

Interpreting the Dynamics of Public Housing: Cultural and Rational Choice Explanations

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Abstract

This article uses culture of poverty and rational choice theories of poverty to explain how quickly nonelderly household heads leave public housing. Data from the Panel Study of Income Dynamics serve as the basis for the analysis.

Although a significant proportion of all household heads have public housing spells lasting five or more years, the majority have spells lasting less than five years. The availability of other housing options has a strong impact on how quickly individuals move out of public housing. Family structure and human capital play a more modest role. To the extent that one's childhood experiences affect the likelihood of exiting public housing, they appear to do so mostly through their effect on the acquisition of human capital. Finally, the evidence presented is inconsistent with the notion that public housing is a trap from which it is more difficult to escape the longer one lives in it.

Keywords: Low-income housing; Mobility; Policy

Introduction

Public housing, like welfare, is often criticized for fostering dependency among its residents. Because the public housing program subsidizes residents regardless of their work effort, the program is seen as offering few incentives for residents to seek employment. To the contrary, by requiring residents to pay a fixed percentage of their income toward rent, residents are penalized for increasing their income. Public housing residents are perceived as unlikely to undertake efforts to increase their incomes and move into private market housing. Paul Messenger, the executive director of the Akron [OH] Public Housing Authority, describes the public housing program as sending the message "that we will subsidize people unwilling to help themselves; that we don't want to continue helping residents who refuse to remain dependent; and that we will punish those who try to break out of the trap" (Messenger 1992, 139). According to these critics, the public housing program fosters a culture of poverty among residents by providing disincentives for earning more and by not requiring residents to undertake any efforts to improve their situation (Marshal 1994). Moreover, the American ethos

calls for self-reliance on the part of able-bodied adults, and long-term dependence on any type of assistance runs counter to this ethos. While temporary spells of hard luck calling for temporary assistance are not frowned on, long-term poverty is thought to signal a flaw in the individual, and consequently assistance is given only grudgingly under these circumstances.

Reducing dependency in public housing, as in welfare, is therefore a major concern among policy makers. Although there is little in the way of new public housing on the horizon, 21 percent of the nation's assisted housing stock is comprised of public housing, and public housing is likely to remain an important component of any strategy to provide housing to low-income households (Newman and Schnare 1997).

The general perception that public assistance should be temporary was a major impetus behind welfare reform and is also serving to spawn a number of proposals designed to promote self-sufficiency among public housing residents. Examples include mandatory community service by residents; the Family Self-Sufficiency program,¹ which includes time limits on the length of residence; and allowing residents to pay a flat rent rather than 30 percent of their incomes. Some other reforms being considered for public housing also have implications for dependency. Altering admissions policies to attract more working and middle-class tenants may change the nature of dependency in public housing. The Jobs-Plus program, if fully implemented, also has the potential to affect the dynamics of public housing residence if the program can increase the earnings of tenants and these earnings increases translate into less dependency.

Concerns about dependency on public housing and the implications of dependency for other proposed reforms of public housing make information on the actual dynamics of public housing residence especially pertinent. For example, if the U.S. Department of Housing and Urban Development (HUD) truly wants to transform public housing into a transitional stop, then learning which residents are

¹ The Family Self-Sufficiency program is designed to coordinate the use of public housing and Section 8 assistance under the certificate and voucher programs with public and private resources to enable eligible families to achieve economic independence. Participation in the program is voluntary. Participants enter into contracts with public housing authorities wherein the resident agrees to engage in a set of prescribed activities toward economic independence. In return, respondents receive support services such as child care, training, and remedial education. Moreover, any increase in their rent due to increases in their earned income is placed into an escrow account that is made available to the family after it no longer receives federal or state welfare assistance, upon successful performance of its obligations under the contract of participation, and under other appropriate circumstances.

prone to becoming dependent would allow resources to be targeted accordingly. Unfortunately, there has been little research to inform such efforts. Thomas Hungerford's (1996) analysis using the Survey of Income and Program Participation (SIPP) represents the first attempt to provide empirical evidence on public housing dynamics.² But Hungerford's analysis only covered a 28-month period and did not consider whether oft-cited cultural explanations of dependency played a role in fostering dependency on public housing. In addition, Hungerford's analysis did not adequately control for local economic conditions as a determinant of how quickly individuals exit public housing.

This article examines the nature and causes of public housing dynamics using the Panel Study of Income Dynamics (PSID). The PSID allows for a richer understanding of public housing dynamics than the SIPP because it contains information on the county of residence as well as data that can be used as proxies for cultural explanations of dependency. Given the increasing attention paid to the development of self-sufficiency programs (Rohe and Stegman 1991), it is important to gain a better understanding of both how quickly individuals move out of public housing and under what circumstances. Just as research on the dynamics of welfare receipt (Bane and Ellwood 1994; Blank 1997; Fitzgerald 1991, 1995; Kimenyi 1991; O'Neill et al. 1987; Plotnick 1983) helped inform the welfare debate, the research presented here will be useful to policy makers interested in reducing dependency on public housing. This article focuses on public housing because of the great concern policy makers have shown for this program—perhaps because of its greater visibility and notoriety than other housing assistance programs—and because panel data for recipients of other types of assisted housing are not readily available.

Explaining public housing dynamics

This article uses two theories on poverty and welfare dependency to explain the dynamics of public housing residence: the *culture of poverty* theory and the *rational choice* theory. These theories have been used to explain the dynamics of welfare receipt, and the findings from this strand of research will be incorporated into the theoretical

² The SIPP is a panel survey of a sample of households representative of the noninstitutionalized population of the United States. SIPP respondents are interviewed eight times at four-month intervals. Monthly information is collected on income, use of government programs, and demographic characteristics (Nelson, McMillen, and Kasprzyk 1985). Hungerford's analysis of housing assistance spells controlled for the race, gender, marital status, disability status, education, state unemployment rate, state fair market housing rent as determined by HUD, number of children under age six, and welfare receipt.

framework. Although welfare is a *cash* benefit and public housing an *in-kind* (meaning that cash is not provided) benefit, the similarities between the two programs suggest that theories developed to explain welfare dynamics may also shed light on the dynamics of public housing residence. For example, as means-tested programs, both welfare and public housing serve an overwhelmingly poor clientele (Newman and Schnare 1992). Prior to the implementation of the Temporary Assistance for Needy Families program, welfare was similar to public housing in that recipients often saw little improvement in their economic status by working. This is because additional earnings served to reduce benefits, as happens in public housing when additional earnings serve to increase one's rent.

Prior research also lends credence to the notion that rational choice and cultural theories of poverty and dependency can explain public housing dynamics. Hungerford (1996) used a rational choice model to explain the dynamics of housing assistance spells and found factors associated with this model to be important determinants of housing assistance dynamics. Moving out of a poor neighborhood, which is in some ways conceptually similar to moving out of public housing, has been found to be associated with factors that facilitate escaping poverty (South and Crowder 1997). Thus, theories that have been developed and utilized to explain how individuals become impoverished and dependent on public assistance are likely to shed light on the dynamics of public housing residency.

Cultural explanations of dependency

The culture of poverty explanation of dependency suggests that the poor have acquired habits and attitudes that prevent them from getting ahead. Facing bleak prospects for social or economic mobility, the poor develop traits such as a focus on immediate gratification, criminal behavior, and dependence on public assistance that are useful for coping with permanent poverty, but detrimental to getting ahead economically (Lewis 1968). Advocates of the culture of poverty point to the childhood experiences of poor people when they learn these cultural traits from their parents and other adults. Hence, the culture of poverty explanation essentially argues that, in response to a lack of opportunity for economic mobility, the poor develop habits to cope with their limited circumstances. Moreover, these cultural traits are thought to persist even when opportunities become available to the poor.

Scholars such as Thomas Sowell (1975) and Lawrence Mead (1992) and the journalist Nicholas Lemann (1991) have pointed to the historical experiences of blacks as a subordinate caste in America that have left this group with a culture that makes them "uniquely

prone to the attitudes contrary to work, and thus vulnerable to poverty and dependency” (Mead 1992, 148). To a lesser extent, Latinos are also described as a group whose “third world outlook” (Harrison 1992; Mead 1992) makes them susceptible to poverty and dependency. According to these historical perspectives, the discrimination faced by blacks provided little incentive for working hard to get ahead because they were likely to remain impoverished no matter how hard they worked. Likewise, in the societies that many Latinos immigrate from, class structures are more rigid and thus working hard provides no guarantee for getting ahead. Consequently, poorer Latinos may place little value on education and other factors that enhance economic mobility because in their homeland, such behaviors are rarely rewarded. Harrison and Mead see these attitudes as persisting in the United States among many Latino immigrants. Although in recent times opportunities have opened up for blacks and Latinos, members of these minority groups may be clinging to a culture that was useful for dealing with the blocked opportunity structure of the past but now inhibits economic mobility and fosters dependency.

An alternative cultural perspective points to the experience of living in public housing as a cause of dependency. According to this perspective, living in subsidized housing is akin to acquiring a habit like smoking cigarettes. The longer one partakes, the more difficult it becomes to quit, an effect referred to as *duration dependence* (Blank 1989). Mead (1992) argues that the design of current public assistance programs, which historically have required little from recipients in return for assistance, has led to the development of a dependent class. Life on the dole causes recipients to lose the sense that they can control their own fate. In public housing, the more one works, the higher one’s rent. In effect, residents are rewarded for not working.

Thus, cultural explanations of dependency and poverty point to an individual’s background and the receipt of public assistance as the primary causes of long public housing spells. According to the cultural school, individuals from poorer backgrounds should have especially long spells of public housing residence. Blacks and Latinos should also have longer spells than whites. In addition, it should become more difficult for public housing residents to move out the longer they have resided in public housing. If the culture of poverty perspective can explain the bulk of the poverty observed today, little in the way of reactions to external economic forces should be observed among the poor. For the culture of poverty posits that those who adhere to these cultural values will behave as though their economic choices are constrained even when economic opportunities are present.

Hungerford's (1996) analysis contained little in the way of proxies for cultural variables, but he did find blacks to be significantly less likely to move out of public housing. Some studies of welfare dynamics also found nonwhites to be significantly less likely to exit welfare (Bane and Ellwood 1994; Blank 1989; O'Neill et al. 1987), but others have failed to find any significant differences between whites and nonwhites in rates of welfare exits once other determinants of welfare exit rates were controlled for (Fitzgerald 1991; Harris 1993; Kimenyi 1991; Leahy, Buss, and Quane 1995; Plotnick 1983). Few studies have looked at the circumstances under which welfare recipients grew up and how that affects the length of time spent on welfare, but O'Neill and her colleagues (1987) did find welfare recipients who lived in a single-parent household at age 14 to be less likely to exit welfare. Likewise, Kimenyi (1991) found welfare recipients who grew up in a family that received welfare to be less likely to exit welfare. In contrast, Harris (1993) found the educational attainment of one's mother to have an insignificant effect on how quickly a woman left welfare.

Prior research on the duration dependence of housing assistance and welfare recipients has also been inconsistent. Hungerford (1996) and Bane and Ellwood (1994) found no evidence of duration dependence among housing assistance and welfare recipients respectively. In contrast, O'Neill et al. (1987) and Blank (1989) both found evidence of duration dependence among welfare recipients.

In sum, the extant literature on the dynamics of public housing residence and welfare receipt provides conflicting evidence on the importance of cultural factors in determining how quickly individuals move out of public housing. Some of the uncertainty surrounding the empirical evidence on cultural factors and dependency undoubtedly stems from different studies having used different data sets. For example, Bane and Ellwood (1994) used the PSID, whereas O'Neil et al. (1987) used the National Longitudinal Survey, and Blank (1989) used data from the Seattle/Denver Income Maintenance Experiments. In addition, although the models used to explain welfare dependency are similar, no two studies specify exactly the same model.

Rational choice models

A second perspective on the causes of dependency, the rational choice model, focuses on the economic options available to individuals (Bane and Ellwood 1994). This model emphasizes the economic opportunities available and the impacts of individual skills, education, and experience on earning power. The rational choice model

makes the crucial assumption that individuals are rational actors who behave in ways to maximize their economic well-being.

At the individual level, the rational choice model argues that one's earnings are determined by one's productivity. Hence, highly productive workers earn more than less productive workers. Productivity, in turn, is dependent on one's human capital, or the store of knowledge, skills, physical health, education, and experience one brings to the labor market. According to this school of thought, the poor are different from the nonpoor in their lack of human capital. The only jobs, if any, available to those with low levels of human capital pay wages below the poverty level. Thus, individuals with low levels of human capital are expected to remain mired in poverty and should remain in public housing for a long time.

Structural economic conditions are also important in helping to explain the use of assistance programs. Microeconomic theory postulates that because public housing is an in-kind benefit, demand for it should be dependent on the supply of affordable private market housing (Rothenberg et al. 1991). The characteristics of the local housing market thus become especially relevant. For example, where the poor can afford decent housing without being subsidized, the duration of public housing spells should be shorter. Alternatively, if unsubsidized housing is fairly expensive, the likelihood of ending a public housing spell should be lower. The overall economic health of a region may also play a role in determining the length of public housing spells. In an economically prospering region, jobs should be more plentiful, and it should be easier for the poor to either become employed or acquire higher-paying jobs and move out of poverty. Thus, a strong local economy should serve to shorten their public housing residence.

Housing market discrimination represents another structural facet of the housing market that may affect the dynamics of public housing residence, if only for blacks and, to a lesser extent, Latinos. Research by the Urban Institute has shown that blacks and Latinos are likely to experience discrimination in their housing searches (Turner, Struyk, and Yinger 1991). Moreover, South and Crowder (1997) have shown that residential segregation, which is due in part to housing discrimination, is associated with less mobility out of poor neighborhoods for blacks. Thus, the potential for housing discrimination to limit the choices of blacks and Latinos suggests these groups may be more prone to experience long spells of public housing residence.

Wilson (1987) takes the rational choice model one step further in arguing that not only will a lack of well-paying jobs keep some individuals poor, but that in certain racially and economically isolated

neighborhoods cultural norms will change, setting the stage for the development of “ghetto specific” behaviors such as public housing dependency. Wilson sees the decline of manufacturing jobs in central cities as having an especially deleterious impact on the urban poor because these jobs have historically served as stepping stones into the middle class.

In sum, rational choice models of dependency suggest that individuals who cannot afford private market housing, because of their low earning capacity and/or a lack of affordable private market housing, will become dependent on public housing. This contrasts with cultural explanations of dependency that suggest certain childhood experiences will result in a taste for public housing or a preference for living in public housing. Both models, however, share the perspective that economic factors are the ultimate arbiters of behavior, with the difference being that the rational choice model assumes individuals adapt automatically to changing constraints, whereas the cultural perspective sees individuals as developing behaviors that linger on long after the conditions that spawned them have changed.

The evidence compiled by social scientists on the importance of human capital as a determinant of exits from public assistance is mixed. In Hungerford’s analysis, education was positively associated with exits from housing assistance. Bane and Ellwood (1994), Blank (1989), Fitzgerald (1991, 1995), Harris (1993), and O’Neill et al. (1987) all found that educational attainment was positively associated with exiting welfare. Butler’s (1996) results show that education is positively associated with leaving poverty. Hutchens (1981), Kimenyi (1991), and Plotnick (1983), however, found that education had no significant effects on the rates of welfare exits.

Hungerford (1996) found the condition of the local housing market to be an insignificant predictor of the length of housing assistance spells. In addition, higher rates of unemployment were associated with *quicker* exits from housing assistance in Hungerford’s analysis. Both of these results were based on state level measures, however, which may be too coarse to capture the effects of local conditions. The findings from welfare studies on the impact of local economic conditions on welfare dynamics have been mixed. Several studies find the expected negative relationship between exiting welfare and local unemployment rates (Blank 1989; Fitzgerald 1991, 1995; Harris 1993), but others fail to find a significant relationship (Plotnick 1983). One study actually reported a positive relationship between unemployment and the likelihood of exiting welfare (O’Neill et al. 1987), but in this study, data were not available on the unemployment rate in all of the years in the study period.

As was the case with the empirical evidence on the impact of cultural factors on public assistance dynamics, the evidence for rational choice models is somewhat inconsistent. At least some of these inconsistencies may be attributed to the use of inadequate measures of local economic and housing conditions. In addition, as noted above, the use of different data sets and different model specifications could also lead to conflicting results.

Residential mobility

Although moving out of public housing is likely to require some upward economic mobility, it is also probable that individuals deciding to move from public housing might be influenced by factors that motivate individuals to move in general. Consequently, explanations of residential mobility will also be considered in this analysis. The life cycle model has emerged as the dominant paradigm explaining why people move (Fielding 1994; Rossi [1955] 1980). The life cycle model posits that as individuals move through the various stages of life, their housing needs change, prompting moves to more suitable housing. This suggests that younger, single, unmarried, and childless individuals are most likely to move and that public housing spells will be shorter among individuals having these characteristics.

Public policy

Several important changes in housing policy occurred during the analysis period (1986 to 1992, see below) that could affect the speed at which individuals leave public housing. In 1987 HUD implemented a policy that gave admission preferences for public housing to individuals who were homeless, living in substandard housing, or paying an especially high percentage of their income toward rent. It seems plausible that the cohort of public housing residents entering after 1987 may be populated by those with a higher risk of becoming dependent. Certainly the experience of being homeless or living in substandard housing might make public housing seem relatively attractive and thus dampen any desire to move out. To address these concerns, the research reported in this article included a measure of whether a resident moved into public housing after 1987.

A second policy that may have affected public housing dynamics during the analysis period is the 1986 Tax Reform Act. This act enables states to issue a generous tax credit to developers who build low-income housing. The Low-Income Housing Tax Credit (LIHTC), as it is commonly called, was responsible for the development of an increasing number of low-income housing units during the later

years of the study period. Although the LIHTC probably serves a more upscale clientele than public housing (U.S. General Accounting Office 1993), LIHTC housing might serve as a stepping stone to many public housing residents who wish to move out of public housing but cannot quite afford private market housing. In addition, the LIHTC program may serve to lower housing prices in general by increasing the supply of affordable housing. Because of the potential for the LIHTC to affect public housing dynamics, the analysis also controls for the amount of LIHTC development in the housing market.

Data and methods

Using data from the PSID, this article examines the likelihood of a household head moving out of public housing for each year between 1986 and 1992. The PSID is a longitudinal survey of a representative sample of U.S. individuals and their families (Hill 1992). It has been following the same individuals and their families since 1968. As of 1992, the sample included information on 50,915 individuals. From 1986 on, the PSID asked respondents if they resided in a public housing development.³ Data on local manufacturing employment and the local housing market were obtained from the 1990 Census Summary Tape File 3C. Data on LIHTC development activity were obtained from HUD's *A Picture of Subsidized Households—1997* (HUD 1997).⁴ Residents older than 62, the age for which individuals are eligible for elderly public housing, were excluded from the analysis because policy concerns regarding dependency focus on the non-elderly. Using the criteria described above yields a sample size of 1,145 individuals who were household heads for the entire period they lived in public housing. Of those 1,145 individuals, 129 were experiencing a second spell of public housing residency.

The PSID is uniquely suited for analyzing public housing dynamics through a socioeconomic mobility perspective. It has several advantages over the SIPP. First, it includes data on the socioeconomic status of the individual's parent(s). Second, it covers a longer time

³ Research done on the American Housing Survey suggests the self-reporting of housing assistance data can be a potential source of error because some respondents incorrectly identify the type of housing assistance they receive (Shroder and Martin 1998). To the extent this is true in the case of the PSID, the results may be applicable to housing assistance recipients in general, rather than just public housing residents.

⁴ The data on LIHTC developments in HUD's *A Picture of Subsidized Households* are based on a survey of state housing agencies. Seventeen percent of the LIHTC developments in the database were not geocoded. If this pattern of missing geocode information is not random, the results could be biased.

period. Third, it allows for more localized measures of economic and housing market conditions to be included in the analysis. The PSID is also better suited than the American Housing Survey (AHS) for the purposes of this study because the AHS follows housing *units* rather than the residents. Despite these advantages, the PSID is not without its drawbacks. Unlike the AHS, which has extensive information on housing characteristics, the PSID lacks information on the characteristics of the housing unit. And unlike the SIPP, the PSID asks respondents about their public housing status on an annual rather than monthly basis.⁵

Using the 1990 census to measure local housing conditions and manufacturing employment required the assumption that these characteristics were relatively stable at the county level from 1986 to 1992. This is somewhat problematic given that some areas experienced a recession during this period. A measure of the local unemployment rate, which the PSID provides for each year, should temper this problem somewhat. A further limitation of the data is its lack of information on the type of neighborhood the individual grew up in or is presently living in. Wilson's (1987) theory on urban poverty suggests these "neighborhood effects" could influence dependency on public housing. The lack of information on, say, the census tract the individual spent the largest part of his or her childhood in or where the individual is currently living precludes testing for evidence of neighborhood effects on public housing dynamics. Despite these limitations, the PSID in conjunction with the census data provides a rich source of information.

Understanding how often and under what circumstances individuals are likely to move out of public housing warrants the use of event history methods that allow for the analysis of dynamic phenomena (Yamaguchi 1991). Static analyses that take a snapshot of individuals living in public housing at one point in time are inadequate because they ignore the time-varying nature of some factors that will influence the odds of someone moving out of public housing. In addition, some public housing spells are right censored, meaning the individual has not yet moved out of public housing at the end of the observation period. Simply treating this observation as a case where the individual does not move out of public housing would bias our estimates because they may move out in the future (Allison 1984). Discarding right-censored cases would cause information to be wasted. Finally, a snapshot approach provides a dis-

⁵ Research on welfare dynamics has shown that analyses based on annual data miss much of the on and off and on again use of welfare by recipients that occurs within a single year. This is unlikely to be a problem for this analysis, however, because public housing residents are unlikely to move in and out of public housing within a single year.

torted picture of all people who lived in public housing during a given period because long-term residents will tend to “pile up” and hence will be overrepresented in any given year. Those who move in and out quickly are less likely to be captured in a single snapshot. For these reasons, event history methods are the appropriate analytical technique.

Exploratory analysis

The data analysis begins with a simple display of the distribution of spell lengths. Table 1 provides a snapshot of the length of tenure for residents of public housing in 1986. If the PSID asked respondents living in public housing in 1986 how long they had been living there, the results would be those illustrated in table 1. The majority of public housing spells are relatively short. Only 28 percent of the respondents had been living in public housing for more than five years. This echoes the findings of Hungerford (1996), who found that 29 percent of the public housing residents in his sample had spells less than or equal to 12 months, while only 24 percent had spells lasting longer than 12 months, with the remainder having spells that terminated beyond the observation period.

In contrast to the simple snapshot approach, which provides a distorted picture, some of the more sophisticated survival methods provide a clearer picture of public housing dynamics because they take into consideration that some observations are censored. Table 2 illustrates several measures depicting public housing dynamics in the PSID sample using one such method, the *life table* method.

Table 1. Length of Time Residents Have Been Living in Public Housing

Spell Duration	Percent of Residents Living in Public Housing for the Specified Duration, as of 1986
1 year	33
2 years	18
3 years	11
4 years	9
5 years	6
6 years	3
7 years	4
8 years	2
9 years	3
10–15 years	6
16–25 years	4

Source: Panel Study of Income Dynamics.
Note: Unweighted tabulations. $n = 338$.

Table 2. Life Table of Public Housing Exits

Period (Years)	<i>n</i>	Moved Out	Censored ^a	Hazard ^b
1	1,000	413	210	0.6
2	432	100	101	0.30
3	272	54	86	0.27
4	165	36	19	0.26
5	130	24	18	0.27
6	83	17	15	0.25
7	63	11	9	0.21
8	49	8	13	0.21
9	39	4	9	0.12
10–15	60	26	24	0.12
16–25	20	7	15	0.07

Source: Panel Study of Income Dynamics.

^a *Censored* indicates the number of individuals who either dropped out of the PSID, had missing data for that period, or were still living in public housing in 1992.

^b The *hazard* is the rate of an individual moving out of public housing in a year, given that he or she has not yet moved out of public housing.

The tabulations are based on unweighted observations. The period refers to each year in an individual's public housing spell except for the last 15 years, which were grouped together because of the small sample size. *N* represents the number of individuals living in public housing at the beginning of a period. *Censored* indicates the number of individuals who either dropped out of the PSID, had missing data for that period, or were still living in public housing in 1992. For any individual meeting one of the three aforementioned criteria, it is impossible to tell if they moved out of public housing. Thus, their public housing spell is right censored.⁶ The life table method assumes that censoring or moves take place in the midpoint of the year. The *hazard* is the rate of an individual moving out of public housing in a year, given that he or she has not yet moved out of public housing (Allison 1984; Yamaguchi 1991).

Left-censored spells, meaning the spell began before 1986, are included if the date of the beginning of the spell is known. Because the PSID asks individuals if they move each year, this date can usually be determined. For example, if someone was living in public housing in 1986, and they had not moved since 1981, it can be assumed they lived in public housing from 1982 to 1985. In constructing the life table, however, only the periods after 1985 are included for left-censored individuals. Thus, for someone living in public housing for 10 years from 1980 to 1990, only their last 4 years are

⁶ The hazard is calculated by the following formula: Where for the *i*th interval d_i is the number who moved out of public housing, t_{im} is the midpoint of that interval, b_i is the width of the interval, and w_i is the number of censored cases in the interval.

included in the life table analysis. To include the first six years would bias the estimates downward (Guo 1993).

Figure 1 provides a graphical illustration of the hazard. The figure clearly illustrates that the odds of leaving public housing decline the longer a person resides in public housing. Thus, the possibility of duration dependence among public housing residents cannot be ruled out yet. The decline in the hazard rate is most precipitous in the first three years, after which it begins to level off. However, the relatively high hazard in the first few years also suggests that a sizable portion of the public housing population may not be at risk of becoming long-term dependents of public housing. This finding contradicts the notion that public housing is a dependency trap for most individuals who reside there. It appears that for a sizable portion of public housing residents, there is little risk of becoming trapped in public housing, and this group moves out after relatively short durations. Duration dependence may be a problem for a small but substantial portion of the sample, however. After the sharp drop of the first two years, the hazard does decline over time, albeit gradually. Those remaining past the first couple of years may be those most at risk of experiencing duration dependence.

Multivariate analysis

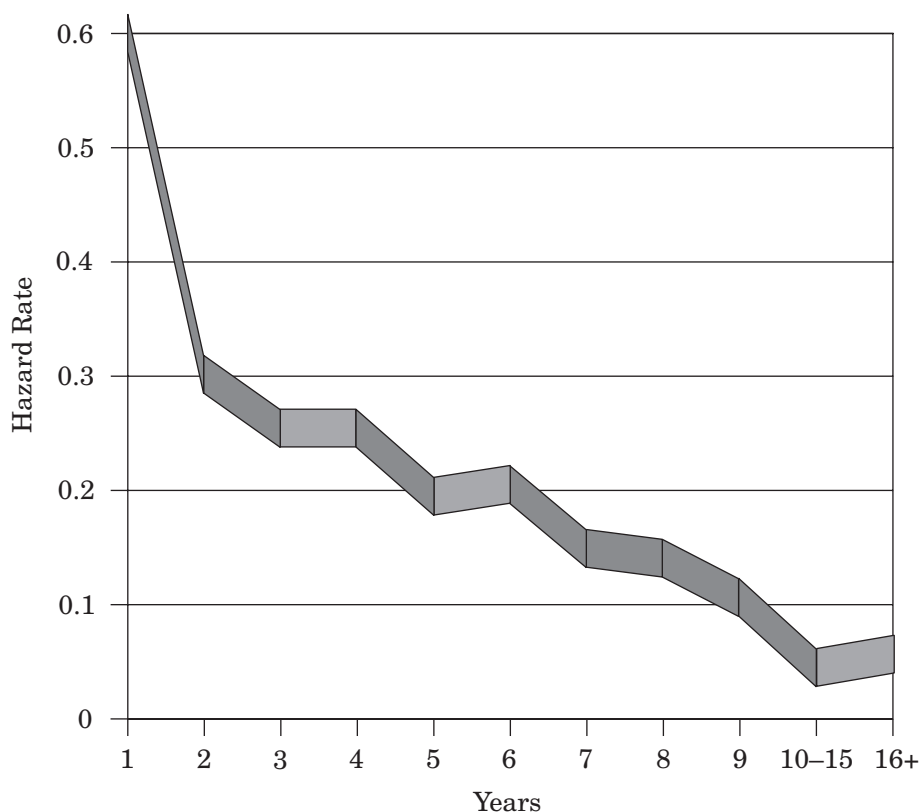
The previous section showed that many individuals have relatively short public housing spells. Yet it is clear that a sizable portion of those moving into public housing do go on to stay for a relatively long period of time. What factors determine who stays and who leaves public housing? The multivariate analysis takes up this question.

The theoretical framework outlined above points to three sets of factors that are likely to influence the likelihood of someone moving out of public housing: cultural factors, rational choice factors, and life cycle factors. Table 3 lists the measures used to proxy for each set of factors along with their means.

Logistic regression techniques were chosen for estimation purposes because of their widespread use in the social sciences and because they can handle the complexities associated with survival data (Allison 1995). Allison provides a succinct synopsis of using logistic regression for event history data:

Each individual's survival history is broken down into a set of discrete time units that are treated as distinct observations. After pooling these observations, the next step is to estimate a binary regression model predicting whether an event did or did

Figure 1. Hazard Rate



not occur in each time unit. Covariates are allowed to vary over time from one time unit to another. (Allison 1995, 211)

To perform this analysis, each public housing resident's spell will be broken down into a separate observation for each year in the spell. For example, someone living in public housing for four years after 1985 would contribute four observations to the data. Time-varying covariates, such as age, will be different in each of the four observations. Variables that do not vary over time, such as race, will be the same in all four observations. If the year the individual moved into public housing can be determined, left-censored spells are included in the analysis without biasing the estimates (Guo 1993). Only the portions of these left-censored spells that occur during the 1986–92 observation period are included when the hazard of moving out of public housing is estimated; however, the time the individual spent in public housing prior to 1986 is controlled for.

A logistic model was then estimated with the dependent variable being whether an individual moved out of public housing in a given

Table 3. Means of Variables Used in Multivariate Analysis

Variable	Mean
<i>Family background and cultural factors</i>	
FATHERHS = Father has high school diploma	0.26
MOTHERHS = Has high school diploma	0.38
TWOPAREN = Grew up in household with both parents	0.52
FAMMID = Family was middle-income (Family was poor serves as reference)	0.24
FAMMRICH = Family was well-off (Family was poor serves as reference)	0.26
NEMWCC = Grew up in central city in Northeast or Midwest (Grew up in central city in U.S. outside of South and outside of NE and MW serves as reference)	0.18
SOUTHGRO = Grew up in South (Grew up in central city in U.S. outside of South and outside of NE and MW serves as reference)	0.60
FOREIGN = Foreign born (Grew up in central city in U.S. outside of South and outside of NE and MW serves as reference)	0.05
BLACK = (Whites serve as reference category)	0.69
OTHER = Native American, Asian, other (Whites serve as reference category)	0.01
LATINO = (Whites serve as reference category)	0.12
TOTAFDC = Total number of years received AFDC	3.3
REPEAT = If prior spell in public housing	0.15
AFTER87 = Those beginning spell after 1987	0.72
<i>Rational choice factors</i>	
WORKEXP = Years of full-time work experience	8.4
JOBTRAIN = Has certificate from job training program	0.24
PRIMARY = 1–8 years of school (High school grad serves as reference category)	0.07
SOMEHS = 9–11 years of school (High school grad serves as reference category)	0.27
SOMECOLL = Some college (High school grad serves as reference category)	0.14
COLLEGE = College graduate or beyond (High school grad serves as reference category)	0.03
DISABLED = Work-inhibiting disability	0.16
UNEMPLOY = County unemployment rate	6%
OWNPRICE = Median price of owner-occupied housing in county	\$58,400
LIHTC = Number of LIHTC units developed in county each year	148
VACANCY = Vacancy rate for housing units in county	0.09
MANUPERC = Percentage of jobs in manufacturing sector in county	0.14
SBCITY = Living in central city outside of NE or MW (Living in central city of NE or MW serves as reference category)	0.28
SMCITY = Living in metro area of 50,000–1 million (Living in central city of NE or MW serves as reference category)	0.28
SUBURB = Residing in suburb in metro area of 1 million or more (Living in central city of NE or MW serves as reference category)	0.09
TOWN = Incorporated places outside of metro areas (Living in central city of NE or MW serves as reference category)	0.17
RURAL = Residing in rural area (Living in central city of NE or MW serves as reference category)	0.01
<i>Life cycle and demographic variables</i>	
MARRY = Currently married (Never married serves as reference category)	0.26
DIVORCE = Divorced, widowed, or separated (Never married serves as reference category)	0.31

Table 3. Means of Variables Used in Multivariate Analysis (Continued)

Variable	Mean
NEWWED = Married in past year	0.04
AGE = Age in years	30
PRESKOOL = Number of children under 6 years old	1
TOTKID = Total number of children under 18 years old	1
MALE	0.53
INCOME = Total family income	\$10,300

Note: The following variables were allowed to vary from year to year in the analysis: TOTAFDC, WORKEXP, JOBTRAIN, PRIMARY, SOMEHS, SOMECOLL, COLLEGE, DISABLED, UNEMPLOY, LIHTC, MARRY, DIVORCE, NEWWED, AGE, PRESKOOL, TOTKID, and INCOME.

year. By including a set of dummy variables for each of the years of residence in public housing, time-varying differences in the hazard rate for moving out of public housing can be modeled. The logistic regression model will incorporate the effects of the factors described in the conceptual framework as well as the effect of length of residence in public housing on exiting from public housing. The 129 repeat spells were analyzed together with the first spells, and a dummy variable was used to indicate if a spell was a repeat spell.

Rather than entering all of the independent variables at once, the explanatory variables are added to the model in blocks, with each block representing a different theoretical perspective. The blocks are composed of variables intended to capture the impact of time, the culture of poverty perspective, the rational choice perspectives, and the life cycle perspective on the likelihood of moving out of public housing. By entering the variables in blocks that are associated with a particular theoretical perspective, the impact of each theoretically derived set of variables is clearer.

The parameter estimates for a logit model are not interpretable, so the odds ratios and indicators of statistical significance will be presented instead. The results are presented in table 4.

Discussion of results

The results of model 1 are presented in the first column of table 4. That model illustrates the impact of time, prior public housing spells, moving into public housing after 1987, and total years of welfare receipt on the odds of moving out of public housing. As was the case in the exploratory analysis, the longer one lives in public housing, the lower the odds of moving out, although the decline is not monotonic. Having an earlier observed spell of public housing residence, as well as moving into public housing after 1987, is also

Table 4. Multivariate Analysis of Public Housing Exits

Variable	Model 1	Model 2	Model 3	Full Model
Second year	0.374 (0.0001)	0.404 (0.0001)	0.407 (0.0001)	0.430 (0.0001)
Third year	0.281 (0.0001)	0.311 (0.0001)	0.319 (0.0001)	0.344 (0.0001)
Fourth year	0.272 (0.0001)	0.292 (0.0001)	0.304 (0.0001)	0.338 (0.0001)
Fifth year	0.169 (0.0001)	0.187 (0.0001)	0.194 (0.0001)	0.228 (0.0001)
Sixth year	0.183 (0.0001)	0.205 (0.0001)	0.221 (0.0001)	0.281 (0.0001)
Seventh year	0.122 (0.0001)	0.138 (0.0001)	0.143 (0.0001)	0.182 (0.0001)
Eighth year	0.105 (0.0001)	0.116 (0.0001)	0.116 (0.0001)	0.149 (0.0001)
Ninth year	0.089 (0.0001)	0.099 (0.0001)	0.100 (0.0001)	0.146 (0.0005)
Ten years +	0.148 (0.0001)	0.168 (0.0001)	0.185 (0.0001)	0.272 (0.0001)
REPEAT	0.684 (0.0001)	0.623 (0.0001)	0.616 (0.0142)	0.675 (0.0486)
AFTER87	0.513 (0.0001)	0.605 (0.0001)	0.584 (0.0001)	0.594 (0.0001)
TOTAFDC	0.984 (0.0785)	0.989 (0.2908)	0.992 (0.4511)	1 (0.9914)
<i>Family background and cultural factors</i>				
FATHERHS		1.254 (0.0884)	1.149 (0.2781)	1.099 (0.5382)
MOTHERHS		1.306 (0.0259)	1.202 (0.1499)	1.093 (0.4908)
TWOPAREN		1.356 (0.0027)	1.361 (0.0030)	1.375 (0.0027)
FAMMID		0.999 (0.9954)	1.022 (0.8713)	0.927 (0.5761)
FAMRICH		1.125 (0.3366)	1.078 (0.5560)	0.979 (0.8738)
BLACK		0.881 (0.3891)	0.813 (0.1944)	0.833 (0.2667)
OTHER		0.703 (0.4808)	0.566 (0.2691)	0.569 (0.2859)
LATINO		0.491 (0.0046)	0.416 (0.0012)	0.405 (0.0011)
NEMWCC		0.675 (0.0238)	0.871 (0.4887)	0.883 (0.5436)
SOUTHGRO		0.847 (0.2790)	0.799 (0.1696)	0.829 (0.2614)
FOREIGN		0.399 (0.0275)	0.576 (0.2134)	0.729 (0.4833)
<i>Rational choice factors</i>				
WORKEXP			0.999 (0.8075)	1.01 (0.0459)
JOBTRAIN			1.054 (0.6646)	1.049 (0.7018)
PRIMARY			1.18 (0.4371)	1.642 (0.0261)
SOMEHS			0.915 (0.4689)	0.954 (0.7116)
SOMECOLL			1.764 (0.0001)	1.830 (0.0001)
COLLEGE			1.037 (0.9125)	1.057 (0.8704)
DISABLED			0.673 (0.0051)	0.816 (0.1744)
UNEMPLOY			0.963 (0.1673)	0.963 (0.1754)
LIHTC			1.043 (0.0037)	1.045 (0.0026)
VACANCY			1.038 (0.0110)	1.044 (0.0039)
OWNPRICE			0.993 (0.0029)	0.993 (0.0038)
MANUPERC			1.000 (0.9813)	1.001 (0.9096)
SBCITY			1.634 (0.0102)	1.560 (0.0227)
SMCITY			1.860 (0.0010)	1.720 (0.0052)
SUBURB			1.352 (0.1868)	1.288 (0.2798)
TOWN			1.451 (0.1197)	1.341 (0.2280)
RURAL			3.524 (0.0245)	3.056 (0.0462)
<i>Life cycle and other demographic variables</i>				
MARRY				0.985 (0.9288)
DIVORCE				1.320 (0.0386)
NEWWED				0.859 (0.5954)
AGE				0.956 (0.0001)

Table 4. **Multivariate Analysis of Public Housing Exits** (Continued)

Variable	Model 1	Model 2	Model 3	Full Model
PRESKOOL				1.071 (0.4059)
TOTKID				0.901 (0.0563)
INCOME				1.009 (0.1009)
MALE				1.252 (0.1070)
χ^2 values	225.817 (0.0001)	290.947 (0.0001)	362.777 (0.0001)	408.936 (0.0001)

Note: The first numbers in each column are odds ratios. Odds ratios are interpreted as more likely or less likely to move out of public housing. For example, for the age variable, one additional year in age decreases the odds of someone moving out of public housing by 4.4 percent. For a categorical variable, such as male, it is interpreted as males being 25 percent more likely than females to move out of public housing. The numbers in parentheses are levels of statistical significance. The p-value gives the probability that we would observe this estimate solely by chance. 0.1, 0.05, and 0.01 are conventional cutoff points for statistical significance.

associated with lower odds of moving out of public housing. The total time spent on welfare only has a marginal impact on the odds of moving out of public housing. These results are consistent with the notion of duration dependence, yet the results may be due to unobserved heterogeneity because all of the variables have not yet been added to the model.⁷

The results of model 2 are presented in the second column of table 4. Variables serving as proxies for cultural background have been added to the model. Attempts to measure “culture” are obviously constrained by the amorphous nature of the concept. A number of measures, including economic status when growing up, parental educational attainment, growing up in a two-parent household, the region of the country one grew up in, and race/ethnicity (because of the possibility of housing discrimination, the decision to consider race/ethnicity a cultural construct as opposed to a structural one is admittedly somewhat arbitrary) are used as proxies for culture.

The results indicate that parental education does exert a significant influence on the odds of moving out of public housing, with both the mother’s and the father’s level of educational attainment having significant effects. Growing up in a two-parent household has the expected positive and significant effect on the odds of moving out of public housing. Having a Latino heritage, growing up in a central

⁷ Often, what appears to be duration dependence is really unobserved heterogeneity. Unobserved heterogeneity occurs when some measure that affects the likelihood of an event occurring is not included in the model. In such cases, some individuals may have a lower hazard for moving out of public housing at the beginning of their spell and are the only ones not yet experiencing an event in the later analysis periods. Thus, in the later analysis periods the only individuals left are those who had relatively low hazards for moving out of public housing in the first place.

city in the Northeast or Midwest, or growing up outside of the United States all have significant negative effects on the odds of moving out of public housing. The later years of a spell are still associated with a lower likelihood of individuals moving out of public housing. Given that both the cultural perspective and the possibility of housing discrimination suggest reasons to expect a lower probability of moving out of public housing among blacks, it is somewhat surprising that blacks are not significantly less likely to move out of public housing. These findings provide modest support for cultural explanations of public housing dependency. Whereas some measures of family background do influence the odds of moving out of public housing, some do not. It would appear that in sum, one's family or cultural background has a modest impact on the odds of moving out of public housing.

The results of model 3 are presented in the third column of table 4. Variables representing human capital (years of work experience, level of educational attainment, disability status, having graduated from a job-training program) and structural conditions (county vacancy rate, price of owner-occupied housing in the county, amount of LIHTC housing developed in the county, county unemployment rate, the percentage of jobs in the county in the manufacturing sector, and location) have been added to the model. Taken as a group, human capital measures have a mixed impact on the odds of moving out of public housing. Only having received some college training and being disabled have significant impacts in the expected direction. Other measures of education are not significantly related to the odds of moving out of public housing.

Variables representing local economic conditions generally perform as anticipated. The measure for the county unemployment rate has the anticipated negative effect, and although it does not reach conventional levels of statistical significance, it comes close, the *p* value being 0.17. Higher prices for owner-occupied housing are associated with lower odds of moving out of public housing, while housing vacancy rates have a significant positive impact on the odds of moving. The amount of LIHTC units developed in a county in a given year has a significant positive impact on the odds of someone moving out of public housing in that year. The LIHTC appears to affect housing markets in a manner that allows more options for public housing residents. Most probably it serves to lower prices in the affordable housing market by increasing supply. Wilson's theory on the urban underclass, which attaches great importance to the availability of manufacturing jobs as an explanation of poverty, does not appear to be of much importance as a determinant of public housing exits. The proportion of jobs in the manufacturing sector did not have a positive effect on the rate that individuals leave public housing.

Public housing residents of central cities in the Northeast and Midwest are significantly less likely to exit public housing than their counterparts in other parts of the country. Perhaps this is due to the older housing stock in these cities that offers less attractive housing alternatives than may be the case in other parts of the country. In addition, public housing in these cities is more likely to be in the classic superblock form, which isolates residents physically and socially from their surrounding neighborhoods. It should also be noted that the high-rise public housing developments of northeastern and midwestern cities like New York and Chicago dominate the public's perceptions of public housing, including the perception that most public housing residents have very long tenures. The findings indicate that these perceptions are less accurate outside of the big cities of the Northeast and Midwest. The results of the rational choice model strongly imply that local conditions are important determinants of public housing spell durations, suggesting that the results of prior analyses that failed to adequately control for local conditions were likely biased.

It is noteworthy that many of the cultural variables, in particular parental education, lose much of their impact with the addition of rational choice factors. This implies that to the extent that cultural factors do have an effect, they operate indirectly, perhaps on the acquisition of human capital.

The results of the full model are presented in the last column of table 4. Variables representing demographic characteristics (gender, age), life cycle (number of preschool children, total number of children, and marital status), and family income are added to the model.⁸ Individuals who are divorced or separated have higher odds of exiting public housing than never-married individuals, although somewhat surprisingly, married individuals share no such advantage. As expected, males and people with higher levels of family income have higher odds of moving out of public housing. An individual's age and the total number of his or her children both have the anticipated negative impact on the odds of moving out of public

⁸ Several diagnostic procedures including the deviance residual, the confidence interval displacement, the hat matrix, and the deviance difference statistic were employed to detect for outliers or overly influential cases. If an observation appeared to have an undue influence on the model, the observation was deleted and the model reestimated. In none of the reestimated models, however, did the estimates for the independent variables change significantly. To test for high levels of multicollinearity, a correlation matrix was estimated to detect variables that might be highly correlated. None of the independent variables, however, had a level of correlation higher than 0.61, which suggests multicollinearity is not a problem. In addition, the continuous independent variables were regressed on all the other independent variables. None of the r^2 s obtained, however, were close to one, further suggesting that multicollinearity is not a problem.

housing. Perhaps the total number of children as opposed to the number of preschool children is important because of the difficulty large low-income families are likely to face when attempting to locate large, affordable, private market housing. In this last set of variables, the lack of any significant association between being married and the odds of moving out of public housing is perhaps the most surprising. From an economic perspective, marriage should be an asset; however, residential mobility theory posits that married households are less likely to move. Perhaps these countervailing forces balance each other.

In the full model, later years of a housing spell are still associated with a lower probability of moving out of public housing. Having a prior spell of public housing residence, growing up in a two-parent household, being Latino, having a primary school education (albeit in an unanticipated direction), having some college experience, local housing conditions, residence in a central city in the Northeast or Midwest or a rural area, being divorced or separated, one's age and gender, family income, and the total number of children also still significantly affect the odds of moving out of public housing.

In the full model, work experience is now significant and has a positive albeit modest impact. The most plausible explanation for the change in how work experience affects the odds of moving out of public housing is the inclusion of age in the model. Although work experience modestly improves the odds of someone moving out of public housing, more work experience is characteristic of older individuals, who are less likely to move. Consequently, age must be controlled for to detect the positive impact of work experience as was done in the full model.

The fact that the later years of a spell are still associated with a lower likelihood of exiting public housing even after the inclusion of so many variables would seem to diminish the probability that unobserved heterogeneity is responsible. The more relevant variables included, the lower the probability of unobserved heterogeneity being a factor. Yet one can still imagine some attitudinal factors, for example, that may influence the odds of someone moving out of public housing that have not been captured in the model.

Duration dependence

One way of testing for the presence of duration dependence, suggested by Allison (1995), is to utilize information from individuals with prior public housing spells. This method is based on the straightforward assumption that duration dependence caused by one spell will be evident in subsequent spells. If time spent in pub-

lic housing decreases one's desire to move out, this lowered motivation to move out of public housing should be evident in subsequent spells as well. This suggests that the length of a prior public housing spell should be negatively associated with the odds of moving out of public housing.

To test for duration dependence using this approach, moving out of public housing was regressed on the length of the first for all of the repeat spells. There were 129 repeat spells observed that, when broken into distinct observations for each year of a spell, translated into 149 observations used in the analysis. This regression yielded an odds ratio of 1.015, suggesting a positive relationship between the length of the first spell and the odds of moving out of public housing. However, the relationship is not significant even at a 10 percent level of confidence.

This suggests that unobserved heterogeneity rather than duration dependence is the factor that causes the later years of public housing spells to be associated with a lower odds of exiting public housing. Rather than individuals becoming "addicted" to public housing as time wears on, it appears that some individuals enter public housing planning not to (or being unable to) leave until after a long period of time. These are the individuals left in the later years of public housing spells. Whatever factors influence these individuals to become long-term residents of public housing are not being fully captured in these modeling efforts.

From a theoretical perspective, the results presented here are not very supportive of cultural factors as determinants of public housing dependency. Although it is true that family background does exert some influence on the odds of exiting public housing, with the exception of growing up in a two-parent household, this influence disappears when rational choice factors are added to the model. This could be interpreted as suggesting those who grow up with poor cultural values fail to acquire human capital. But it is also consistent with the notion that growing up in a disadvantaged household deprives one of the opportunity to acquire human capital by, for example, having to attend inferior schools or not being able to afford college. Which interpretation is correct is not clear based on the evidence, but to the extent that cultural factors are important, they should exert some influence beyond their impact on the acquisition of human capital. It may be that cultural factors are important determinants of who *enters* public housing, but this analysis does not provide unambiguous support for the notion that cultural factors are important determinants of who exits public housing.

The evidence for the human capital school is also mixed. Education does not always influence the odds of moving out of public housing

in the anticipated direction, and work experience has only a modest impact. In contrast, the consistent impact of housing market conditions confirms the importance of structural factors in determining who exits public housing. However, Wilson's (1987) contention that a dearth of manufacturing employment leads to underclass behaviors like public housing dependency is not supported here.

Policy implications

There are several policies being implemented or considered by policy makers for which the findings of this study are relevant. The most obvious are self-sufficiency programs, time limits, and changes in admissions policies. This section addresses these implications.

As noted in the beginning of this article, frequent portrayals of residents as dependent for long periods of time have served, in part, as the impetus for self-sufficiency policies. But the results of this study clearly call into question the accuracy of portrayals of public housing residents as uniformly being long-term wards of the state. Echoing the findings of studies on the dynamics of welfare, which found most welfare spells to be relatively short (Bane and Ellwood 1994; Blank 1989), this study suggests that many public housing spells are also relatively short as evidenced by the high rate with which individuals move out of public housing in the first few years. The findings of this study are also consistent with Hungerford's (1996) study on housing assistance dynamics, which also found a large proportion of public housing spells to be relatively short.

The most important policy implication that flows from this finding is that any policy designed to shorten public housing spells should be targeted toward those who appear to be prone to long-term residency. Programs designed to make public housing residents self-sufficient are likely to be expensive and probably more costly than preserving the status quo, at least in the short run. A self-sufficiency program operated by the Charlotte [NC] Housing Authority, for example, provides counseling, conducts occupational testing, and allows residents to save a portion of their rent toward a down payment for a home (Rohe 1995). Making such a program available to all or even most public housing residents would be prohibitively expensive. But if resources could be targeted toward those who are or are likely to become long-term residents of public housing, the costs of such remedial efforts could be reduced substantially.⁹

⁹ Discussed here are targeting strategies that are practical. For example, Latinos were found to be less likely to exit public housing, but targeting individuals on the basis of ethnicity is probably illegal.

The results of this study show the odds of someone moving out of public housing to be influenced significantly by local housing market and economic conditions. Consequently, any policy designed to reduce dependency among public housing residents should be implemented with the variability of local environments in mind. It may be desirable to target self-sufficiency resources toward areas where self-sufficiency is most difficult to achieve—cities with few affordable housing alternatives or with high levels of unemployment. Or it may be more realistic to recognize that in cities with few housing alternatives or jobs, self-sufficiency may not be a realistic objective for many public housing residents.

The results of this study also suggest that self-sufficiency resources be focused on the more disadvantaged residents of public housing. In terms of education, individuals without postsecondary schooling are likely to need the most assistance. Individuals with little or no work experience may also need special assistance to become economically independent. Based on the evidence presented here, however, it appears that job-training programs may be insufficient to move many individuals to self-sufficiency, given that graduates from those programs were not significantly more likely to exit public housing. This implication is consistent with Rohe and Kleit's (1997) evaluation of Charlotte's Gateway program, where even after participating in job training many residents still had a difficult time becoming self-sufficient. Female heads of households too, perhaps because of child care responsibilities, were found to be less likely to exit public housing in this study. This implies that, as with welfare reform, providing adequate child care may be a necessary first step to foster self-sufficiency.

The findings of this study appear to undermine some of the arguments for time limits for public housing tenure such as those proposed by Will Marshal (1994) of the Progressive Policy Institute or as evidenced by the five-year limit required by the Family Self-Sufficiency program. Perhaps most important, structural constraints play a major role in determining how long individuals stay in public housing. Thus, in many regions of the country, time limits beg the question, "Where will the public housing residents move?" Why force residents to move out when, even if they are working, they may not be able to afford or find suitable housing?

A second argument often advanced in favor of time limits is that over time it becomes more difficult to move out as individuals become dependent on public housing. This contention is not supported by this study. Most likely, individuals that stay in public housing the longest, to a large degree, cannot find suitable alternatives. Forcing people to move will do little to change the structural constraints they face. And as other research illustrates, substantially

increasing the typical resident's earning power is difficult. If strict time limits were adopted for public housing, the results of this study provide empirical evidence for allowing waivers in areas with high unemployment, low vacancy rates, or expensive housing prices. Such an approach would be similar to the clause in the Temporary Assistance for Needy Families program that allows states to exempt from the five-year limit counties with unemployment rates twice the national average. This approach recognizes that some public housing residents may have difficulty moving out if there are few housing options or opportunities to increase their income. Although it is certainly true that there is not enough housing assistance for everyone, the proper policy response would be to increase the amount of housing assistance rather than setting arbitrary time limits.

Although not conclusive, the evidence presented here, along with Hungerford's analysis, should dispel the notion that public housing is habit forming for most residents. Many residents move out relatively quickly, and there is no real evidence that those who are left behind experience duration dependence. This is consistent with Vale's (1997) survey of Boston public housing residents. When asked why they wanted to stay in public housing, most mentioned social ties to their development rather than any difficulty in giving up their housing subsidy. Although critics contend that public assistance programs such as public housing and welfare are like narcotics for the poor, the evidence presented here and in other studies does not support this view.

Aside from the obvious implications for self-sufficiency and time-limit policies, the findings of this study have implications for other public housing policies as well. The finding that the post-1987 cohort was less likely to exit public housing implies that admissions criteria will significantly affect whether public housing is used as a temporary way station or a semipermanent home. HUD's recent moves to attract more middle-income families, if successful, should result in fewer long-term residents. Of course, implementing such a policy doesn't mean that problems such as a lack of affordable housing alternatives or well-paying jobs that caused a need for long-term public housing residence in the first place will disappear. These needs simply will not be met by the public housing program. Just what the correct policy choice is between the competing needs of economically integrating public housing and serving the most disadvantaged is beyond the scope of this article.

The findings of this study imply that the Jobs-Plus program, which is designed to help public housing residents find and keep jobs, may also affect spell dynamics. This is particularly true if the Jobs-Plus program can help public housing residents obtain well-paying jobs.

As the results of this study show, income has a positive impact on the likelihood someone will leave public housing. The findings presented here, however, may dampen our optimism regarding the potential impacts of the Jobs-Plus program, as participation in a job-training program was not found to increase the likelihood that someone would exit public housing. This finding is consistent with other studies on programs designed to increase earnings among disadvantaged groups—the impacts, if any, are generally small (Blank 1997).

As is the case with welfare reform, the focus on reducing dependency ignores the fact that for many individuals, full-time work will do little to improve their situation. Many individuals may be unable to afford private market housing, even with heroic work efforts (Finder 1996). Unlike welfare reform, however, where reducing dependency is the paramount goal, reducing dependency in public housing represents only one of several often conflicting goals in efforts to reform public housing. For example, the transformation of public housing from serving only the poorest of the poor to serving a mixed-income clientele implies that public housing will have to be made more attractive to working-class and middle-class families. But transforming public housing into a transitional stop where everyone moves in and out quickly undermines the notion of a stable community and is unlikely to appeal to a more upscale clientele. Encouraging public housing tenants to become more involved in management or other “empowering” activities (Peterman 1996) also appears to undermine efforts to transform the program into primarily a transitional one. After all, why should tenants invest time and energy in managing their developments when they have to move out quickly anyway?

How policy makers plan to resolve these conflicting goals is not immediately apparent as other researchers have noted (Quercia and Galster 1997). Thus, although the findings presented here have clear implications for a number of policies, it is difficult to come down strongly in favor of specific recommendations, given that the goals of some of the policies implicitly contradict the goals of other policies.

Conclusion

The results of this study show that many public housing spells are relatively short. Consequently, any efforts aimed at making short-term public housing spells more prevalent should perhaps be targeted toward those who are likely to become long-term residents of public housing. The evidence presented here suggests that those most needful of policy interventions designed to promote self-

sufficiency are individuals living in economically depressed regions or housing markets with few alternatives for the poor or central cities in the Northeast and Midwest and individuals without post-secondary education. The findings of this study also indicate that changes in admissions preferences are likely to influence the length of public housing spells. Given that the less disadvantaged residents (e.g., those with more education and work experience) exited more quickly, current efforts to attract a more middle-class clientele to public housing should result in more relatively short spells in addition to creating a more economically integrated environment in public housing. The evidence from this study and other studies of welfare and housing assistance dynamics does not support the notion that receipt of public assistance, whether in the form of welfare or public housing, becomes a trap from which it is increasingly difficult to exit as time wears on.

Finally, although a large number of residents were found to move out of public housing relatively quickly, the PSID does not allow us to discern if their housing condition improved. An analysis (not presented here) of the postmove tenure status of those exiting public housing indicated that only about 10 percent of those moving out subsequently moved into homeownership. It is also not clear if people moving out of public housing are moving to locales with more employment opportunities or improved amenities. Without this information, it is difficult to say whether it is a desirable social goal to have individuals move out quickly. Ascertaining the subsequent housing status of people moving out of public housing is a good follow-up to the research presented here.

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