Policy Briefs

The Policy Briefs department summarizes a change or trend in national policy that may have escaped the attention of researchers. The purpose is to stimulate the analysis of policy in the field while the policy is being implemented and thereafter. If you have an idea for future Policy Briefs, please contact david.l.hardiman@hud.gov.

Project-Based Vouchers

Brent D. Mast
David Hardiman
U.S. Department of Housing and Urban Development

The views expressed in this article are those of the authors and do not represent the official positions or policies of the Office of Policy Development and Research, the U.S. Department of Housing and Urban Development, or the U.S. government.

Note From the Editor

David Hardiman

This article by Brent D. Mast presents a highly useful snapshot of project-based vouchers (PBVs), which includes information on both assisted household characteristics and the locations of PBVs. These snapshot data are also presented alongside a comparison with the larger Housing Choice Voucher (HCV) tenant-based program.

Both aspects of the article—the snapshot of PBVs and the comparison—present useful information to consider; however, in this introduction I present some caveats with the comparison aspect of the information provided.

Background and Legislative History

The Quality Housing and Work Responsibility Act of 1998[1] (QHWRA) enacted a major PBV program authority that allowed public housing agencies (PHAs) to attach a portion of their allocated vouchers to specific buildings. This authorization was part of a larger set of streamlining improvements in QHWRA that included consolidating two previously separate Section 8 programs (vouchers and certificates) and delegating additional decisionmaking authority to the local level (PHAs),

[1] Pub. L. 105–276, 112 Stat. 2519, 42 U.S.C. 1437. October 21, 1998.

while reducing U.S. Department of Housing and Urban Development (HUD) micromanagement.[2] This PBV authority was further amended, clarified and improved in the VA-HUD-Independent Agencies Appropriations Act for FY 2001.[3]

The number of PBVs has increased dramatically in only a few years, as PHAs have made increasing use of this flexible authority and as units have been converted from other rental programs. As shown in exhibit 1, PBVs have increased from only about 43,000 in 2010 to more than 140,000 in 2016.

This rapid increase is important to keep in mind while considering the information presented in this article, particularly those portions comparing PBVs to the overall HCV tenant-based program. For instance, in terms of the data on assisted households themselves, the comparisons will not always be parallel in nature. PBV units that are newly issued by a PHA often show a shorter "length of stay" for assisted tenants. Differences in length of stay, therefore, will likely reflect differences in when the units were issued rather than any difference in tenant outcomes or behavior. Alternatively, PBVs used for a special purpose, such as supportive housing for the homeless, or PBVs issued in conjunction with Low-Income Housing Tax Credits as a set-aside for persons with disabilities or the elderly, will reflect the tenant characteristics of those specific populations.

In addition, for PBV units that converted from another HUD rental housing program, the comparisons do not include data tracking existing tenants' experiences (for example, length of stay) while in those previous programs. I will discuss this concept more in the next part of this introductory note.

Exhibit 1

Project-Based Vouchers, MTW and non-MTW, 2010 to 2016

	Year						
	2010	2011	2012	2013	2014	2015	2016
All	43,393	55,759	66,383	77,504	91,478	119,605	140,043
MTW PBV	11,383	16,163	20,917	21,987	25,557	32,033	38,210
Non-MTW PBV	32,010	39,596	45,466	55,517	65,921	87,572	101,833

MTW = Moving to Work. PBV = project-based voucher.
Note: Data are as of December of each year.
Sources: Public and Indian Housing Information Center; Voucher Management System

[2] A previous version of the PBV program authority—project-based certificates (PBCs)—was seldom used, largely due to complex and time-consuming HUD requirements. PBCs were first enacted in the Housing and Urban-Rural Recovery Act of 1983 (Pub. L. 98–181) and later amended in the National Affordable Housing Act of 1990 (Pub. L. 101–625; better known as Cranston-Gonzalez). HUD itself stated in a 1995 attempt at regulatory improvement, "HUD agrees that the HUD oversight is excessive for a five-year subsidy commitment, especially considering the limited HUD field office staff capacity to perform PBC reviews. The final rule significantly decreases HUD review responsibilities for the PBC program, and simplifies program administration" (*Federal Register* 60 (127): 34692).

[3] Pub. L. 106–377, 114 Stat. 1441, 1 U.S.C. 12 note. October 27, 2000.

Additional Considerations for Specific Types of PBVs: Moving to Work and Rental Assistance Demonstration Conversions

Moving to Work Demonstration

A large portion of PBVs are administered by PHAs that are participants in the Moving to Work (MTW) demonstration. MTW provides a range of programmatic flexibilities, including greater opportunities for PHAs to waive regulatory requirements and undertake innovative practices, many of which involve the use of PBVs.

As shown in exhibit 1, of the approximately 119,000 PBVs as of December 2015, approximately 32,000 were in MTW PHAs and 87,600 were in non-MTW PHAs.

The high number of PBVs in MTW PHAs likely reflects the additional programmatic authority and flexibility available to these agencies. For instance, several MTW PHAs have undertaken innovative practices such as using sponsor-based vouchers for providing assistance to homeless persons in permanent supportive housing. Other agencies have converted their public housing units to PBVs while also pursuing partnerships for private management arrangements.

Rental Assistance Demonstration Conversions

Of the approximately 87,600 non-MTW PBVs, about 10,200 are units that were converted from other project-based rental programs. Thus, these units were previously either public housing or Rent Supplement/Rental Assistance Payments (Rent Supp/RAP) units. This has important implications for the findings in the article that relate to locational information (that is, poverty rate and proximity to opportunity assets).

In addition, PBV units that were converted from other programs do not include data for their assisted residents as related to their length of stay in a rental assistance program. The data used in this article consider only assisted households' length of stay in the PBV program itself and do not count any previous time they may have been assisted by the housing program (public housing or Rent Supp/RAP) from which the unit was converted. Nevertheless, the information is included, as it still offers some utility, despite this noted limitation.[4]

Note also that other PBVs may have been converted from other housing programs that did not include a Rental Assistance Demonstration (RAD) transaction. Several MTW PHAs, for example, converted their public housing units to PBVs. Without an additional indepth inventory analysis, it is not known how many additional converted units fall into this category. The caveat that applies to the length of stay data therefore applies to an unknown additional number of PBVs that were converted without a RAD transaction.

[4] A final consideration on the length of stay comparison is that both sides of the program data are based on programwide snapshots (that is, all PBVs compared to all tenant-based HCVs) and not individual cohorts of assisted residents tracked over time. As such, impact on tenant outcomes or behavior is hard to estimate from these data alone. At the time of writing, HUD is undertaking a separate study on this topic.

Note Conclusion

The significant amount of information on PBVs in this article sheds additional light on the growing use of this important program flexibility. As more PHAs take advantage of the authority to use PBVs, including in conjunction with other programs and for specific public policy purposes, this article may help guide informed decisionmaking at the federal, state, and local levels.

The Utilization of Project-Based Vouchers

Brent D. Mast

Introduction

This article explores the use of project-based vouchers (PBVs), primarily using HUD Public and Indian Housing Information Center (PIC) data for December 2015. The analysis is motivated by the conflict between public housing agencies (PHAs)—which would like more discretion to use PBV funding—and advocates that have pressed for restrictions on project-basing, because of concerns about the consequences for fair housing and economic opportunity if project-basing absorbs more of the Housing Choice Voucher appropriations. I address the following questions—

- What are the differences between the types of households that are served by PBVs and those served by tenant-based vouchers (TBVs)?
- Are there differences in the types of PHAs that use PBVs and those that use TBVs? I pay particular attention to the distinction between Moving to Work (MTW) demonstration PHAs and non-MTW PHAs, as the MTW PHAs are less constrained in the use of PBVs.
- Are there differences in household outcomes, such as subsidies, rent burdens, and length of stay, between PBV and TBV households?
- Are there differences in neighborhood indicators, such as poverty rates, environmental quality, and school proficiency, between PBV households and TBV households?

Background

PBVs are a type of voucher for which the subsidy is assigned to a unit, in contrast to TBVs, for which households can use the voucher to rent an affordable unit of their choice.[5] Under the PBV program, a PHA enters into an assistance contract with the owner for specified units for a specified term. Any PHA operating a voucher program can have up to 20 percent of vouchers be PBVs.

According to PIC data for December 2015, 119,613 vouchers were PBVs, representing 5.4 percent of total vouchers. Among the 604 PHAs using PBVs, 7.6 percent of vouchers were PBVs. Of the 40 MTW PHAs, 35 operated PBV programs. Among the 35 MTW agencies with PBV programs, 11.8 percent of vouchers were PBVs. Among the 569 non-MTW agencies with PBVs, 6.7 percent of vouchers were PBVs.

[5] For more information on the PBV program, see portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/programs/hcv/project.

Key Findings

In the next section, I explore differences in tenant and PHA characteristics in the PBV program with those in the TBV program. Some notable differences are—

- Elderly households are much more likely to use PBVs.
- Nonelderly households with disabilities are not more common in the PBV program than the TBV program.
- Households with children and large households are much more prevalent in the TBV program than the PBV program.
- PBV use is much more common among MTW PHAs.
- PBVs are most common in the Northeast and West census regions.
- PBV use is much more prevalent in larger PHAs.

In the third section, I compare household and neighborhood outcomes for PBV households with children to those for a weighted national sample of TBV households with children. Results indicate that—

- Rent burdens are considerably lower for PBV households.
- Length of stay is much shorter, on average, for PBV households, and length of stay is longer for elderly households in both programs.
- Total income and wage income distributions are very similar between PBV and TBV households.
- PBV households tend to live in higher-poverty neighborhoods than TBV households.
- Environmental risks are greater for PBV households.
- PBV households tend to have better job proximity.
- PBV households tend to have lower transportation costs and better transit access.

In the fourth section, I compare length of stay, rent burden, and poverty rates for TBV families with children to those for PBV families with children within the 604 PHAs with PBV programs. I make comparisons with multivariate regression models with PHA controls, so that the comparisons of PBV and TBV households are within-PHA comparisons.

I present my conclusions in the final section.

Comparison of PBV- and TBV-Assisted Tenants

In this section, I explore differences in the types of households and PHAs that the PBV and TBV programs serve. I present summary statistics on PBV and TBV households for numerous tenant and PHA characteristics, including disability status, elderly status, census region, and PHA size. All statistics except those on homelessness are reported for MTW and non-MTW agencies.

Tenant Characteristics

PBVs comprise 5.4 percent of total vouchers; the share is much larger in MTW agencies. Exhibit 2 shows percentage frequencies for program type (PBV or TBV) by MTW status. PBVs are 11.2 percent of vouchers in MTW agencies compared with 4.5 percent in non-MTW agencies. One possible explanation for this difference, which I explore in a following section, is that MTW agencies may have clients that are harder to house with TBVs. Another possible explanation is that some ceilings on PBVs do not apply to MTW agencies, and those agencies prefer PBVs for one or more reasons; for instance, PBVs may be easier to administer than TBVs.

Two groups that may be harder to house, as compared to other voucher households, are elderly households and nonelderly households in which the household head or spouse has a significant disability.

Elderly households comprise 39.3 percent of PBV households compared with 22.0 percent of TBV households. Elderly households' share of total vouchers is slightly higher in MTW agencies (23.8 percent) than in non-MTW agencies (22.8 percent). Exhibit 3 shows percentage frequencies for MTW status by program type and elderly status. The percentage of elderly households that are PBV households is very similar for both MTW and non-MTW PHAs. In non-MTW agencies, 39.3 percent of PBV households are elderly households. In MTW agencies, elderly households are 39.0 percent of PBV households. The shares of TBV households that are elderly are very similar between MTW and non-MTW agencies.

Nonelderly households with disabilities constitute a slightly lower share of vouchers in the PBV program than in the TBV program. Nonelderly households with disabilities comprise 24.9 percent of PBVs compared with 27.7 percent of TBVs. Nonelderly households with disabilities, as a share of total vouchers, are 26.5 percent in MTW agencies compared with 27.7 percent in non-MTW

Exhibit 2

Program Type by MTW Status Frequencies

MTW Status	Program	
	PBV (%)	TBV (%)
MTW	11.2	88.8
Non-MTW	4.5	95.5
Total	5.4	94.6

MTW = Moving to Work. PBV = project-based voucher. TBV = tenant-based voucher.
Source: Public and Indian Housing Information Center, December 2015

Exhibit 3

Elderly Household Frequencies

MTW Status	Program	Elderly (%)	Nonelderly (%)
Non-MTW	PBV	39.3	60.7
Non-MTW	TBV	22.0	78.0
MTW	PBV	39.0	61.0
MTW	TBV	21.9	78.1
Total	PBV	39.3	60.7
Total	TBV	22.0	78.0

MTW = Moving to Work. PBV = project-based voucher. TBV = tenant-based voucher.
Source: Public and Indian Housing Information Center, December 2015

agencies. Exhibit 4 shows percentage frequencies for MTW status by program type and disability status. In non-MTW agencies, nonelderly households with disabilities comprise 25.9 percent of PBV households. In MTW agencies, nonelderly households with disabilities comprise 22.1 percent of PBV households.

Another group that may be relatively harder to house is families with children, yet families with children are more likely to use a TBV. Families with children are 30.4 percent of PBV households and 46.7 percent of TBV households. The share of total vouchers held by families with children is 2 percentage points lower in MTW agencies (44.1 percent) than in non-MTW agencies (46.1 percent). Exhibit 5 shows percentage frequencies for MTW status by program type and presence of children. Households with children are more likely to use a PBV in MTW agencies than in non-MTW agencies. In MTW agencies, households with children hold 32.6 percent of PBVs and 45.5 percent of TBVs. In non-MTW agencies, households with children hold 29.7 percent of PBVs and 46.9 percent of TBVs.

Large households may also be relatively hard to house. Large households, defined as those with at least five household members, comprise 10.6 percent of total vouchers—10.5 percent in non-MTW agencies and 10.9 percent in MTW agencies. Large households are more prevalent in the TBV program; they comprise 6.0 percent of PBVs and 10.8 percent of TBVs. Exhibit 6 shows percentage frequencies for MTW status by program type and large household status. Large households are more likely to use a TBV in both MTW and non-MTW agencies. In MTW agencies, large households hold 6.3 percent of PBVs and 11.5 percent of TBVs. In non-MTW agencies, large households hold 5.9 percent of PBVs and 10.7 percent of TBVs.

Exhibit 4

Nonelderly Households With Disabilities Frequencies

MTW Status	Program	Nonelderly Households With Disabilities (%)	Other Households (%)
Non-MTW	PBV	25.9	74.1
Non-MTW	TBV	27.7	72.3
MTW	PBV	22.1	77.9
MTW	TBV	27.1	72.9
Total	PBV	24.9	75.1
Total	TBV	27.7	72.4

MTW = Moving to Work. PBV = project-based voucher. TBV = tenant-based voucher.
Source: Public and Indian Housing Information Center, December 2015

Exhibit 5

Households With Children Frequencies

MTW Status	Program	Households With Children (%)	Other Households (%)
Non-MTW	PBV	29.7	70.3
Non-MTW	TBV	46.9	53.1
MTW	PBV	32.6	67.4
MTW	TBV	45.5	54.5
Total	PBV	30.4	69.6
Total	TBV	46.7	53.3

MTW = Moving to Work. PBV = project-based voucher. TBV = tenant-based voucher.
Source: Public and Indian Housing Information Center, December 2015

Exhibit 6

Large Household Frequencies

MTW Status	Program	Large Households (%)	Other Households (%)
Non-MTW	PBV	5.9	94.1
Non-MTW	TBV	10.7	89.3
MTW	PBV	6.3	93.7
MTW	TBV	11.5	88.5
Total	PBV	6.0	94.0
Total	TBV	10.8	89.2

MTW = Moving to Work. PBV = project-based voucher. TBV = tenant-based voucher.
Source: Public and Indian Housing Information Center, December 2015

Families that were homeless at admission may also have special circumstances that make them more likely to use a PBV. Unfortunately, homelessness data are not available in PIC for MTW agencies. Recent research has concluded that homeless-at-admission data for non-MTW agencies are not reliable for the period analyzed in this article, due to inconsistent collection and recording of household homeless status during participants' program enrollment and recertification. The information cited in the following section should be considered with the understanding that HUD Office of Policy Development and Research staff members who are most familiar with PIC data are not comfortable with the accuracy of the data in the homelessness element for that period.

In non-MTW agencies, 4.2 percent of all voucher households are coded as homeless at admission in the PIC system for December 2015. The share of PBV households coded as homeless at admission is much higher (10.6 percent) than the share of TBV households (3.9 percent).

Geography

The use of PBVs varies considerably in terms of geography. PBV use is highest in the Northeast and West census regions. In the Northeast region, 6.9 percent of vouchers are PBVs, and 30.1 percent of PBVs are in the Northeast. In the West region, 5.9 percent of vouchers are PBVs, and 25.6 percent of PBVs are used in the West. The geographic distribution of PBVs is driven in part by the location of MTW vouchers, which are concentrated in the west. Exhibit 7 shows percentage frequencies for MTW status by program type and census region (data for Puerto Rico are given separately in the table).

Exhibit 7

Census Region Frequencies

MTW Status	Program	Northeast (%)	Midwest (%)	South (%)	West (%)	Puerto Rico (%)
Non-MTW	PBV	31.4	18.8	25.2	22.4	2.3
Non-MTW	TBV	23.8	19.2	33.9	21.5	1.5
MTW	PBV	26.6	10.6	28.5	34.4	NA
MTW	TBV	17.5	20.4	26.7	35.4	NA
Total	PBV	30.1	16.6	26.1	25.6	1.7
Total	TBV	23.1	19.4	33.1	23.2	1.3

MTW = Moving to Work. NA = not applicable. PBV = project-based voucher. TBV = tenant-based voucher.
Source: Public and Indian Housing Information Center, December 2015

- Non-MTW agencies: 31.4 percent of PBVs are in the Northeast, 18.8 percent are in the Midwest, 25.2 percent are in South, and 22.4 percent are located in the West.
- MTW agencies: 26.6 percent of PBVs are in the Northeast, 10.6 percent are in the Midwest, 28.5 percent are in South, and 34.4 percent are located in the West.

PHA Size

Large PHAs dominate the utilization of PBVs. Almost one-half (46.2 percent) of PBVs are administered by PHAs with more than 10,000 total units (vouchers and public housing) compared with 32.3 percent of TBVs administered by those PHAs. MTW agencies greatly influence this discrepancy; 73.4 percent of MTW vouchers are in agencies with more than 10,000 total units compared with 27.1 percent of vouchers in non-MTW agencies.

Exhibit 8 shows percentage frequencies for MTW status by program type and by PHA size in five categories: 0 to 250, 251 to 550, 551 to 1,250, 1,250 to 10,000, and 10,001 or more units. "Qualified" (that is, small) PHAs are defined as those with no more than 550 units.

- Non-MTW agencies: Only 3.0 percent of PBVs are in qualified PHAs, although 11.2 percent of TBVs are in qualified PHAs. The largest concentration of PBVs and TBVs is in PHAs with 1,251 to 10,000 total units. Slightly more than one-third (35.7 percent) of PBVs are in the largest PHAs compared with 26.7 percent of TBVs.
- MTW agencies: No MTW agencies are qualified PHAs. About one-fourth of PBVs and TBVs are in medium-to-large MTW PHAs. The share of PBVs in the largest PHAs is 74.8 percent, which is similar to the share of TBVs (73.2 percent).

Exhibit 8

PHA Size Frequencies

MTW Status	Program	PHA Size (%)				
		0–250	251–550	551–1,250	1,251–10,000	> 10,000
Non-MTW	PBV	0.6	2.4	8.8	52.5	35.7
Non-MTW	TBV	4.0	7.2	14.5	47.6	26.7
MTW	PBV	NA	NA	2.1	23.1	74.8
MTW	TBV	NA	NA	1.1	25.7	73.2
Total	PBV	0.5	1.8	7.0	44.6	46.2
Total	TBV	3.5	6.4	12.9	44.9	32.3

MTW = Moving to Work. NA = not applicable. PBV = project-based voucher. PHA = public housing agency. TBV = tenant-based voucher.
Source: Public and Indian Housing Information Center, December 2015

Summary

To summarize, little evidence suggests PBVs are used for populations that are harder to house. PBV use is much more common among elderly households than nonelderly households. Nonelderly households with disabilities may also be harder to house, yet they comprise a greater share of TBVs. Families with children and large households may also be harder to house, yet they are much more prevalent in the TBV program than the PBV program.

Households that were homeless at admission may be the population that is hardest to house. Data availability and quality, however, make it difficult to draw conclusions regarding these households. No homelessness data are available for MTW agencies. In non-MTW agencies, households coded as homeless at admission are much more likely than other households to use a PBV.

PBV use is much more common in MTW agencies than in other PHAs. One possible explanation for the wider use of PBVs in MTW agencies is that their tenants are harder to house, yet little evidence supports this hypothesis. Elderly households are more likely to use PBVs, but elderly households' share of total vouchers is very similar for both MTW and non-MTW agencies. In a logistic regression predicting PBVs, the coefficient for MTW agencies was still highly significant when controlling for elderly households, nonelderly households with disabilities, households with children, large households, census region, and PHA size. MTW agencies might have more tenants that were homeless at admission, but no data are available on this topic.

Geographically, PBV use is most common in the Northeast and West census regions, in part due to the large concentration of MTW agencies in the West. PBV use is also much more common among the largest PHAs. Possible explanations are that negotiating PBV contracts and/or administering two voucher programs are too burdensome for smaller PHAs.

National Comparison of Selected Outcomes for Households With Children

Propensity Score Matching

In this section, I compare TBV families with children to PBV families with children on a national scale. To obtain a TBV comparison group more similar to PBV households, I weighted the TBV households by propensity score weights. The propensity scores were estimated by logistic regression. The model included two continuous predictors (household head age and number of children); binary indicators for married household heads, female household heads, elderly households, nonelderly households with a disabled spouse or co-head, and households in MTW PHAs; and categorical variables for census region and PHA size. I would have liked also to include an indicator for households homeless at admission, but this information is missing for MTW households.

Regression estimates are shown in exhibit 9. All predictors—except the indicator for nonelderly households with disabilities—had statistically significant predictive power. As household head age and number of children increased, the estimated probability of having a PBV decreased. Married household heads, elderly households, and MTW households were estimated to be more likely to have a PBV; female household heads were estimated to be less likely to have a PBV.

Households in the Northeast and West were most likely to use a PBV, and PBV use increased with PHA size.

The propensity score weight was computed as $N * p / \sum p$, where N is the number of TBV households with children and p is the estimated probability of being a PBV household. The formula was chosen so that the sum of weights equals N.

Exhibit 10 shows summary statistics for the continuous and binary matching variables by program; exhibits 11 and 12 show frequencies for census region and PHA size, respectively. TBV data are

Exhibit 9

Logistic Regression Estimates

Effect	Odds Ratio Estimate	Lower 95% CI	Upper 95% CI
Household head age	0.950	0.949	0.952
Number of children	0.903	0.895	0.911
Married household head	1.217	1.171	1.265
Female household head	0.576	0.555	0.598
Elderly household	2.751	2.533	2.987
Nonelderly household with disabilities	0.971	0.941	1.002
Moving to Work PHA	2.513	2.448	2.580
Census region: Northeast vs. PR	3.938	3.365	4.607
Census region: Midwest vs. PR	1.803	1.539	2.112
Census region: South vs. PR	1.958	1.674	2.291
Census region: West vs. PR	3.612	3.087	4.226
PHA size: 0–250 vs. > 10,000	0.176	0.152	0.202
PHA size: 251–550 vs. > 10,000	0.326	0.302	0.352
PHA size: 551–1,250 vs. > 10,000	0.618	0.593	0.644
PHA size: 1,251–10,000 vs. > 10,000	0.854	0.833	0.875

CI = confidence interval. PHA = public housing agency. PR = Puerto Rico.
Note: – 2 log likelihood = 312,428.47.
Source: Public and Indian Housing Information Center, December 2015

Exhibit 10

Matching Variable Summary Statistics

Variable	Program	N	25th Percentile	Median	Mean	75th Percentile	Std Dev
Number of children	PBV	36,252	1	2	2.170	3	1.295
	TBV	973,917	1	2	2.236	3	1.322
	TBV (w)	973,913	1	2	2.179	3	1.267
Household head age	PBV	36,251	28	34	35.649	42	10.289
	TBV	973,913	31	37	38.182	44	9.825
	TBV (w)	973,913	29	34	35.818	41	9.177
Married household head	PBV	36,252	0	0	0.114	0	0.318
	TBV	973,917	0	0	0.083	0	0.276
	TBV (w)	973,913	0	0	0.111	0	0.314
Female household head	PBV	36,252	1	1	0.878	1	0.327
	TBV	973,917	1	1	0.922	1	0.268
	TBV (w)	973,913	1	1	0.881	1	0.324
Nonelderly household with disabilities	PBV	36,252	0	0	0.142	0	0.349
	TBV	973,917	0	0	0.164	0	0.370
	TBV (w)	973,913	0	0	0.144	0	0.351
Elderly household	PBV	36,252	0	0	0.022	0	0.148
	TBV	973,917	0	0	0.026	0	0.159
	TBV (w)	973,913	0	0	0.023	0	0.149
Moving to Work PHA	PBV	36,252	0	0	0.288	1	0.453
	TBV	973,917	0	0	0.118	0	0.323
	TBV (w)	973,913	0	0	0.272	1	0.445

PBV = project-based voucher. PHA = public housing agency. Std Dev = standard deviation. TBV = tenant-based voucher.
Note: (w) indicates weighted TBV.
Source: Public and Indian Housing Information Center, December 2015

Exhibit 11

Census Region Matching Statistics

Program	Census Region (%)				
	Northeast	Midwest	South	West	Puerto Rico
PBV	29.9	14.1	26.9	28.6	0.4
TBV	21.0	20.4	37.7	19.3	1.7
TBV: weighted	29.3	14.5	27.6	28.1	0.5

PBV = project-based voucher. TBV = tenant-based voucher.
Source: Public and Indian Housing Information Center, December 2015

Exhibit 12

PHA Size Matching Statistics

Program	PHA Size (%)				
	0–250	251–550	551–1,250	1,251–10,000	> 10,000
PBV	0.5	2.0	8.5	44.6	44.4
TBV	3.3	6.0	12.8	47.3	30.6
TBV: weighted	0.6	2.1	8.7	45.2	43.4

PBV = project-based voucher. PHA = public housing agency. TBV = tenant-based voucher.
Source: Public and Indian Housing Information Center, December 2015

reported unweighted and weighted by propensity score weights. The gauge of the success of the propensity score weighting is how closely the weighted TBV matching variables mirror their PBV counterparts. In general, the distributions of the matching variables for TBV households are much closer to the PBV distributions after propensity score weighting. The mean number of children for PBV households with children is 2.171; the mean number for TBV households is 2.236 unweighted and 2.179 weighted. The mean household head age for PBV households with children is 35.649; the mean number for TBV households is 38.182 unweighted and 35.818 weighted.

The propensity score weighting was also quite successful for the indicator variables.

1. Marital status: The share of PBV married household heads with children is 11.4 percent; the share for TBV households is 8.3 percent unweighted and 11.1 percent weighted.

2. Gender: The share of PBV female household heads with children is 87.8 percent; the share for TBV households is 92.2 percent unweighted and 88.1 percent weighted.

3. Disability: The share of PBV households with children that are nonelderly households with disabilities is 14.2 percent; the share for TBV households is 16.4 percent unweighted and 14.4 percent weighted.

4. Elderly households: The share of PBV households with children that are elderly households is 2.2 percent; the share for TBV households is 2.6 percent unweighted and 2.3 percent weighted.

5. MTW: The share of PBV households with children in MTW PHAs is 28.8 percent; the share for TBV households is 11.8 percent unweighted and 27.2 percent weighted.

Propensity score weighting was also successful for the census region and PHA size variables. For example, 29.9 percent of PBV households with children are located in the Northeast compared with 21.0 percent of TBV households. The weighted share of TBV households in the Northeast is 29.3 percent.

Comparisons for Matched Samples

Exhibit 13 shows summary statistic comparisons for four household-level variables: subsidy, total household income, rent burden, and length of stay. All data are for households with children, with TBV statistics weighted by propensity score weights. Rent burden is defined as the tenants' contribution to gross rent (including utilities) divided by monthly adjusted income. Rent burden is undefined for households with 0 adjusted income.

Subsidies are slightly greater for PBV households with children (median of $787 and mean of $839) as compared with the matched sample of TBV households with children (median of $778 and mean of $830). Note that subsidies are calculated differently for PBV and TBV tenants. In the PBV program, the PHA pays the owner the difference between 30 percent of family income and the gross rent for the unit.[6]

Incomes tend to be slightly higher for the weighted sample of TBV households. Median income is $13,650 for TBV households compared with $12,918 for PBV households, and mean income is 15,718 for TBV households compared with $15,433 for PBV households.

Length of stay is noticeably longer for TBV households (median of 5.9 years and mean of 8.1 years) than for PBV households (median of 1.8 years and mean of 3.8 years). As discussed in the introductory note, this discrepancy may be due to considerations with the data and not due to actual differences in tenant experience or outcomes.

Exhibit 13

Families With Children Household Variable Comparisons

Variable	Program	N	25th Percentile	Median	Mean	75th Percentile	Std Dev
Subsidy	PBV	36,239	556	787	839.320	1,085	427.287
	TBV (w)	973,888	527	778	830.637	1,089	431.179
Total household income	PBV	36,252	6,492	12,918	15,433.295	21,480	12,312.044
	TBV (w)	973,913	7,113	13,650	15,718.443	21,938	11,879.412
Length of stay	PBV	36,252	0.822	1.755	3.825	3.775	11.631
	TBV (w)	973,913	2.208	5.929	8.094	10.238	12.866
Rent burden	PBV	30,081	29.981	30.003	31.210	30.028	10.136
	TBV (w)	906,656	30.000	30.081	36.874	37.760	16.233

PBV = project-based voucher. Std Dev = standard deviation. TBV = tenant-based voucher
Note: (w) indicates weighted TBV.
Source: Public and Indian Housing Information Center, December 2015

[6] http://portal.hud.gov/hudportal/documents/huddoc?id=DOC_9157.pdf.

Length of stay is longer for elderly households in both programs. The mean length of stay for elderly households is 5.0 years in the PBV program and 14.1 years in the TBV program compared with 3.8 and 8.0 years, respectively, for nonelderly households.

TBV households are much more likely to be rent burdened than PBV households. Mean rent burden for TBV households is 36.9 percent compared with 31.2 percent for PBV households.

Exhibit 14 shows rent burden in five categories: 0 to 30 percent, 31 to 39 percent, 40 to 49 percent, 50 percent and above, and missing.

1. Rent burden of 0 to 30 percent: The share of PBV households with burdens in this category is 76.1 percent compared with 49.5 percent of TBV households.
2. Rent burdens between 31 and 39 percent: The share of PBV households with burdens in this category is 2.7 percent compared with 23.5 percent of TBV households.
3. Rent burdens between 40 and 49 percent: The share of PBV households with burdens in this category 1.3 percent compared with 9.4 percent of TBV households.
4. Rent burdens of 50 percent or more: The share of PBV households with burdens in this category is 2.9 percent compared with 10.4 percent of TBV households.
5. Missing rent burden: Rent burden could not be computed for 17.0 percent of PBV households and 7.2 percent of TBV households.

Although total household incomes are similar between the two groups, differences in wage income are also policy relevant. Higher wage income might indicate better economic progress for assisted tenants. For these comparisons, I exclude elderly households and include only households with children. The 25th percentile of wage income is $0 for both TBV and PBV households. Median wage income is $4,864 for PBV households and $5,200 for TBV households. Mean wage income is $10,904 for PBV households and $10,308 for TBV households. The 75th percentile of wage income is $18,590 for PBV households and $17,999 for TBV households.

Comparing wage income for nonelderly households with children in PHAs with PBVs, median wage income is $4,864 (mean is $10,904) for PBV households compared with a median of $5,130 (mean is $10,521) for the matched sample of TBV households.

Exhibit 14

Rent Burden Frequencies

Poverty Rate Category	PBV (%)	TBV: Weighted (%)
0–30%	76.1	49.5
31–39%	2.7	23.5
40–49%	1.3	9.4
50% and above	2.9	10.4
Missing	17.0	7.2

PBV = project-based voucher. TBV = tenant-based voucher.
Source: Public and Indian Housing Information Center, December 2015

To summarize, the most noticeable differences in household variables between the groups are much shorter lengths of stay and much lower rent burdens for PBV households with children than for the matched sample of TBV households. Subsidies are similar for both groups, and differences in both total income and wage income are modest.

Neighborhood Comparisons

To compare neighborhood conditions for TBV and PBV households with children, I analyze 10 variables: (1) Small Area Fair Market Rent (SAFMR), (2) the census tract poverty rate, (3) the percentage of the population that is non-White, (4) an indicator for *racially or ethnically concentrated areas of poverty* (R/ECAPs), (5) a school proficiency index, (6) a jobs proximity index, (7) a labor market engagement index, (8) an environmental health index, (9) a low transportation cost index, and (10) a transit trips index.

Data on R/ECAPs and the six opportunity indices are taken from HUD's Affirmatively Furthering Fair Housing (AFFH) database.[7] In metropolitan areas, R/ECAPs are defined as having at least 50 percent non-White residents and a poverty rate that is at least 40 percent or three times the average tract poverty rate for the metropolitan area. In nonmetropolitan areas, the non-White threshold is 20 percent and the poverty threshold is 40 percent.

The six opportunity indices are measured on a 0-to-100 scale, with greater values indicating higher opportunity. The block-group school proficiency index is based on the percentage of fourth-grade students that is proficient on state math and reading exams.

The jobs proximity index for a given residential block group is based on a ratio of jobs to workers measured across the metropolitan area. Both numerator and denominator are distance weighted, with jobs and workers in block groups farther away receiving less weight.

Computed at the tract level, the labor market engagement index is based on the unemployment rate, the labor force participation rate, and the percent of the population ages 25 and older with at least a bachelor's degree.

The tract-level environmental health index is a linear combination of standardized estimates of air-quality carcinogenic, respiratory, and neurological hazards.

Two indices measure transportation opportunity for a household profile consisting of a single-parent family of three, renting, with an income equal to 50 percent of Area Median Income. The transportation cost index is based on modeled transportation costs as a share of household income. The transit trips index is based on modeled annual household transit trips.

Exhibit 15 shows summary statistics for the neighborhood indicators for PBV and TBV households with children. TBV statistics are weighted by propensity score weights.

SAFMRs are very similar for PBV households with children and TBV households with children. Median SAFMR is $1,090 (mean is $1,182) for PBV households compared with $1,100 median ($1,183 mean) for TBV households.

[7] Sources and other information for the R/ECAP variable and six opportunity indices are available in the AFFH data documentation, www.hudexchange.info/resource/4848/affh-data-documentation/.

Exhibit 15

Neighborhood Variable Summary Statistics

Variable	Program	N	25th Percentile	Median	Mean	75th Percentile	Std Dev
SAFMR	PBV	32,636	880	1,090	1,182.252	1,390	409.371
	TBV (w)	842,085	890	1,100	1,183.297	1,370	423.901
Poverty rate	PBV	36,250	16.841	27.829	28.860	39.354	15.324
	TBV (w)	973,112	14.574	23.588	25.201	34.058	13.583
Non-White %	PBV	36,250	33.333	65.156	61.191	90.313	30.561
	TBV (w)	973,112	35.439	67.764	61.789	90.925	30.837
R/ECAP	PBV	36,250	0	0	0.233	0	0.423
	TBV (w)	973,112	0	0	0.140	0	0.347
School proficiency index	PBV	33,920	12	28	33.496	53	25.598
	TBV (w)	930,578	12	27	32.100	48	24.052
Jobs proximity index	PBV	33,615	26	53	51.618	77	29.316
	TBV (w)	925,615	22	48	47.656	72	29.033
Labor market engagement index	PBV	36,250	9	26	34.834	58	29.482
	TBV (w)	973,112	12	27	33.224	50	25.148
Environmental health index	PBV	36,181	12	25	32.978	53	26.043
	TBV (w)	973,072	13	27	34.066	53	25.568
Low transportation cost index	PBV	36,030	55	79	70.350	91	24.726
	TBV (w)	955,856	47	69	65.158	88	25.364
Transit trips index	PBV	36,030	52	75	68.365	90	25.318
	TBV (w)	955,856	49	71	66.008	89	26.015

PBV = project-based voucher. PHA = public housing agency. R/ECAP = racially or ethnically concentrated area of poverty. SAFMR = Small Area Fair Market Rent. Std Dev = standard deviation. TBV = tenant-based voucher.
Note: (w) indicates weighted TBV.
Sources: Public and Indian Housing Information Center, December 2015; U.S. Department of Housing and Urban Development (HUD), Small Area FMR database 2016; 2009–2013 American Community Survey 5-year estimates; Great Schools 2012; Longitudinal Employer-Household Dynamics 2012; U.S. Environmental Protection Agency, National Air Toxics Assessment 2005; HUD Local Affordability Index database, 2008–2012

Compared to TBV households with children, PBV households with children tend to live in higher-poverty census tracts. The median tract poverty rate for PBV households is 27.8 percent (mean is 28.9 percent) compared with 23.6 percent (25.2-percent mean) for TBV households. Exhibit 16 shows census tract frequencies in five categories of poverty rate: 0 to 9 percent, 10 to 19 percent, 20 to 29 percent, 30 to 39 percent, and 40 percent and above. Of PBV households with children, 10.6 percent reside in tracts with poverty rates under 10 percent compared with 13.3 percent of TBV households with children. The share of PBV households with children living in tracts with poverty rates of at least 40 percent is 23.8 percent compared with 15.1 percent of TBV households with children.

The minority share of tract population is slightly lower for PBV households with children than for TBV households with children. The median percentage of non-White residents in a tract is 65.2 percent (mean is 61.2 percent) for PBV households with children compared with 67.8 percent (61.8-percent mean) for TBV households with children.

As measured by R/ECAPs, PBV households with children tend to live in more distressed neighborhoods than the matched sample of TBV households. The share of PBV households residing in R/ECAPs is 23.3 percent compared with 14.0 percent of TBV households.

The school proficiency index is slightly higher for PBV households with children than for TBV households with children. The median school proficiency index is 28 (mean is 33.5) for PBV households and 27 (32.1 mean) for the matched sample of TBV households.

Exhibit 16

Census Tract Poverty Rate Categories for Families With Children

Poverty Rate Category	PBV (%)	TBV: Weighted (%)
0–9%	10.6	13.3
10–19%	22.0	27.0
20–29%	21.7	25.8
30–39%	21.9	18.9
40% and above	23.8	15.1

PBV = project-based voucher. TBV = tenant-based voucher.
Sources: Public and Indian Housing Information Center, December 2015; 2009–2013 American Community Survey 5-year estimates

The jobs proximity index is notably higher for PBV households with children than for the matched sample of TBV households. The median jobs proximity index is 53 (mean is 51.6) for TBV households compared with 48 (47.7 mean) for TBV households.

Labor market engagement is similar for both groups. The median labor market engagement index is 26 (mean is 34.8) for PBV households with children and 27 (33.2 mean) for TBV households with children.

PBV households with children score lower on the environmental health index as compared with TBV households with children. The median environmental health index is 25 (mean is 33.0) for PBV households with children compared with 27 (34.1 mean) for the matched sample of TBV households with children.

Transportation opportunity is much higher for PBV households with children than for the matched sample of TBV households with children. The median low transportation cost index is 79 (mean is 70.4) for PBV households compared with 69 (65.2 mean) for TBV households. The median transit trips index is 75 (mean is 68.4) for PBV households and 71 (66.0 mean) for TBV households.

Overall, the results of the neighborhood comparisons are quite mixed. Although PBV households with children tend to live in higher-poverty neighborhoods, are more likely to reside in R/ECAPs, and have lower environmental quality, they also tend to have better proximity to jobs and better transportation opportunities. The categories of SAFMR, minority share of tract population, labor market engagement, and school proficiency are similar for both groups.

Within-PHA Comparison of Selected Outcomes for Households With Children

In this section, I compare length of stay, rent burden, and poverty rates for TBV families with children with those for PBV families with children, within the 604 PHAs with PBV programs. The comparisons are made with multivariate regression models with PHA controls, so that the comparisons of PBV and TBV households are within-PHA comparisons. To control for non-PHA-specific factors affecting outcomes, the regression models include two continuous predictors (household head age and number of children) and binary indicators for program type, married household heads, female household heads, elderly households, and nonelderly households with a disabled spouse or co-head.

Length of Stay

I modeled length of stay with a linear regression with PHA fixed effects; estimates are shown in exhibit 17 (PHA fixed effects are not shown). Model estimates indicate that the average length of stay for PBV households with children is 4.6 years shorter than that of TBV households with children, within PHAs with PBV programs, with other things equal.

To compare length-of-stay predictions between PBV and TBV households, I compared model predictions evaluated at the means of all variables except program type. Predicted length of stay is 8.7 years for TBV households and 4.2 years for PBV households.

Predicted length of stay is much longer for elderly households than for other households. For these predictions, I evaluated model predictions at the overall means for the PHA fixed effects and evaluated means according to elderly status for the remaining variables except for program type. In the TBV program, predicted length of stay is 8.6 years for nonelderly households and 12.9 years for elderly households. The corresponding predictions for the PBV program are 4.0 years for nonelderly households and 8.3 years for elderly households.

Exhibit 17

Length of Stay Regression Estimates

Variable	Coefficient	Standard Error	*t*-value	*p*-value
Intercept	– 5.847	0.265	– 22.105	< 0.0001
Project-based voucher	– 4.574	0.059	– 77.536	< 0.0001
Household head age	0.241	0.002	155.048	< 0.0001
Number of children	0.024	0.010	2.520	0.012
Married household head	0.032	0.050	0.649	0.516
Female household head	1.743	0.050	34.636	< 0.0001
Elderly household	– 2.565	0.087	– 29.320	< 0.0001
Nonelderly household with disabilities	– 0.180	0.035	– 5.188	< 0.0001

Notes: The model includes 603 public housing agency fixed effects, which are not reported. N = 714,395, R-*Squared = .261.*
Source: Public and Indian Housing Information Center, December 2015

Rent Burden

I analyzed rent burden with two regression models. First, I modeled continuous rent burden with a linear regression with PHA fixed effects; estimates are shown in exhibit 18 (PHA fixed effects are not shown). Estimates indicate rent burden is 5.1 percent lower for PBV households than for TBV households, within PHAs that have PBV programs, with other things equal.

To estimate rent predictions for PBV and TBV households, I compared model predictions evaluated at the means of all variables except program type. Predicted rent burden is 37.0 percent for TBV households and 32.0 percent for PBV households.

I also modeled the rent burden categories shown in exhibit 14 with a multinomial logistic regression with PHA random intercepts. For brevity, regression estimates are not reported but are available on request. Model predictions evaluated at the means of all variables except program type are shown in exhibit 19.

Exhibit 18

Rent Burden Regression Estimates

Variable	Coefficient	Standard Error	*t*-value	*p*-value
Intercept	36.258	0.398	90.998	< 0.0001
Project-based voucher	– 5.081	0.096	– 52.839	< 0.0001
Household head age	0.015	0.002	6.251	< 0.0001
Number of children	– 0.469	0.015	– 31.233	< 0.0001
Married household head	– 3.033	0.077	– 39.523	< 0.0001
Female household head	0.468	0.078	6.022	< 0.0001
Elderly household	– 3.081	0.133	– 23.161	< 0.0001
Nonelderly household with disabilities	– 2.751	0.053	– 52.210	< 0.0001

Notes: The model includes 603 public housing agency fixed effects, which are not reported. N = 657,755, R-Squared = .076.
Source: Public and Indian Housing Information Center, December 2015

Exhibit 19

Rent Burden Category Predictions

Rent Burden Category	PBV (%)	TBV (%)
0–30%	81.1	52.1
31–39%	2.8	24.1
40–49%	1.3	9.2
50% and above	2.5	9.5
Missing	12.3	5.1

PBV = project-based voucher. TBV = tenant-based voucher.
Source: Public and Indian Housing Information Center, December 2015

1. Rent burdens of 0 to 30 percent: The predicted share of PBV households with burdens in this category is 81.1 percent compared with 52.1 percent of TBV households.
2. Rent burdens between 31 and 39 percent: The predicted share of PBV households with burdens in this category is 2.8 percent compared with 24.1 percent of TBV households.
3. Rent burdens between 40 and 49 percent: The predicted share of PBV households with burdens in this category 1.3 percent compared with 9.2 percent of TBV households.
4. Rent burdens of 50 percent or more: The predicted share of PBV households with burdens in this category is 2.5 percent compared with 9.5 percent of TBV households.
5. Missing rent burden: Rent burden could not be computed for 12.3 percent of PBV households and 5.1 percent of TBV households.

Poverty Rates

I modeled continuous census tract poverty rates with a linear regression with PHA fixed effects; estimates are shown in exhibit 20 (PHA fixed effects are not shown). Estimates indicate poverty rates are 4.4 percent greater for PBV households than for similar TBV households within the same PHAs.

To estimate tract poverty rates for PBV and TBV households within the same PHAs, I compared model predictions evaluated at the means of all variables except program type. Mean predicted poverty rates are 25.4 percent for TBV households and 29.8 percent for PBV households.

Exhibit 20

Poverty Rate Regression Estimates

Variable	Coefficient	Standard Error	*t*-value	*p*-value
Intercept	14.382	0.310	46.452	< 0.0001
Project-based voucher	4.400	0.069	63.603	< 0.0001
Household head age	– 0.027	0.002	– 14.544	< 0.0001
Number of children	0.243	0.011	21.540	< 0.0001
Married household head	– 0.203	0.059	– 3.458	0.0005
Female household head	– 1.413	0.059	– 23.905	< 0.0001
Elderly household	1.436	0.103	13.990	< 0.0001
Nonelderly household with disabilities	0.219	0.041	5.388	< 0.0001

Notes: The model includes 603 public housing agency fixed effects, which are not reported. N = 708,297, R-*Squared = .254.*
Sources: Public and Indian Housing Information Center, December 2015; 2009–2013 American Community Survey 5-year estimates

I modeled the poverty categories shown in exhibit 14 with a multinomial logistic regression with PHA-random intercepts. For brevity, regression estimates are not reported but are available upon request. Model predictions evaluated at the means of all variables except program type are shown in exhibit 21.

1. Poverty rates of 0 to 9 percent: The predicted share of PBV households with poverty rates in this category is 7.7 percent compared with 11.6 percent of TBV households.
2. Poverty rates of 10 to 19 percent: The predicted share of PBV households with poverty rates in this category is 24.1 percent compared with 32.2 percent of TBV households.
3. Poverty rates of 20 to 29 percent: The predicted share of PBV households with poverty rates in this category is 27.6 percent compared with 30.9 percent of TBV households.
4. Poverty rates of 30 to 39 percent: The predicted share of PBV households with poverty rates in this category is 24.3 percent compared with 17.6 percent of TBV households.
5. Poverty rates of 40 percent and above: The predicted share of PBV households with poverty rates in this category is 16.3 percent compared with 7.8 percent of TBV households.

Exhibit 21

Poverty Category Predictions

Rent Burden Category	PBV (%)	TBV (%)
0–9%	7.7	11.6
10–19%	24.1	32.2
20–29%	27.6	30.9
30–39%	24.3	17.6
40% and above	16.3	7.8

PBV = project-based voucher. TBV = tenant-based voucher.
Sources: Public and Indian Housing Information Center, December 2015; 2009–2013 American Community Survey 5-year estimates

Summary

Within-PHA comparisons are consistent with the national comparisons from the previous section. PBV households have much shorter lengths of stay than TBV households within the same PHAs, and elderly households have considerably longer stays in both programs as compared with nonelderly households within the same PHAs. PBV households are much less likely to be rent burdened than similar TBV households within the same PHAs. PBV households are more likely to live in high-poverty neighborhoods than are similar TBV households within the same PHAs.

Conclusions

To summarize, key findings include—

1. PBV use is much more common among MTW PHAs. One possible explanation for greater use of PBVs in MTW agencies is that their populations are harder to house. Analyzing data for a variety of household types that may be harder to house, however, I find little support for this hypothesis.

2. PBV use is much more common in large PHAs. Possible explanations are that negotiating PBV contracts and/or administering two voucher programs are too burdensome for smaller PHAs.

3. Elderly households are much more likely to use a PBV relative to other households. Elderly households, as a share of total vouchers, are very similar in MTW and non-MTW agencies, so this is not an explanation of greater PBV use by MTW agencies.

4. Geographically, PBVs are most prevalent in the Northeast and West census regions. This finding could be in part due to the concentration of MTW agencies in the West and to local housing market factors (for example, tighter rental supply) in the Northeast.

5. Rent burdens are lower for PBV tenants than for TBV tenants. Subsidies are similar for tenants in both programs.

6. Length of stay tends to be much shorter for PBV households with children than for similar TBV households with children. As discussed in the introductory note, this finding may be due to considerations with the data and not due to actual differences in tenant experience or outcomes.

7. Comparing neighborhood outcomes for PBV and TBV households with children, results are quite mixed. PBV tenants tend to live in higher-poverty neighborhoods, are much more likely to reside in R/ECAPs, and have greater environmental risks. PBV households, however, also tend to live closer to employment opportunities, have lower transportation costs, and have better transit access. As discussed in the introductory note, a large number of PBVs are units that were converted from older project-based programs (that is, public housing and Rent Supplement/Rental Assistance Payments) and thus will reflect the earlier locational development decisions of those programs.

8. Results of within-PHA comparisons are very similar to national comparisons. Within the same PHAs, PBV households have shorter lengths of stay, lower rent burdens, and higher census tract poverty rates than TBV households.

Acknowledgments

The authors thank Kathy O'Regan and Mark Shroder for helpful comments.

Authors

Brent D. Mast is a social science analyst in the U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

David Hardiman is a program analyst at the U.S. Department of Housing and Urban Development, Office of Policy Development and Research.