davis, Senior Vice President of the Leadership Council of Metropolitan Open Communities, provided valuable insights. The Council has played a central role in the Gautreaux program. For a discussion on the problem in expanding the strategy of greater residential mobility, see Moberg (1995) and Hughes (1995).

³⁰ There may be other reasons to eliminate the large-scale housing projects. For example, these structures tend to attract non-resident criminals and other undesirable activities. Moreover, even if public housing does not have an independent effect on work, the funds may be more effectively used elsewhere.

known as underclass behavior.³¹

The results for Section 8 are more promising. While an additional 10 to 20 hours of work per month is not sufficient for economic independence, the cross-sectional nature of the analysis understates the dynamic and cumulative effects. There is some indication that those in this housing program are as likely to leave welfare as other recipients. The exit rate for those in the private rental market is nearly identical to the rate for those in Section 8 housing (10.6 percent and 10.4 percent)³². The comparison understates the exit rate for Section 8 because it is possible that an individual exited both AFDC and the housing program at the time of the survey. This would, then, undercount the number of those previously in Section 8 who exited AFDC. Unfortunately, the survey does contain retrospective data on housing, thus precluding a more definitive analysis. Even if we accept the observed exit rates, the lack of a difference is remarkable given that Section 8 residents are more likely to be long-term recipients, a group that exhibits a very low exit rate. In other words, participation in Section 8 appears to help overcome the welfare trap.

Despite the limitations of this study, the estimates are nonetheless sufficiently robust to yield

³¹ The association between public housing and the underclass is found in the sociological literature on urban blacks. Public housing units are concentration within larger cities, where a highly politicized process of site selection forced massive public-housing projects into low-income, minority neighborhoods. According to Massey and Denton, these public housing projects are "black reservations, highly segregated from the rest of society and characterized by extreme social isolation" (1993, p. 57). The problems of public-housing residents are compounded by the emergence of an underclass social structure and cultural norms. Housing projects are sites closely associated with the underclass, characterized by social disorganization and inhabited by "the unprecedented increase in the number of teenage and young adult minorities in these neighborhoods, many of whom are jobless, not enrolled in school, and a source of delinquency, crime, and unrest" (Wilson 1987, p. 38).

³² Estimates are based on an expanded AFDC-FG sample that includes respondents who had been recipients at the time the sample was drawn but not on welfare at the time of the survey.

at least one practical conclusion. Policies cannot be based on simplistic views. There is a belief that benefits from multiple transfer programs are so generous that they accentuate welfare dependency. The findings for Section 8, however, reveal a much more complex picture. One interpretation is that a well-designed housing program can help welfare recipients to form a greater attachment to the labor market. From a societal perspective, the mission of housing programs should go beyond just providing shelter to promoting other desirable outcomes when possible, including the goal of increasing employment opportunities for the poor. This is particularly important given the horizontal inequities among the poor created by providing subsidies for only a small (and declining) segment of the eligible population.

To make these programs more effective, we must know precisely the underlying mechanisms that generate the reported outcomes. Additional research is needed to determine how many Section 8 residents are able to move to better neighborhoods with greater employment opportunities, and what facilitates their job search. This would require more information on individuals and their immediate environment than available in the current data set. With the increasing availability of geographic information systems and greater access to administrative data, it should be possible to address these issues directly.

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