

A Research Note: The Housing Choice Voucher Program and Access to Opportunity in Florida's Nonmetropolitan Areas

Rebecca J. Walter

Ruoni Wang

The University of Texas at San Antonio

Abstract

Previous research on the Housing Choice Voucher program has found that recipients tend to be clustered in high-poverty, minority concentrated areas. Although these findings are consistent across study areas, much of the research has been conducted in large metropolitan areas. This study accounts for all locations across the state of Florida, including small metropolitan, micropolitan, and rural areas, to examine if place matters for voucher holders' ability to access high-opportunity neighborhoods. The findings reveal that voucher households in nonmetropolitan areas have lower incomes and tend to be younger with higher percentages of single mothers and families with children; however, nonmetropolitan voucher households are also less concentrated and access higher-opportunity neighborhoods. These differences in nonmetropolitan areas warrant the consideration of place for both future research and policy.

Introduction

The Housing Choice Voucher (HCV) program provides housing assistance to more than 2 million low-income households and is the largest tenant-based rental housing subsidy in the nation. A national objective of the HCV program is to provide voucher holders with the ability to move to the location of their choice. A body of research has emerged that focuses on the importance of providing low-income households access to opportunity-rich neighborhoods that include, for example, quality schools, access to employment, and healthy environmental conditions that facilitate self-sufficiency. Recent research documents that younger children who moved to higher-opportunity neighborhoods were more likely to attend college and experience greater earnings as adults

(Chetty, Hendren, and Katz, 2015). Nevertheless, previous nationwide studies have questioned the HCV program's ability to deconcentrate poverty (Devine et al., 2003; McClure, Schwartz, and Taghavi, 2015) and provide low-income households the ability to move to neighborhoods with higher opportunity after receiving a voucher (Walter, Li, and Atherwood, 2015).

A large body of research has found that voucher holders tend to be clustered in high-poverty, minority concentrated neighborhoods (Newman and Schnare, 1997; Pendall, 2000) and have limited access to high-opportunity neighborhoods. However, much of this research has examined large metropolitan statistical areas (MSAs). Little is known about locational patterns of voucher recipients who reside in small metropolitan, micropolitan, and rural areas.¹ This gap in the research raises an interesting question about the performance of the HCV program outside of large MSAs and if voucher recipients in nonmetropolitan areas access neighborhoods with higher opportunity than urban households. Furthermore, very little research focuses on small cities and regions that are not connected to the global network, and generalizing theories for large MSAs can lead to biased approaches for understanding localized areas (Bell and Jayne, 2009).

This study extends the query by examining voucher locational patterns in the state of Florida at a more granular scale, offering the opportunity to capture location heterogeneity across varying housing markets. This study utilizes administrative data from the U.S. Department of Housing and Urban Development (HUD) documenting location and sociodemographic information of individual voucher households residing in Florida in 2013. The data set is coupled with the opportunity indices provided in HUD's Affirmatively Furthering Fair Housing (AFFH) tool to address the following research questions: (1) What share of HCV households reside in smaller MSAs, micropolitan areas, and rural areas, and do household characteristics vary by location? (2) Does voucher dispersion or clustering in affordable rental neighborhoods vary by place? (3) Are voucher holders in MSAs accessing higher-opportunity neighborhoods than nonmetropolitan households?

Four large MSAs (population of more than 1 million) are in Florida: Jacksonville, FL; Orlando-Kissimmee-Sanford, FL (Orlando); Miami-Fort Lauderdale-West Palm Beach, FL (Miami); and Tampa-St. Petersburg-Clearwater, FL (Tampa) (based on the MSA definitions in OMB Bulletin 15-01, dated July 15, 2015). This study uses these MSAs for comparison purposes, but they are not the focus of the study. The remaining areas in the state of Florida are assigned to one of three categories: (1) small MSAs, (2) micropolitan areas, and (3) rural areas (counties that are not in a metropolitan or micropolitan area). Micropolitan and rural areas are also referred to as nonmetropolitan areas in this study. Taking Thrift's (2000) approach to the city that one size does not fit all, this study intends to advance rental housing policy for very low-income households by accounting for place. Understanding the dynamics of voucher household characteristics and locational outcomes in nonmetropolitan areas can help direct policy interventions to particular voucher subgroups in regions that have been given less attention.

¹ The Office of Management and Budget defines metropolitan and micropolitan statistical areas by grouping counties, including relatively high-density counties in urban areas, plus adjacent counties that have strong social and economic ties with the urban area. MSAs contain an urban area with a population of 50,000 or more, and the population within the urban area of a micropolitan statistical area is between 10,000 and 50,000 on average.

Literature Review

The body of literature on the HCV program is heavily focused on urban areas, leading to calls for more research on voucher holders who reside in different types of urban or nonurban settings (Carlson et al., 2012b). Only one study has focused on rural areas exclusively (Pistilli, 2001). The few studies that have accounted for voucher holders in nonmetropolitan areas found differences in household composition and neighborhood quality (Carlson et al., 2012b; Ross, Shlay, and Picon, 2012), suggesting the importance of location in analyzing the HCV program. No study, however, has examined the ability for voucher holders to access opportunity by location, comparing large MSAs, small MSAs, micropolitan areas, and rural areas.

The following information describes the differences in location that have been gathered from national studies. First, the share of voucher holders in nonmetropolitan census tracts in 2010 made up only 13.3 percent of all vouchers, with the majority residing in central city tracts (52.2 percent) and the remaining residing in suburban tracts (34.4 percent). Voucher holder presence in nonmetropolitan areas declined from 21.0 percent in the mid-1990s to 19.2 percent in 1997 and 13.3 percent by 2010 (McClure and Johnson, 2015; Newman and Schnare, 1997). Second, substantially more rent-burdened HCV households (families who spend more than 31 percent of income on rent) reside in nonmetropolitan areas (47.4 percent) than in metropolitan areas (36.0 percent; McClure, 2005). Third, although HCV households move from a nonmetropolitan area to a metropolitan area more often than in the other direction, from 1998 to 2005, portability from metropolitan areas to nonmetropolitan areas accounted for 5.5 percent of all portability moves (Climaco et al., 2008). Fourth, nonmetropolitan areas have the fewest high-opportunity neighborhoods by both census tract and block group as compared with central cities and suburban cities. Nonmetropolitan areas also have the fewest neighborhoods with low poverty and minimum assisted housing as compared with central cities and suburban cities (McClure, 2011). HCV households residing in rural and suburban areas were less satisfied with their housing unit than those residing in central cities but were more satisfied with their neighborhoods (Ross, Shlay, and Picon, 2012).

State HCV studies are less common, and only two state studies distinguish between rural and urban regions (Carlson et al., 2012a, 2012b). Carlson and colleagues found the number of households that applied and did not receive a rent subsidy in Wisconsin was lower in rural areas. Also, nearly one-third of urban-residing applicants did not receive assistance (excluding Milwaukee) compared with only slightly more than one-fifth of applicants in rural areas (Carlson et al., 2012a). Household composition and neighborhood quality for voucher holders were different in rural areas than in large urban areas in Wisconsin. One year after voucher receipt, households in rural areas moved to neighborhoods of lower quality, whereas households in urban areas moved to neighborhoods with higher quality (Carlson et al., 2012b).

The only study the authors found that focused on rural areas was conducted nearly 15 years ago and commissioned by HUD. The five areas include: Troy, Alabama; Creston, Iowa; Great Falls, Montana; Blossburg, Pennsylvania; and Del Rio, Texas. That study largely focused on voucher success rates and found that HCV waiting lists tended to be shorter than the average wait time for the voucher program and had fewer applicants (Pistilli, 2001). Turnover was high in the program, creating issues of program utilization for housing authorities. Success rates varied from 96 percent in Del Rio to

35 percent in Creston. Most rental units passed the initial inspection or required minor repairs, deflating the perception that rural areas contain a large stock of substandard units. Housing availability was a concern with fewer rental units than the national average. The degree of rurality did not appear to affect lease-up rates for voucher holders, but proximity to colleges and universities created competition for voucher holders to find affordable rental units. Manufactured housing in rural areas increased the number of affordable housing options for voucher holders. Discrimination based on family size and race may have lowered lease-up rates in rural areas (Pistilli, 2001).

Past research indicates that the HCV program shares similarities in nonmetropolitan areas and urban areas, albeit with stark differences. The limited information comparing neighborhood conditions between urban and rural regions reveals some indication that the socioeconomics of neighborhoods in which voucher holders reside are similar (high poverty, cheaper housing, and low levels of educational attainment). Factors such as discrimination based on family size and race appear to reduce lease-up rates for both urban and rural households. Significant differences are seen in neighborhood and housing unit satisfaction, the extent of the rent burden, the demand for vouchers, and mobility. These differences warrant research that accounts for place to help guide policymaking. This study expands on the previous literature on the HCV program by examining voucher household characteristics, degrees of clustering, and the ability for voucher holders to access opportunity by location, comparing large MSAs, small MSAs, micropolitan, and rural areas.

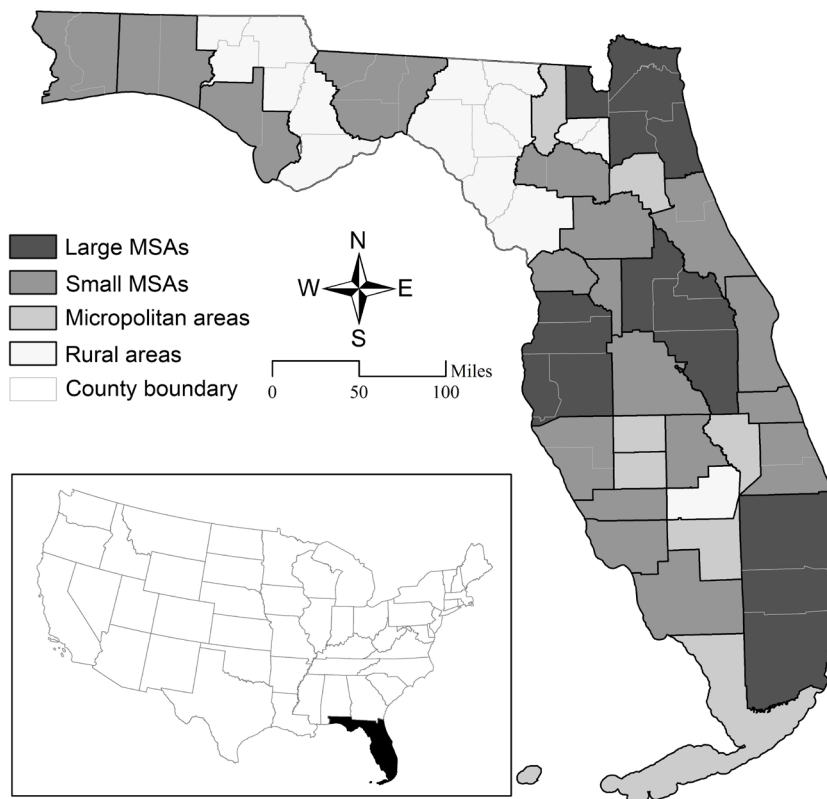
Data and Methodology

The authors obtained calendar year 2013 HCV administrative data for the entire state of Florida from HUD. The variables include individual tenant characteristics (age, gender, race or ethnicity, income sources and amounts, disability status, and relation of each household member to the head of household); household characteristics (whether any member was formerly homeless, household income, and total tenant payment); and unit and location information (number of bedrooms, home address, geocoded latitude and longitude, gross rent, and utility allowance). Gross rent includes contract rent and a utility allowance estimate. Total tenant payment equals gross rent minus the voucher amount. Only tenant-based vouchers were used. The moderate rehabilitation category was excluded, because it provides project-based rental assistance. This procedure resulted in a study population of 105,466 voucher households that were geocoded in ArcGIS based on the geocoordinates provided by HUD.

To determine the share of Florida HCV households that reside in places outside large MSAs, the state's counties were classified into the following categories: large MSA, small MSA, micropolitan area, and rural area. A county population of at least 1 million distinguished a large MSA from a small MSA. The definitions used by the Office of Management and Budget were applied to classify micropolitan counties. Out of 67 counties in Florida, 44 fall within a MSA. Four MSAs, including Jacksonville, Miami, Orlando, and Tampa, meet the definition for a large MSA and cover 16 counties. The remaining 18 small MSAs cover 28 counties and have populations of approximately between 100,000 and 1 million. The 7 micropolitan areas in Florida have populations of approximately 10,000 to 100,000 and encompass 7 counties. The remaining 16 counties that did not fall within a metropolitan or micropolitan area were categorized as rural. All but 1 of the rural counties are in northern Florida (exhibit 1).

Exhibit 1

Study Area by Location



MSA = metropolitan statistical area.

To understand the heterogeneity of voucher households by location, descriptive statistics from the 2013 HUD data on household characteristics were examined. Specifically, voucher distribution was analyzed by household racial or ethnic composition; household type (including age, disability status, whether children are present, and household size); economic status including income level and income source; and unit size (number of bedrooms). Although the focus of this article is on voucher holders outside of large MSAs, data on voucher holders in the four large MSAs, as well as statewide information, are provided for comparison.

To determine if HCV recipients are more dispersed in affordable rental neighborhoods by location, the proportion of HCV households to total fair market rental units was calculated at the census block group level. The total fair market rental units were estimated using the total rental units derived from 2009–2013 American Community Survey 5-year estimates and 2013 Fair Market Rents (FMRs) published by HUD. Specifically, the total rental units were generated by adding occupied units with cash rent, occupied units without cash rent, vacant for-rent units, and rented-not-occupied housing units. The calculation was based on two-bedroom FMRs, because HUD typically uses the two-bedroom FMRs to derive the other bedroom sizes (HUD, 2007).

To calculate the number of fair market rental units, the first step was to calculate the number of occupied units with cash rent of less than the two-bedroom FMR. For example, if the FMR was \$780, all units in the rent categories from \$1 to \$749 were included, plus 60 percent of the units falling under the \$750–\$799 category. Next, a multiplier was generated by dividing the number of occupied units with cash rent of less than the FMR (results from step one) by the total number of occupied units with cash rent. The last step was to apply this multiplier to the number of total rental units. Census block groups with no vouchers and no fair market rental units were removed. Because the count of fair market rental units was an estimate, some census block groups had zero fair market rental units and at least one HCV household. In this case, the ratio of the number of HCV households to the number of fair market rental units was assigned the value 1.

Taking a similar approach as Wang and Varady (2005), hot spot analysis was conducted at the state level using the HCV household and fair market rental unit ratio to determine statistically significant hot spots (areas that have high concentrations of HCV households) and cold spots (areas that have a low number of HCV households relative to under-FMR units). The parameters for the hot spot analysis included a fixed distance band with a band size of 15,000 meters to conceptualize the spatial relationship.² The results of the hot spot analysis were overlaid on a map of Florida's 67 counties to determine if HCV households are concentrated in areas that have affordable rental units or if location reveals differences.

Neighborhoods of opportunity are defined and measured by using the opportunity indices provided in HUD's AFFH tool and include the School Proficiency Index, Jobs Proximity Index (provided at the census block group level), Low Poverty Index, Labor Market Engagement Index, Low Transportation Cost Index, Transit Trips Index, and Environmental Health Index (census tract level). The values in the indices range from 0 to 100, and higher scores indicate more opportunity.³ For each index, the median and 25th and 75th percentile scores were calculated by location (large MSA, small MSA, micropolitan, and rural) based on where voucher holders reside using the 2013 geocoded data set. This process allows for each index to be assessed by location to determine if voucher holders in MSAs access higher-opportunity neighborhoods than their counterparts in nonmetropolitan areas.

The median and 25th and 75th percentile scores were also calculated for each county, and the opportunity indices were converted to z-scores. This approach was used to standardize the data to produce an overall average opportunity score for each county in which the seven opportunity indices were weighted equally. The same process was repeated for each county but only accounting for the census tracts and block groups where voucher holders reside using the 2013 geocoded data set as done previously. The index scores for each county were then compared with the index scores for where voucher holders reside in that county. The purpose of this analysis was to further understand how voucher holders perform relative to the overall opportunity index score for each county to determine where voucher holders access the highest or lowest opportunity and to provide additional insight on variation across location.

² The fixed distance method was selected because it is a robust method for the large variation in size of census block groups, which is important for this study as it covers all census block groups in the state. The band size was selected with multiple trials to ensure that it reflects maximum spatial autocorrelation.

³ Variables, data sources, formulas, and a complete description of the opportunity indices are in HUD's AFFH Data Documentation (HUD, 2016).

Results

This section first presents results on HCV household characteristics by location, then demonstrates how voucher clustering in affordable rental neighborhoods varies by place, and lastly discusses the findings comparing voucher holder access to opportunity neighborhoods in MSAs and nonmetropolitan areas.

Housing Choice Voucher Household Characteristics by Location

Approximately 98 percent of Florida HCV households live in large and small MSAs, and nearly three-fourths of those live in large MSAs specifically. Only 0.9 percent of HCV households live in micropolitan counties and 1.1 percent reside in rural counties, accounting for slightly more than 2,000 HCV households in 2013. The proportion of voucher households to households that earn 50 percent of the Area Median Income (AMI) is higher in large MSAs (7.0 percent) and small MSAs (5.0 percent) compared with 2.9 percent in micropolitan areas and 3.9 percent in rural areas. This finding is consistent with Arnold's (1990) argument that fewer households receive subsidy in nonmetropolitan areas.

Statewide, more than one-half of HCV households are Black, approximately 25 percent are Hispanic, and about 15 percent are White. Heterogeneity is prominent by location in household racial or ethnic composition, even though Black households are the primary racial group that use vouchers in Florida across the four different locations. Large MSAs have only about 10 percent of White HCV households, and this proportion substantially grows as the location becomes more rural. Nearly one-half, 43.5 percent, of all HCV households in rural areas are White. The difference between the proportions of Hispanic households in large MSAs compared with rural areas is also substantial (30.8 versus 2.0 percent, respectively). Black households make up more than one-half of the HCV population in all areas except micropolitan areas, where the proportion drops to 42.4 percent. The large proportion of White residents and few Hispanic residents in rural areas reflect the demographics in northern Florida.

Household type by age is fairly consistent across all locations. Large MSAs and micropolitan areas are similar in terms of age distribution. Rural areas, closely followed by small MSAs, have the most household heads or spouses who are young adults (34 years of age or younger). Large MSAs and micropolitan areas have the largest share of household heads, spouses, or both who are 62 years of age or older. Approximately one-half of all heads of household or spouses (whomever is older), regardless of location, are between the ages of 25 and 61. Nearly one-half of voucher households in MSAs have at least one disabled member, most with disabled members as the primary member in the household. This number drops slightly to approximately 39 percent in micropolitan and rural areas. The variation by location is very small when looking at only disability of the primary member in the household.

Nearly one-half of voucher households have children, and a large portion of these households consist of single mothers with children. Rural areas and small MSAs have relatively high proportions of families with children (58.0 and 53.5 percent, respectively). Both areas also have many single mothers with children, with one-half of all households in rural areas representing this dynamic. Statewide, the

primary household size for voucher holders is one member, which represents more than one-third of the population, followed by four or more members at 26 percent. Micropolitan areas have higher proportions of one- and two-member households compared with all other areas. The largest household sizes (four or more members) are most often in MSAs. The primary bedroom sizes for HCV households are two and three bedrooms (34 and 32 percent, respectively). In rural areas, a significantly lower proportion of HCV households live in one-bedroom units (7 versus 23 percent statewide), but a much higher percentage live in three-bedroom units (47 versus 32 percent statewide).

Statewide, the median income is about \$10,300 for voucher households. The highest median income is in micropolitan areas, at \$12,300, and the lowest median income is in rural areas, at \$9,400. In terms of the primary source of income, about one-third of households have no income, which is consistent across all locations. Another one-third of voucher households' primary income is from wages, and for another one-third, it is from social security or supplemental security income. Very little variation exists by location in all income sources. On average, across the state, the HCV program serves households with income levels at 25 percent of the AMI; this percentage ranges from 24 percent in large MSAs to 27 percent in micropolitan and rural areas. More than 70 percent of HCV households in Florida are extremely low-income and earn 30 percent of the AMI or less, and about 23 percent of HCV households are very low-income, which ranges from 31 percent to 50 percent of the AMI (exhibit 2).

In summary, a larger share of households that earn less than 50 percent of AMI are served in MSAs compared with nonmetropolitan areas. A greater share of minorities comprises HCV households in urban areas, and, as the location changes and becomes more rural, White households make up a larger share in the program. Rural areas contain more HCV households with single mothers and children. The largest share of extremely low-income HCV households is in large MSAs. Many of these findings are consistent with and reflect state demographics.

Exhibit 2

Florida Housing Choice Voucher Profiles by Location (1 of 2)

	State	Large MSAs	Small MSAs	Micropolitan Areas	Rural Areas
Overall HCV count	105,466	77,578	25,857	906	1,125
Percentage of HCV households	100.0	73.6	24.5	0.9	1.1
Land area (square miles)	56,778	15,462	24,331	6,052	10,933
Percentage of land area	100.0	27.2	42.9	10.7	19.3
HCV households as percent of households with 50% AMI or less	6.3	7.0	5.0	2.9	3.9
Race/ethnicity (%)					
Black ^a	55.6	54.1	60.7	42.4	51.0
White ^a	14.3	10.2	24.5	31.0	43.5
Hispanic ^a	25.3	30.8	10.1	22.1	2.0
Other ^b	4.9	5.0	4.7	4.5	3.6
Household type (%)					
Age category ^c					
34 or younger	24.0	21.9	30.0	22.2	33.8
35–61	51.5	51.3	52.0	53.4	49.1
62 or above	24.5	26.8	17.9	24.4	17.2

Exhibit 2

Florida Housing Choice Voucher Profiles by Location (2 of 2)

	State	Large MSAs	Small MSAs	Micropolitan Areas	Rural Areas
Disabled households (any member)	46.5	48.5	41.1	39.4	39.1
Disabled households (any primary member) ^d	38.5	39.4	35.8	36.1	37.7
Households with child(ren)	49.5	48.0	53.5	45.6	58.0
Single mother with child(ren)	45.2	44.0	48.6	40.4	51.1
Household size					
1 member	36.5	36.9	35.1	40.7	32.6
2 members	20.8	21.1	19.9	23.0	20.9
3 members	17.1	16.7	18.2	14.6	21.4
4 or more members	25.6	25.3	26.8	12.0	15.1
Number of bedrooms (%)					
0 bedrooms	1.8	2.2	0.7	0.7	0.9
1 bedroom	23.4	25.1	19.1	25.1	7.4
2 bedrooms	34.3	33.4	36.8	38.0	39.1
3 bedrooms	31.7	30.0	36.2	31.0	47.0
4 or more bedrooms	8.7	9.3	7.2	5.3	5.6
Median income (\$)	10,284	10,008	10,872	12,278	9,360
Income source (%)					
No income	32.1	31.3	34.6	32.8	30.0
Primary income—wage	31.3	30.6	33.3	34.5	31.4
Primary income—welfare	2.2	2.0	2.7	1.4	4.3
Primary income—social security/SSI	34.4	36.1	29.4	31.2	34.4
Income as percent of AMI					
Average percent of AMI	24.8	24.3	26.3	27.4	27.2
30% AMI or less	70.4	72.1	65.8	63.4	68.1
31–50% AMI	22.7	21.2	26.9	29.8	26.0
51–80% AMI	6.3	6.1	6.8	6.7	5.6
81% AMI or more	0.6	0.6	0.5	0.1	0.4

AMI = Area Median Income. HCV = Housing Choice Voucher. MSA = metropolitan statistical area. SSI = supplemental security income.

^a All household members have the same race or ethnicity.

^b Other includes all other racial groups, interracial households, and mixed-race households.

^c The age of household head or spouse, whoever is older.

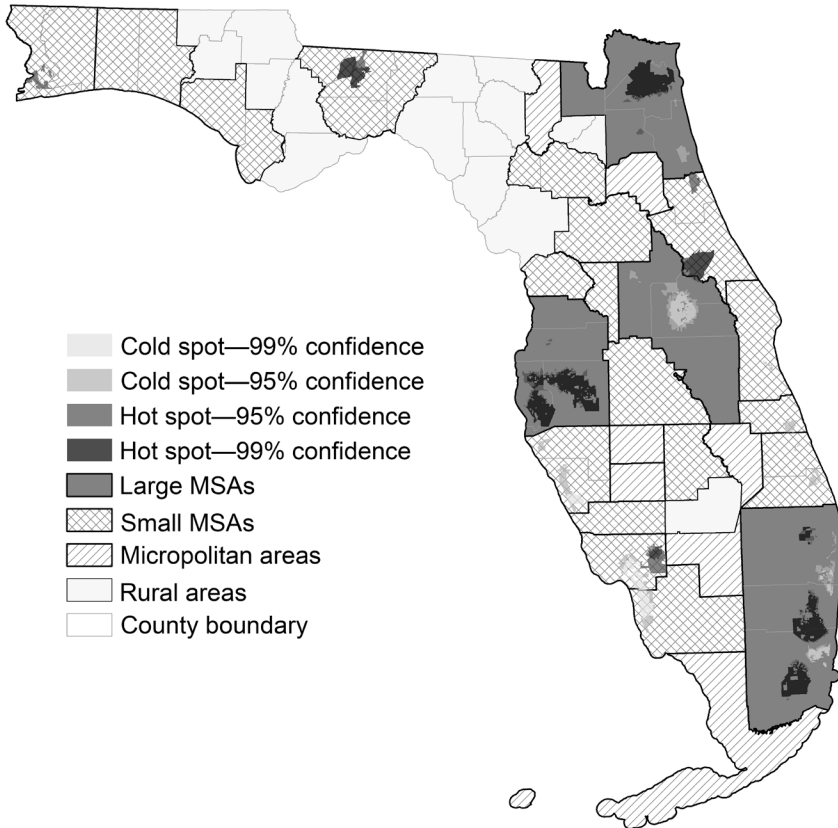
^d Primary member is defined as household head, spouse, or co-head.

Housing Choice Voucher Distribution by Location

Exhibit 3 reveals statistically significant hot spots and cold spots of clusters of voucher holder concentration relative to under-FMR rental housing units. Hot spots have a high concentration of voucher holders relative to the number of fair market rental units. Cold spots have a low number of voucher holders relative to the number of fair market rental units, which indicates areas that are underrepresented by voucher holders. The confidence intervals indicate that a less-than 1-percent chance (99 percent confidence) or less-than 5-percent chance (95 percent confidence) that the clustering occurs by random chance.

Exhibit 3

Hot Spot Analysis of Voucher Holder Concentration Relative to Under-FMR Rental Housing



FMR = Fair Market Rent. MSA = metropolitan statistical area.

Most hot spots and cold spots are in large MSAs, and the distribution pattern is quite different across each large MSA. The Jacksonville and Tampa MSAs have mainly hot spots, indicating the proportion of HCV households compared with under-FMR rental units is relatively high, which represents a clustered pattern of a high concentration of voucher holders. The Orlando MSA has a very large cold spot, meaning the share of voucher holders is low where under-FMR rental units are. The Miami MSA includes a combination of hot spots and cold spots, with concentrations of voucher holders in the middle portion of South Florida counties in underserved neighborhoods. This pattern raises the question as to why voucher holders are not accessing neighborhoods where affordable units are. Although beyond the scope of this study, reasons that may be further assessed to explain this finding are that the lack of voucher acceptance in these areas, discrimination in the market, or the local housing authority's service area may be constricting voucher holders to certain areas during the first year of voucher receipt.

Besides focusing on where hot spots and cold spots exist, we also examine where no hot or cold spots exist. A lack of hot spots and cold spots indicates areas where voucher holders are randomly distributed relative to under-FMR units. Both micropolitan and rural areas have no hot spots or cold spots. This absence means voucher holders are randomly disbursed throughout areas that provide rental units for less than the FMR. The absence of visibly large clusters of poverty in nonmetropolitan areas helps explain why rural poverty is often considered forgotten in mainstream America. For more than five decades, the percentage of low-income people in nonmetropolitan areas has consistently been higher than in MSAs (USDA, 2017).

Housing Choice Voucher Access to High-Opportunity Neighborhoods

Exhibit 4 reveals that micropolitan areas provide the most opportunity to voucher holders in terms of access to employment, school quality, and labor force participation and human capital. On the other hand, large MSAs provide the least opportunity to employment and school quality for voucher holders, whereas rural voucher holders are where labor market engagement is the lowest. The Low Poverty Index, which assesses exposure to poverty in a neighborhood, performs the best in small MSAs and worst in large MSAs, although it is important to note that this index varies very little by location; the scores range from approximately 20 to 28. These scores are relatively low, which indicates voucher holders across the state of Florida are in neighborhoods with high poverty.

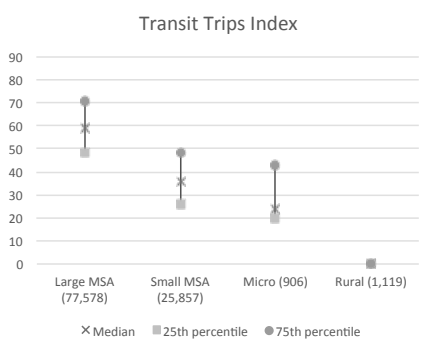
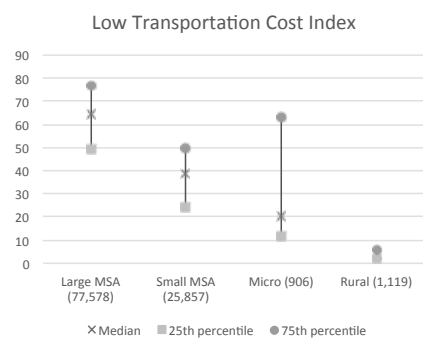
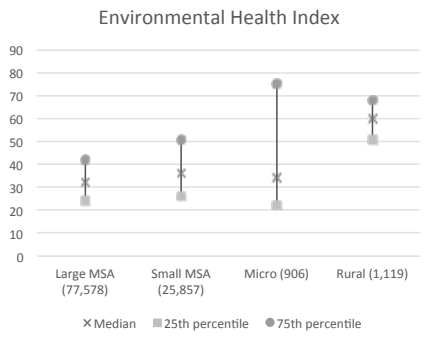
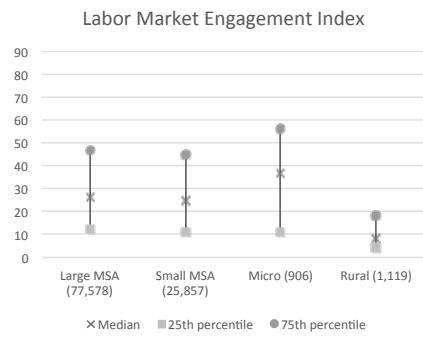
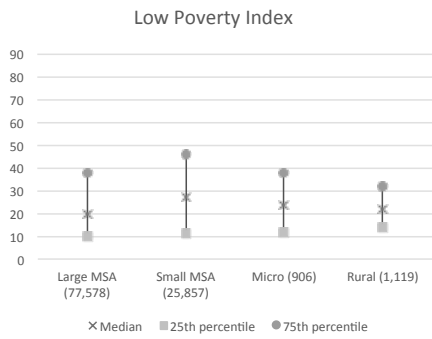
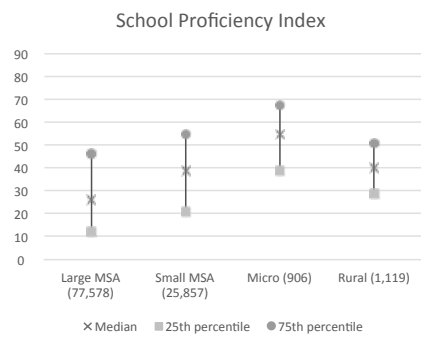
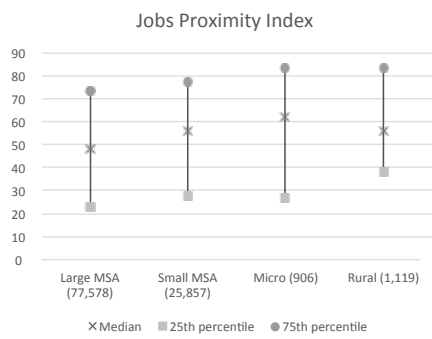
It is not surprising that the Low Transportation Cost Index and Transit Trips Index scores for voucher holders vary by location, with the highest scores in large MSAs and lowest scores in rural areas. This disparity is a result of the decline of public transit and higher transportation costs from inner cities to rural areas. The Environmental Health Index, which assesses environmental quality in neighborhoods using the National Air Toxics Assessment data, indicates that voucher holders in rural areas live in neighborhoods with the highest scores. The score drops rapidly for all other locations and is fairly consistent for large MSAs, small MSAs, and micropolitan areas, although voucher holders in small MSAs access neighborhoods with slightly better environmental quality. Again, this result is likely due to the fact that environmental quality is generally better farther away from urban areas where there are fewer pollutants.

In summary, the finding that voucher holders live in neighborhoods that have high exposure to poverty is consistent with other studies (Devine et al., 2003; McClure, Schwartz, and Taghavi, 2015) and does not vary much by location. The transit and environmental results are also as expected and reflect the general locational differences of these factors. However, the ability for voucher holders to access the best employment opportunities and schools in micropolitan areas is a new finding. Is this finding also a reflection of overall locational differences? Do micropolitan areas generally provide more opportunity than large MSAs, where voucher holders have the hardest time accessing neighborhoods of opportunity? Or do voucher holders successfully access neighborhoods with higher opportunity in micropolitan areas? To better understand this finding, we consider the opportunity scores of voucher holders relative to the overall score for the location in which they live.

When accounting for the overall county index scores for each location, voucher holders in micropolitan and rural counties access higher-opportunity neighborhoods than their counterparts

Exhibit 4

AFFH Opportunity Indices by Location



AFFH = Affirmatively Furthering Fair Housing. MSA = metropolitan statistical area.

in metropolitan counties (large and small MSAs). Voucher holders in 13 of the 16 rural counties and 6 of the 7 micropolitan counties reside in neighborhoods that have higher overall opportunity scores than the counties containing them. In large MSAs, voucher holders are in neighborhoods that have higher overall opportunity in only 4 of 16 counties, although the ratio is 9 to 28 counties in small MSAs. The top 10 counties where the overall index score for voucher holders is greatest compared with the average county index are all rural or micropolitan (exhibit 5).

Exhibit 5

Ten Highest Voucher Index Scores Relative to Overall County Opportunity Index

County	Location	County Index Score	Voucher Index Score	Difference
Holmes	Rural area	- 0.9749	0.6450	1.6198
Jackson	Rural area	- 0.1378	1.2307	1.3685
Columbia	Micropolitan area	- 0.4906	0.6748	1.1654
Bradford	Rural area	- 1.0747	- 0.0444	1.0302
Hamilton	Rural area	- 0.5772	0.4490	1.0262
Glades	Rural area	- 1.1198	- 0.1299	0.9899
Hendry	Micropolitan area	- 0.1430	0.7768	0.9197
DeSoto	Micropolitan area	- 0.5151	0.3882	0.9033
Washington	Rural area	- 0.4046	0.4554	0.8600
Taylor	Rural area	- 0.1887	0.6057	0.7944

Note: Scores in other Florida counties are available from the authors.

Source: Authors' computations

Discussion

The goal of this study is to better understand voucher household characteristics, concentration, and access to neighborhoods of opportunity by accounting for location, operationalized at the county level by degree of rurality. Many studies on the HCV program have evaluated large MSAs, implying that policy is guided by metropolitan findings. However, this study finds that the HCV program performs differently—at least in the state of Florida—across the rural-metropolitan gradient in terms of household composition, concentration, and ability for HCV households to move to neighborhoods of opportunity. Location may be an important consideration in the HCV program, and caution may be justified before assuming national HCV policies are equally effective for public housing authorities that service nonmetropolitan areas.

A primary finding of this study is that HCV households are not concentrated relative to units that rent for less than the FMR in micropolitan and rural areas, and the HCV program performs better in terms of allowing HCV households to access higher-opportunity neighborhoods in non-metropolitan areas. This finding is particularly interesting given that McClure (2011) found that nonmetropolitan areas have the fewest high-opportunity neighborhoods as compared with central cities and suburban areas. This finding implies nonmetropolitan HCV households can access higher-opportunity neighborhoods, even though fewer are available.

Importantly, the federal deconcentration goal may not be as relevant to nonmetropolitan areas. For example, HCV households in rural areas have lower incomes, tend to be younger, and comprise higher percentages of single mothers and families with children than the statewide HCV average. A wider range of supportive services, rather than mobility options to move to a different

neighborhood, are likely needed for these households to reach self-sufficiency. Ross, Shlay, and Picon's (2012) finding that HCV households residing in rural areas are more satisfied with their neighborhoods than their urban counterparts supports this conclusion.

Equally important is the issue of housing availability in nonmetropolitan areas. Pistilli (2001) researched the HCV program's performance in rural areas and found that rural housing availability was a concern for renters, with fewer rental options compared with national averages. Also, recall that Ross, Shlay, and Picon (2012) found that HCV households residing in rural areas were less satisfied with their housing units. Because Pistilli (2001) used data that are now more than 15 years old and examined only six rural areas, a national paper that examines the HCV program and housing availability in nonmetropolitan areas is warranted.

Furthermore, the finding that voucher households access higher-opportunity neighborhoods in certain Florida counties is worth further exploration. For instance, what residential mobility push-and-pull factors enable voucher holders to access more high-opportunity neighborhoods in micropolitan and rural areas than in MSAs? A more indepth qualitative analysis is necessary to gain insight to the factors and barriers that enable or prevent access to high-opportunity neighborhoods for future HCV mobility policy.

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Authors

Rebecca J. Walter is an assistant professor of urban and regional planning at the University of Texas at San Antonio in the College of Architecture, Construction and Planning.

Ruoniu (Vince) Wang is a postdoctoral fellow in the College of Architecture, Construction and Planning at the University of Texas at San Antonio.

References

- Arnold, Craig A. 1990. "Ignoring the Rural Underclass: The Biases of Federal Housing Policy," *Stanford Law and Policy Review* 2: 191–206.
- Bell, David, and Mark Jayne. 2009. "Small Cities? Towards a Research Agenda," *International Journal of Urban and Regional Research* 33 (3): 683–699.
- Carlson, Deven, Robert Haveman, Tom Kaplan, and Barbara Wolfe. 2012a. "Long-Term Earnings and Employment Effects of Housing Voucher Receipt," *Journal of Urban Economics* 71 (1): 128–150.
- . 2012b. "Long-Term Effects of Public Low-Income Housing Vouchers on Neighborhood Quality and Household Composition," *Journal of Housing Economics* 21 (2): 101–120.

Chetty, Raj, Nathaniel Hendren, and Lawrence F. Katz. 2015. *The Effects of Exposure to Better Neighborhoods on Children: New Evidence From the Moving to Opportunity Experiment*. Washington, DC: Internal Revenue Service; U.S. Department of the Treasury.

Climaco, Carissa, Christopher N. Rodger, Judith Feins, and Ken Lam. 2008. "Portability Moves in the Housing Choice Voucher Program, 1998–2005," *Cityscape* 10 (1): 5–40.

Devine, Deborah J., Robert W. Gray, Lester Rubin, and Lydia B. Taghavi. 2003. *Housing Choice Voucher Location Patterns: Implications for Participant and Neighborhood Welfare*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

McClure, Kirk. 2011. *Housing Choice Voucher Marketing Opportunity Index: Analysis of Data at the Tract and Block Group Level*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

———. 2005. "Rent Burden in the Housing Choice Voucher Program," *Cityscape* 8 (2): 5–20.

McClure, Kirk, and Bonnie Johnson. 2015. "Housing Programs Fail To Deliver on Neighborhood Quality, Reexamined," *Housing Policy Debate* 25 (3): 463–496.

McClure, Kirk, Alex F. Schwartz, and Lydia B. Taghavi. 2015. "Housing Choice Voucher Location Patterns a Decade Later," *Housing Policy Debate* 25 (2): 215–233.

Newman, Sandra J., and Ann B. Schnare. 1997. "... And a Suitable Living Environment': The Failure of Housing Programs To Deliver on Neighborhood Quality," *Housing Policy Debate* 8 (4): 703–741.

Pendall, Rolf. 2000. "Why Voucher and Certificate Users Live in Distressed Neighborhoods," *Housing Policy Debate* 11 (4): 881–910.

Pistilli, Linda. 2001. *Study on Section 8 Voucher Success Rates*. Vol. 2, *Qualitative Study of Five Rural Areas*. Washington, DC: U.S. Department of Housing and Urban Development.

Ross, Lauren M., Anne B. Shlay, and Mario G. Picon. 2012. "You Can't Always Get What You Want: The Role of Public Housing and Vouchers in Achieving Residential Satisfaction," *Cityscape* 14 (1): 35–53.

Thrift, Nigel. 2000. "Not a Straight Line but a Curve: Or Cities Are Not Mirrors of Modernity." In *City Visions*, edited by David Bell and Azzedine Haddour. Harlow, United Kingdom: Prentice Hall: 233–263.

U.S. Department of Agriculture (USDA). 2017. *Poverty Overview. A Note About the Data Sources*. Washington, DC: U.S. Department of Agriculture, Economic Research Service.

U.S. Department of Housing and Urban Development (HUD). 2016. *Affirmatively Furthering Fair Housing (AFFH) Data Documentation. Version 3.1*. Washington, DC: U.S. Department of Housing and Urban Development.

———. 2007. *Fair Market Rents for the Section 8 Housing Assistance Payments Program*. Washington, DC: U.S. Department of Housing and Urban Development, Office of Policy Development and Research.

Walter, Rebecca, Yanmei Li, and Serge Atherwood. 2015. "Moving to Opportunity? An Examination of Housing Choice Vouchers on Urban Poverty Deconcentration in South Florida," *Housing Studies* 30 (7): 1064–1091.

Wang, Xinhao, and David Varady. 2005. "Using Hot-Spot Analysis To Study the Clustering of Section 8 Housing Voucher Families," *Housing Studies* 20 (1): 29–48.