

Recipients of Housing Assistance under Welfare Reform: Trends in Employment and Welfare Participation

Joseph M. Harkness and Sandra J. Newman

Johns Hopkins University

Abstract

Between 1994 and 2001, the employment of low-skilled single mothers increased dramatically and the welfare rolls shrank. Did these gains extend to single mothers who received federal housing assistance? This question is important because these women constitute a large, highly disadvantaged group and because housing assistance may work at cross-purposes to welfare reform by fostering dependency on public support. The prospect of deep cuts in housing programs adds to the timeliness of this research.

We find that employment increased as much for single mothers who received housing assistance as for those who did not. Although welfare participation appears to have declined somewhat less for single mothers getting housing assistance, this may be due to inadequate data. Demographic differences do not appear to matter. Gains from increased employment more than offset welfare losses, for an estimated annual net savings of approximately \$265 million in government outlays for housing subsidies in 2001.

Keywords: Families and children; Housing assistance programs; Welfare

Introduction

Between 1994 and 2001, single mothers achieved significant employment and wage gains, while at the same time their welfare participation declined dramatically (Lerman 2001a, 2001b). Progress was especially striking among the less skilled. Analysts generally agree that both the robust economy and welfare reform drove these changes, although it is difficult to disentangle the effects (Moffitt 2003).

This article explores whether these gains extended to the roughly 1.5 million single mothers living in federally subsidized housing.¹ Many of these

¹ According to the data we use (described later), the number of single mothers with housing assistance declined from close to 1.5 million in 1996 to nearly 1.4 million by 2001.

women have poor work histories, long periods of welfare receipt, and other characteristics that disadvantage them in the labor market. Some are formerly homeless, since many public housing authorities (PHAs) have given priority to homeless families. In 1996, two years after Aid to Families with Dependent Children (AFDC) caseloads had already begun their precipitous decline, we estimate that 54 percent of single mothers who received housing assistance also received cash assistance from AFDC.² Were they equally responsive to the package of carrots and sticks offered by the combination of tight labor markets and welfare reform? How did their work and welfare profiles change over this period? And did these changes in work and welfare participation mirror those of other similar single mothers in the population as a whole?

It is possible that housing assistance may be working at cross-purposes to the major welfare reform goal of moving single mothers into the workforce so that they can rely on their own earnings to support their families. Housing assistance helps defray a household's largest budget item, and by combining the subsidy with food stamps, medical assistance, and small amounts of cash from families, partners, or casual work, single mothers who get housing assistance may be able to leave the welfare system. To the extent that the work-promoting features of this system are effective in improving employment and earnings prospects, as research indicates some programs are (Moffitt 2003), disengaging from it may be detrimental. Moreover, since the supply of housing assistance is limited, slower transitions to self-sufficiency among current recipients of housing assistance result in fewer families being served. The threat of deep cuts in housing programs proposed by the Bush administration makes it all the more important to understand how recipients fared during the late 1990s.

Despite its policy significance, the seemingly straightforward question of how single mothers with housing assistance fared under welfare reform and the robust economy of the late 1990s is difficult to answer. The fact that survey respondents do not accurately answer questions about housing assistance (Shroder and Martin 1996) severely limits the value of the nationally representative data sets that include self-reported housing assistance. In this article, we take a different approach, using U.S. Department of Housing and Urban Development (HUD) administrative data to tell the national story of how work (the primary goal of welfare reform) and welfare participation changed for recipients of housing assistance between 1996 and 2001. We then use data from the nationally representative Current Population Survey (CPS) as a benchmark for comparison (U.S. Bureau of the Census 1997, 2002).

² This is an authors' estimate based on 1996 administrative data from the U.S. Department of Housing and Urban Development. These data are described in greater detail later.

It is important to note at the outset that ideal data for examining the effects of welfare reform on recipients of housing assistance do not exist. We therefore focus on the more modest, descriptive goal of examining whether the work and welfare profiles of these recipients changed over the 1996–2001 period and how these changes compare with what happened to other similar single mothers who did not receive housing assistance. We use the best data available, providing a description of deficiencies that are almost certain to affect the results and then placing bounds on likely errors. Although the data do not lend themselves to strong inferences about causal effects, we briefly consider some of the factors that might underlie the patterns we found.

We begin by speculating about how the outcomes experienced by single mothers who get housing assistance and their counterparts who do not might differ. Next, we review the available evidence on how single mothers with housing assistance have fared in the post-welfare reform environment. A description of the data and methods used in the study is followed by a discussion of the results and then by concluding observations.

Why outcomes might differ

Differences in the outcomes of single mothers who received housing assistance between 1996 and 2001 and those who did not might have arisen either because the two groups had different characteristics that would make them more likely to succeed or fail at moving toward self-sufficiency or because the institutional features of housing programs affected behavior and led to different outcomes.

Characteristics of single mothers with housing assistance

One popular view of the effects of welfare reform and the stronger labor markets between 1996 and 2001 is that women with more marketable skills benefited the most. According to this view, this group should have accounted for the majority of those leaving welfare in the early years since they would have been most likely to find jobs. Because single mothers who get housing assistance are, on average, more disadvantaged than those who do not, the former might have been left behind. But the facts suggest otherwise. In their review of the expected effects of four key provisions of welfare reform (work requirements, sanctions, more generous earnings disregards, and time limits), Moffitt and Stevens (2001) conclude that “while most policies should lead to a departure from the rolls of those who are more job-ready, who have more labor market skills, and who are in general less disadvantaged, several welfare reforms—most notably, sanctions and more generous earnings disregards—

work in the opposite direction” (47). Their analysis of the 1968–99 CPS reveals little evidence of selectivity, in the form of “creaming,” among welfare leavers, at least in terms of educational attainment—their indicator of labor market skills. Bavier (2001), in analyzing the Survey of Income and Program Participation (SIPP), similarly concludes that there is little evidence of an increasing concentration of the harder to serve in the welfare caseload, and Lerman (2001a) reports that the earnings and employment gains of single mothers under welfare reform were inversely related to educational attainment. Thus, more disadvantaged women may have benefited more, not less, from strong labor markets and welfare reform.

Features of housing assistance programs

The most common view of housing programs is that they mute recipients’ responses to welfare reform and the strong economy. However, in theory, housing assistance could either reduce or enhance the incentive to work.³ For example, it could reduce the incentive since programs set the tenant’s contribution to rent at 30 percent of adjusted gross income, thereby imposing a 30 percent tax on earnings. Economic theory also suggests that by providing recipients with decent housing for less out-of-pocket cost, housing assistance may increase the well-being (or “utility”) of recipients, which could also reduce the incentive to work.

The rationing of housing assistance may exacerbate these disincentive effects. Unlike the case with other entitlement programs, a single mother who relinquishes her housing assistance has no assurance that she will be able to get it back, no matter how desperate her situation might become. In the Housing Choice Voucher Program, which helps more households than any other federal housing program, the tenant is no longer eligible for assistance once his or her income reaches a point where the subsidy drops to zero and remains there for six months. Recipients, therefore, may purposely earn less than they could or quit work before the six-month no-subsidy period ends, as Newman (1999) reports based on interviews with housing practitioners.

A very different view suggests that a lack of stable or affordable housing itself constitutes a significant barrier to work (Sard and Lubell 2000). According to this view, housing instability can disrupt work schedules and hinder job search activities, and frequent moves can drain energy and resources. More-

³ Leonesio (1988) provides the microeconomic theory on the incentive effects of in-kind assistance. In a nutshell, whether positive or negative incentive effects dominate depends on whether the assistance functions, in economists’ parlance, as a complement to or substitute for leisure.

over, not having a stable address may limit a job seeker's prospects. Also, poor housing quality can contribute to adverse health conditions, particularly for children, thereby draining parents' resources and interrupting work. Unaffordable rent burdens can absorb funds needed to pay for employment-related expenses such as child care, transportation, and clothing. Housing assistance can remove these barriers and increase the propensity to work by providing stable, decent, and affordable housing.

Results from research on the effects of housing assistance programs on the economic outcomes of its recipients are inconclusive. A total of 11 studies on this topic have used nonexperimental data. Four find negative effects (Fischer 2000; Murray 1980; Schone 1994; Susin 2005), one finds a positive effect (Ong 1998), and six find statistically insignificant effects (Berger and Heintze 2004; Harkness and Newman 2004; Ong 1998; Painter 2001; Reingold 1997; Reingold, Van Ryzin, and Ronda 2001).⁴ The Welfare to Work Voucher Program (Patterson et al. 2004) is an experimental evaluation of the effects of awarding housing vouchers to welfare recipients, with random assignment starting in 2000. Although there were small but statistically significant declines in work and earnings within the first two years, these declines disappear thereafter.

Since research on the topic thus far has failed to confirm either the negative or the positive view of the incentive effects of housing assistance (Shroder 2002), it is impossible to predict how these effects could have produced different outcomes for recipients between 1996 and 2001. We can therefore only speculate. One possibility is that policy changes and the economic environment probably strengthened the role of incentives. Thus, to the extent that housing assistance weakened or strengthened these incentives, recipients may have responded to them more or less strongly than other single mothers.

Another possibility is that some PHAs became more proactive in offering services and incentives to promote work. Since 1984, HUD has sponsored a number of programs and demonstrations aimed at improving the economic self-sufficiency of housing assistance recipients (Bogdon 1999). During the period covered by this study, two additional large-scale demonstrations—Jobs-Plus and Moving to Work—were initiated to test different combinations of services and incentives. Some of these programs attempt to reduce the purported disincentives to work associated with housing assistance by, for example, putting rent increases from increased earnings into an escrow account to use for home purchase or education (the Family Self-Sufficiency program).

⁴ Ong (1998) finds a positive effect of tenant-based housing assistance, but a neutral effect of public housing, so he appears twice.

Others provide funds that can be used for supportive services such as job training, child care, and transportation (the Resident Opportunities and Self-Sufficiency Program). The overall effect of these programs is uncertain for two reasons. First, with the exception of Jobs-Plus, they have not been rigorously evaluated, so the magnitude of their impact, if any, is not known. Second, it is also not known how many PHAs actively implemented such programs, although it appears that most did not. For example, the participation rate for single mothers in the Family Self-Sufficiency program, which was the most widely implemented, was only about 5 percent in 2001.⁵

Housing assistance under welfare reform

The evidence currently available on how single mothers with housing assistance fared under welfare reform comes from three groups of studies. The first consists of two papers that used the 1996 panel of the nationally representative SIPP to examine how the economic outcomes of those who received housing assistance in 1996 compared with those who did not, with outcomes measured in 2000. Berger and Heintze (2004), who restricted their sample to working age, low-income women without disabilities, found no differences in labor force participation or employment once background characteristics and, particularly, history of prior employment were controlled for. However, data on housing assistance in the SIPP are based on self-reports, which have been shown to be unreliable (Shroder and Martin 1996). This would bias results toward finding no effect.

Susin's (2005) analysis, which also used data from the 1996 panel of the SIPP, has the benefit of validated data on housing assistance based on matching SIPP respondents' Social Security numbers with HUD administrative records. Using a sample that was not restricted to single mothers, Susin (2005) found that after four years, both those who were receiving housing assistance in 1996 and matched individuals who were not experienced large gains in employment, earnings, and income, as well as large reductions in welfare use. Earnings gains among recipients lagged somewhat behind comparable nonrecipients, but other individual-level outcomes were statistically the same for the two groups.⁶ Although the difference in earnings is associated with declines in

⁵ This is an authors' tabulation based on HUD administrative data.

⁶ Recipients lagged behind nonrecipients on some family-level outcomes, such as income and poverty status, but this appears to be a function of the fact that unassisted households gained more adults (and presumably earners) than assisted households. Whether this stems from unassisted single women being more likely to acquire partners is not clear. Susin (2005) reports that marriage rates rose more among individuals who were unassisted in 1996, but housing assistance had no effect on the proportion of the sample consisting of single women.

employment among public housing residents, this was not the case for voucher users or those in private assisted housing, thus making the result difficult to interpret for these two groups. Differences in sample composition in Susin's (2005) analysis—primarily the inclusion of childless persons with disabilities—leave the question of changes experienced by single mothers unanswered.

The second group of studies consists of evaluations of four state-level experiments comparing the impact of welfare reform provisions on recipients who were also receiving housing assistance versus those receiving welfare alone (Lee et al. 2003; Verma, Riccio, and Azurdia 2003). These studies generally find that the effects of welfare reform on some indicators of economic self-sufficiency—especially earnings and the amount of cash welfare assistance received—are at least as favorable for recipients as for nonrecipients. The Verma, Riccio, and Azurdia (2003) examination of welfare reform experiments in Connecticut and Minnesota finds that effects are more favorable for recipients than for nonrecipients by a statistically significant margin. Lee et al. (2003) find that the welfare reform experiments in Delaware and Indiana often produced more favorable self-sufficiency gains among recipients than among nonrecipients, although the differences were typically not statistically significant.

Earlier studies of two sites participating in the National Evaluation of Welfare-to-Work Strategies (Atlanta and Columbus, OH) found larger earnings gains among recipients who were public housing residents than among nonrecipients (Riccio and Orenstein 1999). Effects on the earnings of recipients of other types of project-based housing assistance, however, were mixed. In sum, these studies suggest that the effects of welfare reform were probably no worse and may have been better for recipients than for nonrecipients. Nonetheless, although these experiments represent the gold standard in research design and are consistent in finding that recipients of housing assistance were not hurt and may have been helped by welfare reform, the research was conducted in only a few locales and may not be generalizable. These studies also pertain only to welfare recipients, not all single mothers.

Finally, some studies conducted after welfare reform compare the employment and earnings of welfare leavers with and without housing assistance, typically in particular locales (Bania, Coulton, and Leete 2001; Mancuso et al. 2001; Nagle 2001; Van Ryzin, Kaestner, and Main 2001; Verma and Hendra 2001; Zedlewski 2002). While these studies generally find that all leavers fare about the same, the interpretation and generalizability of this finding are not clear. Most critically, these studies do not tell us how many welfare recipients with housing assistance are leavers or whether leavers and stayers are similar. Since leavers who have housing assistance may represent an atypical group, these studies do not tell us much about housing assistance recipients as a whole.

Data

To maintain rents at 30 percent of income, recipients of federal housing assistance are required to undergo an annual income recertification. Data from these interviews conducted in 1996, 1998, and 2001 were compiled and made available to us by HUD, after identifying information was deleted. These data, which contain limited demographic information in addition to sources and amounts of income, are the primary source of information on recipients of housing assistance for this analysis, which focuses on 1996 and 2001.

Although welfare reform provides a major impetus for the analysis, we examine all single mothers who get housing assistance, not just those who receive welfare. Besides affecting those currently receiving cash assistance, welfare reform may also have deterred potential recipients from entering the rolls. Restricting the analysis to welfare recipients alone would miss such effects. Moreover, all single mothers, not just welfare recipients, were affected by the strong economy of the late 1990s.

It was not possible to identify mother-child relationships in the HUD data. As a proxy, we restricted the analysis to single women under age 50 who were heads of households that contained children under 18. It is likely that some of these women were grandmothers.

Although HUD provided separate data files for each of the three types of housing assistance (public, tenant based, and private project based), we pooled these observations because there was a large shift of recipients out of private project-based and public housing and into tenant-based housing assistance over the study period.⁷ Because of these changes, analyzing programs separately could yield misleading estimates.

To set the profile of recipients in a broader context, we used data from the Annual Demographic (March) Supplement of the CPS, a large annual survey of the U.S. population conducted by the Bureau of the Census (1997, 2002). We relied on two CPS comparison groups, one consisting of single mothers who have not completed high school (the primary CPS sample) and the other adding high school graduates (the secondary CPS sample).⁸ Since employment gains and welfare declines between 1996 and 2001 were greater among CPS single mothers who did not complete high school than among those who did,

⁷ Government contracts on a sizable number of properties with project-based assistance expired during the study period, and many owners opted out. Residents were offered tenant-based assistance. Many public housing residents affected by the demolition and reconstruction of public housing under the HOPE VI (Housing Opportunities for People Everywhere) program were also offered tenant-based assistance. Data on the exact numbers affected by these policies are lacking.

⁸ Matching techniques, such as propensity scoring, cannot be used with repeated cross-sections of data.

using the former as the primary comparison group actually raises the bar. The secondary CPS sample provides a better match for the educational attainment of recipients, since evidence suggests that most have completed high school (McGough 1997; Newman and Schnare 1994). The primary CPS sample, however, is much closer to the group receiving assistance in terms of 1996 employment and welfare receipt. Moreover, this sample has been used in other studies of welfare reform (Loprest and Wissoker 2002; Schoeni and Blank 2000) to represent women who are most likely to participate in welfare programs. We were not able to exclude housing assistance recipients from the CPS comparison groups because, as already noted, self-reports are unreliable. Our best-guess estimates are that recipients could represent as much as one-third and one-fourth of the primary and secondary comparison samples, respectively. Our sensitivity analyses indicate that including recipients has no substantive effect on key results.⁹

To gain some insight into the role that demographic characteristics might play in the outcomes of recipients and nonrecipients in 1996 versus 2001, we also estimated multivariate regression models. Since these models were not informative, we focus on the univariate results, reviewing the regression results only briefly.

Inaccurate data on recipients' earnings and employment

Recipients have a strong incentive to underreport income, since they are required to pay 30 percent of their reported income for rent. According to Joseph Riley, director of HUD's Economic and Market Analysis Division (e-mail correspondence on January 15, 2004), PHAs may also conduct the recertification interview poorly and therefore fail to elicit some income information even if the recipient is truthful.¹⁰ Whether the income is underreported by the tenant or not captured by the PHA recertification, the end result is the same: lower earnings in the data than in reality. To partially address this problem, we examine whether any earnings at all were reported, not the amounts. We refer to recipients with reported earnings as "employed" or "working" and to those without earnings as "unemployed" or "not working." However, this dummy variable is still likely to undercount labor force participation. A quality control

⁹ These sensitivity analyses amount to solving for X_N , the parameter of interest for those not receiving housing assistance, in the equation $pX_H + (1-p)X_N = X$ where X is the (known) parameter for the entire comparison group, X_H is the (known) parameter for the assisted population, and p is the assumed proportion of comparison group members receiving assistance.

¹⁰ Reporting is expected to improve significantly under the rental integrity monitoring initiative instituted by HUD in 2003 (PIH Notice 2001-15 Improving Income Integrity in Public and Assisted Housing, May 2, 2001).

study conducted by HUD in 2000 found that 18 percent of housing assistance recipients had earnings but did not report them (Joseph Riley, e-mail correspondence on January 15, 2004).¹¹ By contrast, in an analysis of the quality of CPS income data, Roemer (2002) finds that about 5 percent of respondents had earnings but did not report employment, while another 5 percent reported employment but had no earnings according to the Social Security records used for income verification. Therefore, the errors in the CPS appear to cancel each other out.

Whether undercounted employment is a serious problem depends in part on the change indicator being studied. Even with significant undercounting, the relative (percent) increase in the employment rate will be accurate, provided the undercounting rate remains roughly constant.¹² This is reassuring because the proportional increase in employment is a key indicator of outcomes.¹³ Other indicators of interest are the absolute (percentage point) increase in employment and the relative change in unemployment.¹⁴ These will be underestimated (see the appendix for calculations), but if we can obtain some plausible estimates for the extent of the undercount, we can correct for the data problems.

As explained in the appendix, we examined data from three independent sources to derive plausible estimates of the extent of the undercount. These analyses strongly suggest that at least 30 percent of employed single mothers with housing assistance are counted as having no earnings in the HUD administrative data. Consequently, employment rates obtained from the administrative data should be adjusted upward by 43 percent or more ($100/(1 - 0.3) - 100$).

¹¹ In two-thirds of these cases, annual earnings were less than \$1,000.

¹² Let Y_1 and Y_2 denote the true labor force participation rates in assisted housing in 1996 and 2001, respectively, and let r denote the proportion of labor force participants for whom earnings are reported in the HUD administrative data. Then $(rY_2)/(rY_1) = Y_2/Y_1$, so the percent gain estimated from the data will be accurate.

¹³ Of course, the employment undercounting rate may not be constant, in which case the relative change in employment will also be inaccurately estimated. However, a constant rate is the simplest assumption, and there does not appear to be a credible alternative. The primary concern for this analysis is that the accuracy of HUD administrative data on earnings (and, hence, employment) may have improved between 1996 and 2001. If so, employment gains seen in the administrative data could be at least partially an artifact of this improved accuracy rather than a real change. There is, however, no evidence on the issue.

¹⁴ There is no need to examine the absolute decline in unemployment, since it is the same as the absolute increase in employment. However, the relative change in unemployment is different from the relative change in employment. For example, a 5 percentage point (absolute) increase in the employment rate from 90 to 95 percent is a 5 percentage point (absolute) decrease in unemployment, a 6 percent (relative) increase in employment, and a 50 percent (relative) decrease in unemployment.

Inaccurate welfare receipt data in the CPS

Between 1987, when the CPS first began collecting data on welfare receipt, and 1993, the ratio of cases reporting welfare receipt compared with administrative data from the Department of Health and Human Services remained roughly constant at around 80 percent. But from 1994 onward, the accuracy of CPS welfare receipt data began slipping (Bavier 1998). According to Richard Bavier (personal communication, June 28, 2005), the CPS captured about 70 percent of actual AFDC cases in 1996, but only about 60 percent of Temporary Assistance for Needy Families cases in 2001. Thus, because the proportion of undercounted welfare cases in the CPS increased between 1996 and 2001, the decline in welfare participation over this period will be overestimated.

By contrast, the HUD 2000 quality control study found reports of welfare receipt to be accurate. This suggests that, over the period of this analysis, welfare reporting in the HUD data either improved or was always accurate. In either case, there was no increased underreporting as in the CPS, and a decline in welfare participation observed in the HUD data will either be underestimated (if reporting improved) or accurate.

Demographic characteristics

The first two numerical columns of table 1 show a range of demographic attributes of the cohort of single mothers receiving housing assistance in 1996 and 2001. Overall, the basic demographics of this subgroup of recipients remained quite stable over the five years.

The next four numerical columns provide data for the two CPS samples, and the final three columns show the percent change in each attribute for those who received housing assistance in 1996 and 2001 and those who did not. Single mothers with housing assistance are similar to those in the primary CPS comparison group (no high school degree) in terms of the number of children under 18, the age of the youngest child, and the prevalence of disability (as proxied by the receipt of supplemental security income). About 70 percent of each group consists of a racial or ethnic minority, but the black proportion is larger in assisted housing than in the CPS (about 52 versus 33 percent, respectively, in 1996), while the Hispanic proportion is larger in the CPS than in assisted housing (about 33 versus 11 percent, respectively, in 1996). Compared with the women in this CPS sample, those in assisted housing are more likely to be in their 20s or 30s, less likely to be in their teens or 40s, more likely to live in the South, and less likely to live in the West. Finally, a larger proportion of single mothers in the primary CPS sample compared with single mothers receiving housing assistance are living with another nonelderly adult family

Table 1. Demographic Characteristics of Single Mothers in 1996 and 2001

	HUD, All Programs		CPS, Primary Sample		CPS, Secondary Sample		Percent Change from 1996 to 2001		
	1996	2001	1996	2001	1996	2001	HUD	CPS, Primary Sample	CPS, Secondary Sample
Unweighted N	860,226	967,321	928	1,225	2,440	3,841	12.4	32.0	57.4
Weighted N (in millions)	1.47	1.41	1.78	1.57	4.95	4.59	-4.7	-11.8	-7.4
Ethnicity (percent distribution)									
Euro-American	34.1	29.2	30.0	30.2	45.0	42.5	-14.2	0.8	-5.6
African American	52.2	54.0	33.5	30.5	33.3	32.6	3.5	-9.2	-2.2
Hispanic	11.5	14.8	32.6	36.1	18.6	21.8	28.8	10.7	16.8
Other	2.2	1.9	3.9	3.3	3.0	3.2	-13.6	-15.9	4.7
Age (percent distribution)									
15 to 19	3.4	3.0	8.9	7.6	6.0	3.8	-10.4	-14.5	-36.3
20 to 29	41.2	40.5	31.3	33.1	30.0	31.7	-1.8	5.8	5.8
30 to 39	39.8	37.4	38.8	35.5	41.6	38.3	-6.0	-8.4	-7.8
40 to 49	15.6	19.1	21.1	23.8	22.4	26.1	22.5	12.8	16.5
Number of children (percent distribution)									
One	36.9	36.4	35.8	36.1	42.6	43.1	-1.3	0.9	1.2
Two	34.4	34.0	32.4	30.1	32.8	32.5	-1.4	-7.1	-0.8
More than two	28.7	29.6	31.8	33.8	24.6	24.4	3.4	6.2	-1.1

Table 1. Demographic Characteristics of Single Mothers in 1996 and 2001 *Continued*

	HUD, All Programs		CPS, Primary Sample		CPS, Secondary Sample		Percent Change from 1996 to 2001		
	1996	2001	1996	2001	1996	2001	HUD	CPS, Primary Sample	CPS, Secondary Sample
Age of the youngest child (percent distribution)									
0 to 3	41.4	40.9	39.7	39.5	32.7	34.0	-1.2	-0.4	4.1
4 to 5	16.5	13.9	12.6	12.2	14.4	11.8	-15.5	-3.2	-18.2
6 to 12	31.3	33.8	32.7	32.7	34.4	35.7	7.8	0.0	3.8
13 to 17	10.8	11.4	15.1	15.6	18.6	18.6	5.5	3.7	-0.1
Other adults in the household (percent)									
Elderly	0.2	0.2	2.2	2.3	1.8	2.3	-1.9	4.1	24.7
Nonelderly	11.3	12.2	26.3	27.0	20.0	20.8	7.6	2.6	3.9
Region (percent distribution)									
Northeast	18.3	23.3	21.8	18.4	19.4	18.9	27.1	-15.7	-2.3
Midwest	19.5	18.7	15.7	17.8	21.3	22.2	-4.2	13.0	4.1
South	48.7	45.6	38.3	40.2	40.0	40.0	-6.4	4.9	-0.1
West	11.7	12.3	24.1	23.6	19.3	19.0	5.4	-2.0	-1.9
Disability (percentage receiving SSI/SSDI)	6.6	8.6	9.5	7.8	6.9	6.2	31.3	-17.9	-11.0

Source: HUD researcher-formatted Microdata Files for 1996 and 2001 (administrative data); U.S. Bureau of the Census (1997, 2002). SSI = supplemental security insurance; SSDI = Social Security Disability Insurance.

member (about 26 versus 11 percent, respectively, in 1996). These may be grown children, who are more likely to be found in the CPS sample because it contains a larger proportion of women in their 40s.

Results

Employment

The first two columns of table 2 show substantial change in the employment profile of single mothers in assisted housing between 1996 and 2001: The employed fraction increased 9 percentage points, from 37 to 46 percent.¹⁵ In proportional terms, which are more accurate in the presence of undercounted employment, this represents a 26 percent gain, mirroring the employment gain in the primary CPS comparison group.

In absolute terms, employment growth in assisted housing lagged behind growth in the CPS. For single mothers in the primary CPS comparison group, employment rose 14 percentage points, from 52 to 66 percent, 4 percentage points more than the absolute employment gain among single mothers receiving housing assistance.¹⁶ This apparent lag is not reliable, however, since, as noted earlier, percentage point employment gains in assisted housing are likely to be understated because of the probable undercount. If the employment rates for recipients are inflated by the 43 percent calculated earlier to adjust for this undercounting, the gap disappears.

If the undercount is more than 30 percent, then absolute employment gains for single mothers in assisted housing are even more favorable. For example, if employment is undercounted by 40 percent, this means that employment rates from the HUD data should be inflated by 67 percent ($= 100/(1 - 0.4) - 100$), resulting in real employment rates of 61 and 77 percent in 1996 and 2001, respectively, for an absolute gain of 16 percentage points.

Turning to unemployment, the proportion of recipients who reported no earnings dropped 15 percent between 1996 and 2001, versus 29 percent and

¹⁵ As noted earlier, we did not examine earnings because the data are likely to be very imprecise. However, it is noteworthy that, along with an increase in employment rates between 1996 and 2001, earnings per worker also increased by 10 percent (inflation adjusted) in the HUD data and by 18 percent in the primary CPS comparison group. It might be expected that increased employment would reduce earnings per worker, since new entrants into the labor force could potentially pull down the average by commanding lower wages or working fewer hours than those already employed. Increased earnings per worker indicate, on the contrary, more hours, higher wage rates, or both.

¹⁶ Employment in the secondary CPS comparison group grew 8 percentage points. Even with the undercount, then, the 9 percentage point employment gain among recipients exceeded slightly the 8 percentage point gain in the secondary CPS sample.

Table 2. Income Profile of Single Mothers in 1996 and 2001

	HUD, All Programs		CPS, Primary Sample		CPS, Secondary Sample		Percent Change from 1996 to 2001		
	1996	2001	1996	2001	1996	2001	HUD	CPS, Primary Sample	CPS, Secondary Sample
Own earnings									
With any income (%)	36.5	46.0	52.0	65.7	69.4	77.4	26.2	26.3	11.5
Mean (\$)	4,181	5,792	5,458	8,128	10,959	13,342	38.5	48.9	21.7
Mean excluding cases with no earnings (\$)	11,405	12,595	10,494	12,369	15,799	17,247	10.4	17.9	9.2
Family welfare income									
With any income (%)	53.8	28.9	50.0	21.8	34.3	15.4	-46.3	-56.3	-55.3
Mean (\$)	2,393	1,219	2,394	788	1,519	502	-49.1	-67.1	-67.0
Mean excluding cases with no welfare income (\$)	4,449	4,208	4,789	3,607	4,424	3,269	-5.4	-24.7	-26.1
Total family income									
Mean (\$)	8,684	9,556	13,063	15,942	17,950	20,576	10.0	22.0	14.6
Median (\$)	7,180	8,014	9,360	11,852	13,206	15,672	11.6	26.6	18.7
Mean excluding cases with no income (\$)	8,948	10,272	13,584	17,237	18,470	21,823	14.8	26.9	18.2

Source: HUD researcher-formatted Microdata Files for 1996 and 2001 (administrative data); U.S. Bureau of the Census (1997, 2002).

26 percent in the primary and secondary CPS samples, respectively. Thus, again, taken at face value, reductions in unemployment appear to lag in recipients, but these lags would disappear if employment were adjusted upward to account for 30 percent or more undercounting in the HUD administrative data. The results would be even more favorable if they were adjusted for higher undercount rates.

Welfare receipt

As shown in the last rows of table 2, welfare receipt among single mothers in assisted housing dropped by 46 percent between 1996 and 2001. In 1996, 54 percent of single mothers receiving housing assistance also received welfare; by 2001, welfare participation had dropped to 29 percent. Moreover, average annual welfare benefits dropped from \$4,449 in 1996 to \$4,208 in 2001 (in 2001 dollars), a 5 percent decline.

Here again, the CPS data are useful to establish a frame of reference for these changes in welfare receipt among recipients of housing assistance. Welfare receipt dropped by 56 percent in the primary CPS comparison group, moving from 50 percent in 1996 to 22 percent in 2001. Average welfare payments in 1996 were \$4,789, dropping 26 percent in 2001 to \$3,607 (in 2001 dollars). It is possible that welfare benefits dropped more among unassisted single mothers in the CPS if they were more likely to work while receiving welfare or if they received welfare less continuously throughout the year.¹⁷

Although the welfare participation figures suggest that recipients of housing assistance lagged behind other single mothers in their exit from the rolls, the gap narrows considerably when increased underreporting of welfare in the CPS is accounted for. Adjusting for the 70 and 60 percent welfare reporting rates for 1996 and 2001, respectively, welfare participation declined 49 percent in the primary CPS group (and 48 percent in the secondary group), modestly higher than the 46 percent decline among recipients of housing assistance.

It is possible that the accuracy of welfare reporting in the HUD data may have improved over the study period.¹⁸ If so, the 46 percent drop in welfare receipt among recipients of housing assistance would underestimate the actual decline, and the assisted and unassisted groups would be even more similar.

¹⁷ Proportional declines in welfare participation and payments were equally dramatic in the secondary CPS comparison group.

¹⁸ Since PHAs were encouraged to collaborate with welfare agencies in achieving the goals of welfare reform and were required to discount income losses due to sanctions in calculating tenant rent payments, it is possible that they may have become more proactive in verifying income.

Impacts on total income and tenant rent payments

An important question is whether income gains from increased earnings offset losses from reduced welfare participation. Taken at face value, the HUD administrative data suggest that this was the case for single mothers receiving assistance. Average real annual earnings rose \$1,611, while average annual welfare income dropped \$1,164, for a net gain of \$447. Reported figures for total income also suggest a net gain. Between 1996 and 2001, average reported total real income rose from \$8,684 to \$9,556, a 10 percent increase. Thus, on balance, single mothers with housing assistance appeared to be financially better off in 2001 than they were in 1996. Correcting for undercounted earnings would strengthen this observation.

Since rent payments are based on tenants' income, they should have risen over the period, thereby reducing subsidy outlays. For the sample used in this study, the average annual inflation-adjusted tenant rent contribution rose 12 percent, from \$1,624 in 1996 to \$1,813 in 2001.¹⁹ With approximately 1.4 million single mothers receiving housing assistance in 2001, this \$189 gain per household results in an estimated savings of about \$265 million annually.

Regression results

It is possible that the univariate results may stem from differences in demographic characteristics between assisted and unassisted groups. In particular, the higher proportion of blacks and the lower proportion of households with an additional adult member in assisted housing might be expected to contribute to smaller gains in employment or declines in welfare participation. While a rigorous analysis of this question exceeds the limits of our data, we estimated some very simple exploratory regressions. These analyses (not shown) do not support the theory that demographic differences are driving the disparities between assisted and unassisted groups. Regression-adjusted changes in welfare participation were virtually the same as the unadjusted results. The most intriguing result was found for employment, where CPS blacks and mothers of young children had much lower 1996 employment, but much greater 1996–2001 employment gains, than other CPS mothers. By

¹⁹ In calculating the tenant rent contributions, cases with rents in the highest 0.1 percentile were excluded because 1996 rent data from the voucher program had a number of implausibly high values for tenant rent contributions (e.g., \$20,000 per month). For other programs, eliminating the top 0.1 percent reduced average monthly rents by about a dollar. For the 1996 voucher program, eliminating the top 0.1 percent outliers reduced the mean by \$11.40. Even with the outliers included, the rent contributions of single mothers receiving assistance rose substantially between 1996 and 2001: by \$134 annually per household or over \$187 million in the aggregate.

contrast, there was almost no variation in 1996 employment or 1996–2001 employment change across demographic subgroups of housing assistance recipients. This disparity may mean that, unlike in the population at large, demographic subgroups such as whites and blacks in assisted housing may be equally disadvantaged in the labor market. This is plausible because recipients are likely to be more homogeneous in terms of labor market disadvantage than the general population. By and large, housing programs target the most disadvantaged, and many tenants who remain in assisted housing are very disadvantaged indeed.

Conclusions

Our analysis finds that single mothers who received housing assistance increased their employment between 1996 and 2001 as much as, if not more than, comparable single mothers without such assistance. Welfare receipt among single mothers receiving housing assistance also declined dramatically over this period, nearly as much as among other single mothers.

Interpreting these results is tricky because they are based on cross-sectional data. The key question is whether the changes in work and welfare participation among recipients of housing assistance reflect a behavioral response to economic conditions and policy or whether they are merely an artifact of a compositional change in the characteristics of mothers receiving assistance. Because of tenant turnover, we know that the single mothers who received housing assistance in 2001 were not the same individuals who received such assistance in 1996. However, if we knew that single mothers getting housing assistance in these two years were roughly the same in terms of their background characteristics (age, race, education, work history and ability), we could still infer that changes in their work and welfare participation were due to a behavioral response to economic and policy conditions. As discussed in the appendix, it seems fair to conclude that compositional changes were not significant enough to play a major role.

The results indicate that fears of the worst-case scenario—that is, single mothers with housing assistance dropping off the welfare rolls and not going to work—are unfounded. But there is also little support for the best-case scenario where recipients of housing assistance experience better outcomes than their unassisted counterparts, as some analyses of welfare reform experiments have found (Verma, Riccio, and Azurdia 2003).

Why might the employment results appear to be slightly more favorable than the results for welfare? One possible explanation is that even though recipients of housing assistance were as likely to gain employment as their

unassisted counterparts, they earned less, either because they were more likely to work part-time or less continuously or because their jobs paid less. These examples would be consistent with recipients having less marketable skills or more barriers to full-time, year-round work. Unfortunately, there is no reliable evidence on this point.

A second possible explanation is that managers of assisted housing may have actively encouraged their eligible residents to receive welfare. Managers have an interest in seeing this happen, since a drop in tenant income increases the housing subsidy. Because receiving welfare typically requires periodic, time-consuming trips to the welfare office, such encouragement may make a difference in some recipients' decision to remain on the rolls. Consequently, where a single mother without housing assistance might discontinue welfare even if she remained eligible, a single mother with housing assistance might stay on once she starts working. Harkness and Newman (2003), who found that housing assistance was associated with an increase in food stamp receipt and benefits levels, offers some support for this explanation. Housing managers are probably even more interested in seeing their eligible tenants participate in welfare than in the food stamp program, which as an in-kind benefit does not reduce the housing subsidy.

A final point of interest is that a comparison of employment and welfare changes in the 1996–98 and 1998–2001 periods reveals that most of the gains occurred after 1998. The post-1998 period coincided with more proactive efforts by welfare-to-work agencies to work with PHAs in targeting housing assistance recipients (Demetra Nightingale, Johns Hopkins University Institute for Policy Studies, personal communication, October 3, 2003). Three HUD programs offering work-promoting incentives and services to public housing residents in selected sites (HOPE [Housing Opportunities for People Everywhere] VI, Jobs-Plus, and Moving to Work) may also have played a role. In addition, qualitative research on the Moving-to-Opportunity program suggests that welfare-to-work agencies may have played a role in promoting work among recipients of housing assistance (Popkin, Harris, and Cunningham 2002). Unfortunately, most of the efforts to encourage greater self-sufficiency among these recipients have not been evaluated using rigorous research designs (Newman 1999). The sole exception is Jobs-Plus, which used an experimental design and found that a combination of intensive services and financial incentives had positive effects (Bloom, Riccio, and Verma 2005). Unfortunately, solid evidence on the effectiveness of the less intensive approaches taken by a number of welfare-to-work agencies is lacking. These efforts may have contributed to the post-1998 gains among recipients.

As a consequence of increased employment among single mothers receiving housing assistance, HUD subsidies to this group declined by roughly \$265 million annually, while their cash welfare payments dropped by about \$1.6 billion, for a total reduction of about \$1.9 billion. A complete accounting of effects on government transfers would need to examine whether outlays from other programs, such as the Earned Income Tax Credit and child care subsidies, increased. At a minimum, this article suggests that the late 1990s witnessed a substantial shift in sources of public support for single mothers receiving housing assistance away from housing subsidies and direct cash welfare.

Appendix

Low PHA reporting rates in 1996

The HUD data used in this analysis were assembled in their current computerized form in 1996, the first year of our study. Since spotty reporting by many PHAs that first year could lead to biased estimates, we eliminated the low-reporting metropolitan statistical areas (MSAs) and states listed in table A.1 from the analysis.²⁰ While this procedure alleviates concerns about biased estimates, the sample may no longer be representative of the United States as a whole. To gauge whether this is a concern, we ran parallel analyses using HUD data for the 1998–2001 period. Since reporting rates had greatly improved by 1998, this comparison tested whether results were seriously affected by dropping the same states and MSAs that were excluded from the 1996–2001 analysis. The results were virtually unchanged, leading us to conclude that the data are nationally representative, even with the exclusions.

Effects of undercounted employment on estimates of labor force participation

Let Y_1 and Y_2 denote the true labor force participation rates in assisted housing in 1996 and 2001, respectively, and let r denote the proportion of labor force participants for whom earnings are reported in the HUD administrative data. Then the absolute change in the employment rate estimated from the administrative data is $r(Y_2 - Y_1)$, which underestimates the true change by $100(1 - r)$ percent. However, the relative change in the employment rate estimated from the administrative data, $(rY_2)/(rY_1) = Y_2/Y_1$, is correct.

²⁰ We could not directly identify MSAs with low reporting. Instead, we counted an MSA as a low reporter if it had a major PHA (managing at least 10,000 units) with a reporting rate of less than 50 percent. States with a reporting rate of less than 70 percent were designated as low reporters.

Table A.1. States and MSAs with Low 1996 Reporting Rates

State or MSA	Tenant-Based Assistance	Assisted Private Housing	Public Housing
Alaska		✓	✓
California	✓	✓	✓
Connecticut		✓	✓
Delaware		✓	✓
Florida	✓	✓	✓
Georgia	✓	✓	✓
Idaho		✓	✓
Illinois	✓	✓	✓
Indiana	✓	✓	
Maine		✓	
Maryland	✓	✓	
Massachusetts		✓	
Michigan	✓	✓	
Minnesota		✓	
Montana		✓	✓
Nevada		✓	✓
New Jersey	✓	✓	✓
New Mexico	✓		✓
North Dakota			✓
Pennsylvania			✓
Rhode Island		✓	
South Dakota			✓
Virginia	✓		
Wisconsin		✓	
Boston, MA–NH			✓
Houston, TX	✓		✓
Memphis, TN–AR–MS	✓		
Nassau–Suffolk, NY			✓
New Orleans, LA	✓		
Philadelphia, PA–NJ	✓		
San Diego, CA			✓

The absolute change in labor force nonparticipation is underestimated by the same amount as labor force participation: $(1 - rY_2) - (1 - rY_1) = -r(Y_2 - Y_1)$. For the relative drop in labor force nonparticipation, we want to show that using the administrative data provides an underestimate or that

$$(1 - rY_2)/(1 - rY_1) > (1 - Y_2)/(1 - Y_1) \quad (1)$$

Multiplying both sides of equation (1) by $(1 - Y_1)(1 - rY_1)$ yields

$$1 - Y_1 - rY_2 + rY_1Y_2 > 1 - rY_1 - Y_2 + rY_1Y_2 \quad (2)$$

Upon simplification, equation (2) becomes

$$Y_2 - Y_1 > 0 \quad (3)$$

which is true if labor force participation is rising.

Estimating the employment undercount rate in the HUD administrative data

We used three sources of data to estimate the employment undercount rate in the HUD administrative data. All of them suggest significant undercounting that appears to be especially severe among welfare recipients.

The first source is the 2000 HUD quality control study cited in the text (Joseph Riley, e-mail correspondence on January 15, 2004), which found that 18 percent of housing assistance recipients (about 700,000 households) had earnings that were not reported in the administrative records. Since the analysis sample contains about 58 percent of all reported workers, it is plausible that about 58 percent of the unreported workers, or 406,000, were single mothers, bringing the 2001 employment rate up to about 75 percent and producing an estimated undercount rate of nearly 40 percent.²¹

The two other sources use experimental data to analyze differences in the effects of welfare reform on recipients of housing assistance. These random assignment studies, which pertain to welfare recipients only, were conducted in four states: Delaware and Indiana (Lee et al. 2003), and Connecticut and Minnesota (Verma, Riccio, and Azurdia 2003). These studies can be used in two ways to estimate the extent of the undercounted employment in the HUD administrative data. First, if the states in the evaluation studies are at least roughly representative, then the relative rates reported in the evaluations should be about the same as the relative employment rates of welfare recipients with and without housing assistance at the national level. In fact, they are quite different. The experimental studies report almost no difference in the employment rates of welfare recipients with and without housing assistance at random assignment, which generally took place around 1996, but the 1996 employment rate of welfare recipients in the HUD administrative data is only one-

²¹ This procedure assumes that the 18 percent of housing assistance recipients who were unreported workers in the 2000 quality control study were also unreported in 2001. But even if this overall rate dropped by as much as a third, to 12 percent, the underreporting rate among single mothers with children would still be 30 percent.

third of the employment rate of CPS welfare recipients without a high school diploma and one-fourth of the employment rate of all CPS welfare recipients. This implies that 65 to 75 percent of the employment among welfare recipients in the HUD administrative data is undercounted.

In addition, for Connecticut and Minnesota, we can directly compare the employment rates of welfare recipients with housing assistance in the experimental data and the HUD administrative data, which identify states. Some caution is warranted here, however, because the welfare reform experiments in these states took place in a select group of counties, not the entire state. To the extent that these counties are not representative of the state as a whole, comparison with the HUD administrative data for the entire state will be invalid.

In Connecticut, the experimental data show that 41 percent of welfare recipients with housing assistance were employed at some point during the year before random assignment, and 26 percent were employed at the time of random assignment, which occurred over 1996 and 1997 (Verma, Riccio, and Azurdia 2003). By comparison, according to the 1996 HUD administrative data, only 15 percent of Connecticut welfare recipients had earnings. Similarly, in the Minnesota experimental data, 69 percent of welfare recipients with housing assistance were reported to be employed at some time during the year before random assignment, and 15 percent were employed at the time of random assignment, which occurred between April 1994 and March 1996 (Verma, Riccio, and Azurdia 2003). According to the 1996 HUD administrative data, only 9 percent of Minnesota welfare recipients had earnings. These comparisons imply that employment among welfare recipients in these two states is undercounted by at least 40 percent in the HUD administrative data.

The convergence of multiple methods and multiple sources persuades us that reporting errors account for much, if not all, of the lagging employment gains in recipients of housing assistance relative to their counterparts in the CPS between 1996 and 2001.

Did changes in the characteristics of single mothers with housing assistance affect the results?

An important question is whether any changes that we see in the work and welfare participation of recipients of housing assistance between 1996 and 2001 stem from a behavioral response to welfare reform and economic conditions or merely reflect compositional changes in who received housing assistance.

There are two possibilities: The first is that recipients of housing assistance represented a more disadvantaged segment of the population in 2001 than in

1996. Although this may have occurred if the most employable single mothers left housing assistance more quickly or were less likely to enter the waiting lists, it is not a major concern for our purposes here, since our results would then suggest a very strong and favorable *behavioral* response among members of this group to welfare reform and the strong economy.

Of greater concern is the possibility that recipients of housing assistance became less disadvantaged over the study period. If that happened, then our basic finding that recipients of housing assistance more or less “kept up” with their unassisted counterparts could simply be an artifact of this compositional shift. Such a shift is a real possibility, potentially stemming from changes in admission policies around or after 1996. In particular, the suspension of federal preferences in 1996 and their replacement by the income targeting requirements of the Quality Housing and Work Responsibility Act (QHWRA) of 1998 may have affected tenant composition. Between 1988 and 1995, families that were homeless, living in crowded conditions, or paying more than half of their income for housing were given expedited access to housing assistance, effectively targeting it to the most troubled families. In their place, minimums were set for the percentage of families that were required to have incomes below 30 percent the area median to be admitted: 40 percent for public or project-based Section 8 housing (which constitutes about 60 percent of the private assisted housing stock) and 75 percent for vouchers. Thus, under QHWRA, vouchers remained tightly targeted to the very poor, but other housing assistance programs were opened up to higher-income families.

Unfortunately, there has been no systematic analysis of how these changes affected the tenant mix in assisted housing. Several considerations suggest that the change in tenant composition between 1996 and 2001 stemming from policy changes is likely to be small.²² First, the income targeting and repeal of federal preferences under QHWRA were initially implemented in a Notice of Initial Guidance issued in February 1999, but the final regulations were not issued until March 2000. While some PHAs might have moved aggressively to implement QHWRA on their own, it is unlikely that many did, since changing administrative systems and procedures is costly, and few PHAs were likely to risk getting it wrong. For similar reasons, it is unlikely that PHAs dramatically changed their admissions policies in response to the suspension of federal preference rules in 1996, since it was not known whether preference rules would be permanently eliminated. Data on the 20 largest PHAs indicate that at least half of them continued their adherence to at least some preference rules throughout the period of this study (HUD 2001, 2002, 2003). Thus, under the

²² We thank James Armstrong and Ophelia Basgal for valuable suggestions on this point.

most likely scenario for most PHAs, there were at most two years of new admissions under QHWRA before 2001, probably not long enough to seriously affect tenant composition.

Examination of the available data does not support either scenario. Changes in the demographic characteristics of single mothers with housing assistance and single mothers in the CPS comparison sample were typically modest, and the assisted and comparison samples generally changed in similar ways, as shown earlier in table 1. Where exceptions occurred, they did not systematically indicate that single mothers who received assistance had become any more, or less, disadvantaged than their CPS counterparts. For example, on the one hand, the proportion of racial and ethnic minorities increased a few percentage points in the group receiving assistance, but remained constant in the comparison group, which may suggest that single mothers with housing assistance became more disadvantaged between 1996 and 2001. On the other hand, there was a reduction in the percentage of teenage mothers receiving housing assistance, relative to the CPS, which suggests that recipients were becoming less disadvantaged.

Authors

Joseph M. Harkness is an Associate Research Scientist at the Institute for Policy Studies at Johns Hopkins University. Sandra J. Newman is a Professor of Policy Studies and the Director of the Institute for Policy Studies at Johns Hopkins University.

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