HOPE VI Resident Displacement: Using HOPE VI Program Goals To Evaluate Neighborhood Outcomes

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Abstract

This study evaluates the neighborhoods selected by HOPE VI residents in Lexington, Kentucky, following the demolition of the Charlotte Court housing project. HOPE VI is a public policy program designed to address problems associated with severely distressed public housing. A central routine of HOPE VI is demolishing housing projects and redeveloping the original site into new mixed-use housing. Demolition displaces a large percentage of residents to other neighborhoods, using Section 8 vouchers. In this study, using the goals of HOPE VI as a conceptual framework, we developed measures to determine if HOPE VI residents improved their circumstances at the neighborhood level following their displacement. We found no significant difference between the original Charlotte Court neighborhood and the new neighborhoods that residents selected. Using negative binomial regression, the results of the study show that crime and the percent of the population that is African American are significant predictors of the number of displaced households within a neighborhood selected by displaced residents. The study concludes with a discussion of policy implications and an offering of potential solutions to the many problems associated with HOPE VI resident displacement.

Introduction

HOPE VI is a public policy program designed to address problems associated with severely distressed public housing. A central HOPE VI routine is the demolition of existing housing projects and redevelopment of new mixed-use housing on the original site. Research on HOPE VI has shown that demolition displaces a large percentage of residents to other neighborhoods through the use of Section 8 vouchers (Abt, 1996; Comey, 2007; Goetz, 2010; Kingsley, Johnson, and Pettit, 2003; Popkin et al., 2002). Many HOPE VI residents report that their new neighborhoods are improvements; however, many also report that their quality of life is only moderately enhanced (Abt, 1996; Goetz, 2010; Popkin et al., 2002). HOPE VI objectives center on improving housing quality on the original site and decreasing the concentration of crime, poverty, unemployment, and racial segregation (HUD 2008; Popkin et al., 2004; Popkin et al., 2000). HOPE VI research has yielded disparate findings in study sites across the nation. This article adds to the HOPE VI literature by examining the HOPE VI redevelopment of the Charlotte Court housing project in Lexington, Kentucky. Kingsley, Johnson, and Pettit (2003) identified Lexington as having among the most concentrated distribution of displaced residents when compared with 73 redevelopment projects in 48 cities. This study is designed to gauge the efficacy of HOPE VI in Lexington by evaluating measures that are consistent with goals and objectives identified from the U.S. Department of Housing and Urban Development (HUD) documentation and past studies evaluating HOPE VI.

The study examined whether HOPE VI residents selected their new home because it offered an opportunity to improve their lives, or because it was the next best available housing. A key of any examination of HOPE VI is that nearly any location outside of the most severely distressed public housing is likely to be an improvement for the residents (Abt, 1996). Determining the efficacy of HOPE VI is difficult, because a clear set of measures for program outcomes is neither clearly stated, nor openly available. The study therefore identifies several factors believed to be adequate measures of HOPE VI goals and objectives. One hypothesis is that neighborhoods that HOPE VI residents selected in Lexington were better in overall neighborhood conditions such as crime, poverty, unemployment, and racial segregation. A second hypothesis is that, despite the improvement, the number of relocated residents in a neighborhood is significantly associated with measures of reported crime, poverty, unemployment, and racial segregation. If these hypotheses are supported, some weight can be given to the argument that HOPE VI has qualitatively achieved its goals, but simultaneously failed, because new neighborhoods are still significantly associated with the measures identified as problematic in the HOPE VI literature.

HOPE VI Goals and Objectives

The goals and objectives of HOPE VI have been notoriously opaque. The National Housing Law Project (2002) mentioned that one key problem with HOPE VI is its uncertain objectives. The goals and objectives from past studies associated with neighborhood quality generally pertain to improving the quality of public housing; decreasing the concentration of crime, poverty, unemployment, and racial segregation; and building local partnerships with community organizations

(HUD, 2010; Wexler, 2001). The goals are unlikely to capture the full range of initiatives set forth by HOPE VI; however, the goals do represent key factors associated with the social and economic improvements expected for HOPE VI residents.

The first identified HOPE VI goal is to improve living conditions of severely distressed public housing through demolition and renewal projects (Gilderbloom, 2008; HUD, 2010; Popkin et al., 2004). The construction and design methods vary across the nation, where some cities have rebuilt public housing on old sites, and others have used the old public housing sites as land for building new mixed-use or affordable housing. In many instances the demolition of public housing sites has left many former residents with few housing options. As a result, many residents turned to Section 8 vouchers or were forced to move to other housing projects (Buron et al., 2002). The present study reveals similar relocation patterns as residents either moved to a different public housing location or to private apartment housing in a different neighborhood.

The second goal of HOPE VI is to revitalize communities in an effort to reduce the concentration of poverty. This effort often includes limiting the capacity of the public housing rebuilt at the original site and, subsequently, relocating residents to various neighborhoods through Section 8 vouchers (Popkin et al., 2004; Wexler, 2001). America's housing projects are home to the most economically and socially disadvantaged population (Schill and Wachter, 1995). High-poverty neighborhoods have multiple layers of problems, ranging from health-related issues to high rates of homicide. Because of these problems, HOPE VI has aimed to reduce the spatial concentration of poverty by dispersing residents to areas with lower poverty levels. If this goal is achieved, new neighborhoods will have significantly lower poverty levels.

The third goal of HOPE VI is to create opportunities for residents to become self-sufficient through the use of services that provide various types of job training and employment. These services include computer training, daycare, after-school programs, and job referrals (Popkin et al., 2004). If this goal is achieved, neighborhoods selected by displaced residents would not have high unemployment levels. When new neighborhoods selected by displaced residents have insignificant unemployment levels, available jobs, and job training, HOPE VI can be considered successful in moving residents to neighborhoods that, at the very least, expose residents to more employment opportunities.

The fourth goal of HOPE VI is to reduce public housing residents' exposure to incidents of crime (Gilderbloom, 2008; HUD, 2010; Popkin et al., 2004). Several studies identified problems with crime as a key concern of many residents (Popkin et al., 2002; Smith, 2002). It is well known that housing projects have become havens for drug dealing, robbery, and homicide—a central focus of HOPE VI was to eliminate these problems from the lives of public housing residents. If this goal is achieved, the new neighborhood that a displaced resident selected should have lower crime levels than the old neighborhood.

A final goal of HOPE VI identified in the literature is to reduce the amount of racial segregation. Housing projects in the United States traditionally have high rates of African-American residents (Brooks et al., 2005; Fischer, 1999; Kingsley, Johnson, and Pettit, 2003). Mendenhall, DeLuca, and Duncan (2005) found that women who were relocated to neighborhoods with lower percentages of African Americans were able to find and hold on to jobs for a longer period of time and were less

likely to accept welfare benefits. Peterson and Krivo (1993) found that racial segregation leads to higher levels of homicide among black residents. If this goal is achieved, the new neighborhoods that displaced residents select should have low levels of African-American population.

The goals of HOPE VI are important, because they identify objectives the program is designed to achieve. Highlighting program objectives provides a way of measuring the efficacy of the program's outcomes. This study uses HOPE VI goals as a conceptual framework for selecting explanatory variables used in the final analysis. The goals identify several key themes used to study the overall effect that HOPE VI has had on displaced residents' living conditions.

Outcomes for HOPE VI Residents

A fairly consistent finding of HOPE VI research is that residents tend to move to locations with substantially fewer problems when compared with the original housing site (Goetz, 2010). Studies have also indicated, however, that outcomes for residents are generally mixed (National Housing Law Project, 2002). A key finding in this study is that, despite the many improvements observed in past studies, the residents affected by HOPE VI continue to struggle in their everyday lives. The findings presented in the following sections indicate that new neighborhoods have only slight improvements over the original HOPE VI neighborhood. Results also indicate, however, that the new neighborhoods may still be areas that are troubled by crime, poverty, unemployment, and racial segregation. Admittedly, other outcomes for neighborhoods, aside from crime, poverty, unemployment, and racial segregation, have been identified in the literature. For example, Goetz (2010) identified other problem areas such as children's school and social experience, health and behavior outcomes, housing neighborhood characteristics, and social networks. Currently, no existing reliable measures of these other factors can be analyzed at the census block group level. Despite this limitation, poverty, crime, unemployment, and racial segregation are excellent proxies for the goals previously outlined.

Crime

Many studies on HOPE VI have shown that a key concern of HOPE VI residents is their exposure to crime (Barbrey, 2004; Buron et al., 2004; Gilderbloom, 2005; Popkin, 2003; Popkin et al., 2000). Popkin (2003) found that residents of inner city public housing complexes are likely to be offenders and victims of violent crime. Buron et al. (2002) reported that many HOPE VI residents wanted their new neighborhoods to have less drug trafficking and violent crime. Research on HOPE VI has generally found that residents have reported increases in perceived safety levels within their new neighborhoods (Buron, 2004; Buron et al., 2002; Goetz, 2010; Popkin and Cove, 2007; Popkin et al., 2004). Ludwig, Duncan, and Hirschfield (2001) found that moving out of public housing reduces the risk for children to engage in juvenile crime. Most studies that explore crime in HOPE VI neighborhoods have used survey measures to determine how residents perceive safety in their new neighborhood. Few studies have examined the association between displaced HOPE VI residents and neighborhood crime levels. One exception to this gap in the literature is Gilderbloom's (2005) study of a HOPE VI redevelopment in Newport, Kentucky. He found a 19-percent drop in crime at the original site over a 7-year period. This finding was expected because of the large drop

in population through resident displacement. Gilderbloom did not describe crime levels in the displaced residents' new neighborhoods. Barbrey (2004) also evaluated crime at the original public housing location in Knoxville, Tennessee, but found that HOPE VI had little effect on overall crime levels, suggesting that HOPE VI did not substantially improve safety levels for residents.

Poverty

Studies show that poverty levels in new neighborhoods are lower than in the original neighborhood (Boston, 2005; Buron, Levy, and Gallagher, 2007; Buron et al., 2002; Clampet-Lundquist, 2004; Fischer, 1999; Goetz, 2010; Kingsley, Johnson and Pettit, 2003; Popkin et al., 2004). Buron et al. (2002) showed that nearly 40 percent of relocated residents moved to areas that were classified as low poverty. The same study also showed, however, that 40 percent of residents moved to high-poverty areas. Kingsley, Johnson, and Pettit (2003) showed that residents who used Section 8 vouchers moved from neighborhoods with 61-percent poverty rates to neighborhoods with average poverty rates of 27 percent. Despite the improvement in overall neighborhood economic circumstances, research has shown that many residents are unable to take advantage of the economic improvement. Clampet-Lundquist (2004) showed that residents who moved to lower poverty neighborhoods were unable to benefit from their new circumstance because they were unable to connect to local social and communal networks. Overall, it appears that poverty in new neighborhoods is substantially lower when compared with the original neighborhood, but it is not clear if this change means a direct improvement for displaced residents. Residents continue to live impoverished lives, and continue to have many of the same economic problems that were present in their original neigh-borhoods.

Unemployment

Research on unemployment and HOPE VI generally indicates that residents do not improve their employment circumstances (Barrett, Geisel, and Johnston, 2006; Clampet-Lundquist, 2004; Goetz, 2010; Levy and Woolley, 2007). Clampet-Lundquist (2004) showed that the residents displaced by using Section 8 vouchers reported few opportunities for employment in their new neighbor-hoods. Levy and Woolley (2007) also reported that residents who relocated have been unable to improve their employment circumstances largely because of health problems. Barrett, Geisel, and Johnston (2006) showed that issues with transportation and childcare limited opportunities for employment among HOPE VI residents. Buron et al. (2002) found that many residents were em-ployed. Residents who were not employed, however, reported barriers such as lack of job training and few opportunities for employment. The authors also reported that many residents who moved using Section 8 vouchers had trouble paying rent or other bills in the new private-market housing because of lack of income from unemployment and higher bill payments required in the private housing market. Thus, the research on HOPE VI and employment indicates that residents continue to struggle to find work after moving to homes in new neighborhoods.

Racial Segregation

Racial segregation is a well known aspect of public housing in the United States, and is defined as a high percentage of residents within a neighborhood being from a minority population. Research indicates that HOPE VI neighborhoods have high percentages of African-American residents (Brooks

et al., 2005; Buron et al., 2002; Fischer, 1999; Kingsley, Johnson and Pettit, 2003; Popkin et al., 2002). Fischer (1999) concluded that HOPE VI residents who relocate using Section 8 vouchers end up in neighborhoods that are racially segregated. Kingsley, Johnson, and Pettit (2003) conducted a nationwide study and found that HOPE VI has generally failed to decrease the amount of racial segregation that displaced residents experienced. Buron et al. (2002) found that change in racial segregation for most residents' neighborhoods was minimal. In general, it appears that neighborhoods where HOPE VI residents move continue to be racially segregated, despite HOPE VI objectives.

HOPE VI in Lexington, Kentucky

HOPE VI relocations from the Charlotte Court Housing Project in Lexington are especially unique when compared with most other cities across the country. Kingsley, Johnson, and Pettit (2003) showed that Lexington had the second highest average (4.8) of Section 8 relocations per census tract. Their finding that displaced residents are tightly clustered is confirmed by our data mapped at the block group level (see exhibit 1). The average number of Section 8 households per census tract across the country was only two households per tract. In addition, Lexington was 1 of only 4 cities, out of 48 total, where more than 40 percent of the relocatees moved to census tracts with large clusters of other relocated residents. This finding suggests that a small number of census

Exhibit 1

Relocation Counts per Block Group in Lexington, Kentucky
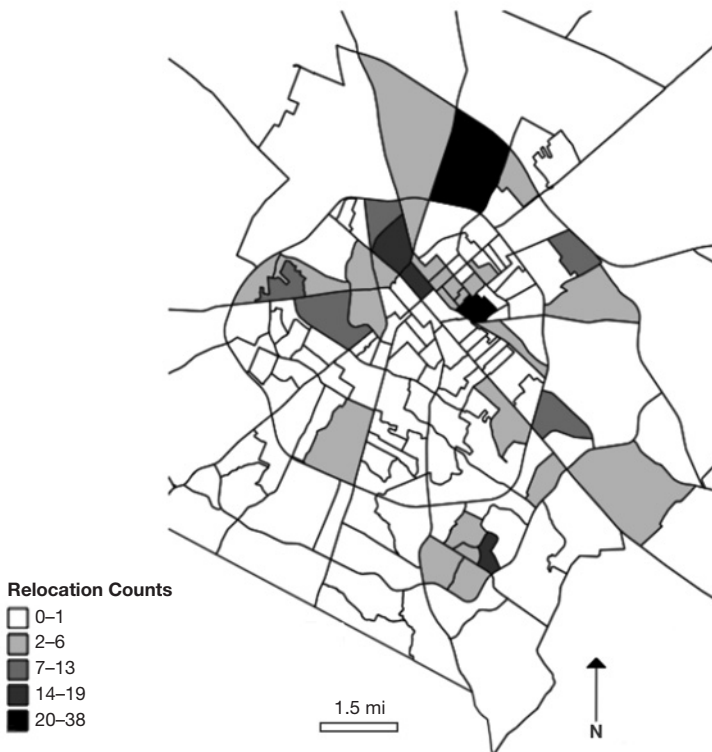
tracts in Lexington have absorbed a large percentage the HOPE VI residents. Research has shown that high concentrations of displaced residents will likely affect housing stock, crime, and social disorder in the clustered areas (Coulton and Pandey, 1992; Crane, 1991; Kingsley, Johnson, and Pettit, 2003). Therefore, Lexington provides a unique opportunity to study the neighborhoods of displaced HOPE VI residents.

Another reason Lexington is ideal for studying HOPE VI is that the relocations in Lexington occurred at the end of 1999, approximately the same time period that the 2000 Decennial Census was conducted. This timing means that the 2000 Census provides data about the neighborhoods at approximately the same point in time as the Charlotte Court HOPE VI redevelopment. The cross-sectional nature of this study is an advantage because it provides a look at the neighborhoods that residents selected at the same time as their initial relocation. The typical neighborhood types that residents moved to directly after being displaced from the original public housing site can, thus, be determined.

Summary and Hypotheses

The quality of neighborhoods chosen by displaced residents is an important determinant of whether or not HOPE VI goals have been achieved. The goals provide language that can be used to identify variables that measure HOPE VI efficacy. Among many HOPE VI objectives, key aims are to decrease the exposure of residents to crime, decrease the concentration of poverty, improve opportunities for employment, and reduce racial segregation. Research on the outcomes of HOPE VI residents has been inconclusive, but has generally found that new neighborhoods are an improvement for residents (Goetz, 2010). Nearly all potential housing available outside of severely distressed housing projects will be an improvement for HOPE VI residents. It is likely, however, that neighborhoods that HOPE VI residents selected have similar problems to those found in the original HOPE VI redevelopment neighborhood. Lexington, Kentucky, was selected as the research site because of data availability, the unique characteristics of relocations within the city, and the time association between the relocations and the 2000 Decennial Census. Neighborhoods that displaced HOPE VI residents selected are likely to be significantly different from the original neighborhood.

Hypotheses

Based on the goals previously listed, a series of hypotheses were developed to test whether displaced HOPE VI residents moved to better neighborhoods. First, the neighborhoods that displaced HOPE VI residents selected are expected to be significantly lower on measures of crime, poverty, unemployment, and racial segregation than the original Charlotte Court neighborhood. If the new neighborhoods' levels are significantly lower than Charlotte Court's, then it could be argued that HOPE VI achieved its goals.

Second, it is expected that, despite the improvement in neighborhood conditions when compared with the Charlotte Court neighborhood, the neighborhoods that displaced HOPE VI residents select will continue to be positively and significantly associated with rates of crime, poverty, unemployment, and racial segregation net of controls that might predict high rates of households using Section 8 vouchers. If supported, the results would indicate that neighborhoods that displaced HOPE VI residents select continue to be plagued by the same problems that HOPE VI is designed to alleviate.

This article proceeds with the understanding that HOPE VI redevelopments are highly contextual, and using one example to generalize to all HOPE VI sites would be inappropriate. Studies that incorporate redevelopment sites not previously researched, however, provide opportunities for researchers to consider how HOPE VI has affected different cities at different times. HOPE VI goals are to improve the lives of individuals who live in public housing; therefore, evaluations should consider HOPE VI goals and objectives when evaluating how the program has affected residents' lives. This study extends the current body of research by employing official police data, framing the hypotheses based on the program goals, and using a study site that has a unique distribution of relocated residents.
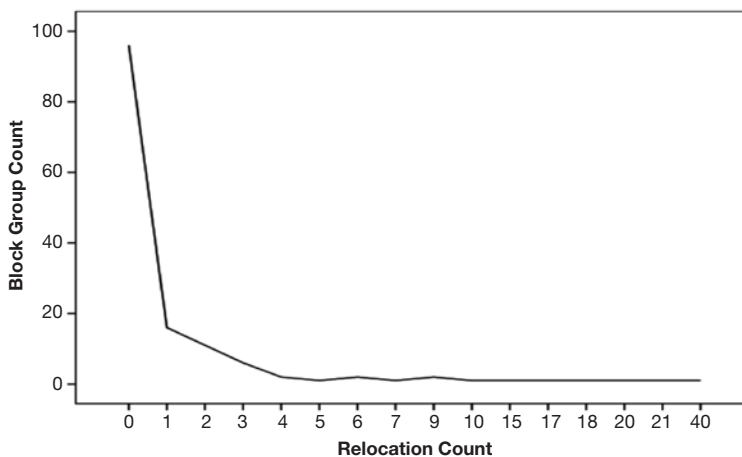
Data

The data for this project were collected for a sample of 148 block groups in Lexington, Kentucky. Lexington is located in central Kentucky and in 2000 had a population of 260,512, making it the 64th largest city in the United States. The data used for analysis were obtained from three sources: Lexington Housing Authority, the United States Census Bureau, and the Lexington Police Department. The study's variables are described in the next section.

Dependent Variable

The dependent variable for this study is a count of the number of displaced residents per census block group. The data were obtained from the Lexington Housing Authority. The data included 260 addresses that were geocoded using Cartographica's Bing Geocoder and achieved a 98-percent match rate. The addresses that did not match were either incorrectly recorded, or were located within another city. Consistent with Kingsley, Johnson, and Pettit (2003), displaced residents were highly concentrated in a small number of city block groups. Exhibit 2 illustrates the positively skewed relocation distribution and the large number of block groups that received zero relocations.

Exhibit 2

Distribution of Dependent Variable

Independent Variables

The main independent variables in this study are reported crimes, poverty, unemployment, and African-American population. The crime data were obtained from the Lexington Police Department for the year 1999. The reported crimes were provided at the address level and included assaults, auto theft, burglary, robbery, and disorderly conduct. The data were geocoded using Cartographica's Bing Geocoder and achieved a 94-percent match rate. Data from 1999 were used because they match the temporal timeframe of the census data used for the other independent variables. Poverty rates were measured by the 2000 Census and were defined as the percentage of the population living below the poverty line. Unemployment was also measured by the census and was defined as the percentage of the population over age 16 who are unemployed. The final independent variable collected from the 2000 Census was the percentage of the population that was African American. Racial segregation has been shown to be a continuing problem for HOPE VI and, therefore, it is assumed that neighborhoods with high percentages of African-American population may be more likely to have displaced HOPE VI residents move there.

Control Variables

The control variables used in this study are necessary because it is likely that displaced residents selected neighborhoods based on housing availability (Smith, 2002). A central argument of this article is that, although improvements may exist for residents, it is likely that difficulties still exist at the neighborhood level because residents' housing choices are limited. That is, residents are most likely to choose places to live that are willing to take on residents using Section 8 housing vouchers or that provide other forms of public housing. Therefore, controls were used for the rental vacancy rate, which is defined as the amount of vacant and available rental housing. Another important control is the percentage of the population that receives public assistance; because HOPE VI is a form of public assistance, a control was used to account for the tendency of displaced residents to move to locations where other residents receive some form of public assistance. The variables used to measure HOPE VI and the controls for housing availability are described in exhibit 3.

Exhibit 3

Neighborhood Condition Descriptive Statistics

Variable	Mean	Standard Deviation
Relocations	1.72	4.69
Reported crimes	28.61	28.18
Percent poverty	14.77	13.40
Percent unemployment	3.33	5.26
Percent African American	14.57	19.60
Percent public assistance	2.49	3.99
Rental vacancy rate	3.22	3.57

Spatial Autocorrelation

Because of the spatial nature of the distribution of HOPE VI residents, it was prudent to test for spatial autocorrelation. Spatial autocorrelation is based on the idea that spatial events are arranged in a random or nonrandom manner due to factors associated with geographic location. Spatial autocorrelation causes biased estimates because the assumption of independence required by most statistics is violated. In the current study, it is likely that residents selected homes in specific areas because of the availability of rental housing that was eligible for rent using Section 8 vouchers. Thus, it is logical that characteristics of specific places might affect the distribution of the displaced residents. GeoDa was used to test spatial autocorrelation. Results indicate that the Moran's I statistic was not significant (Moran's I = 0.12, p = 0.11), which leads to the conclusion that spatial autocorrelation is not any more present in the spatial distribution of displaced residents than what would be expected by random chance. As a result, the data were modeled with a nonlinear count model rather than a spatial-dependence model.

Methods

The analysis process for this study proceeded in two steps. To test the first hypothesis, the study compared the original Charlotte Court neighborhood with the new neighborhoods that displaced residents selected. We used rates of crime, poverty, unemployment, and racial segregation to compare the neighborhoods. We expected to find that the new neighborhoods that displaced residents selected would be significantly lower on each of the measures listed above. Next, to test the second hypothesis, the study used regression analysis to determine if crime, poverty, unemployment, and racial segregation could significantly predict counts of displaced residents net of controls that could explain the presence of households using Section 8 vouchers. We discuss special problems with the regression models in the next section.
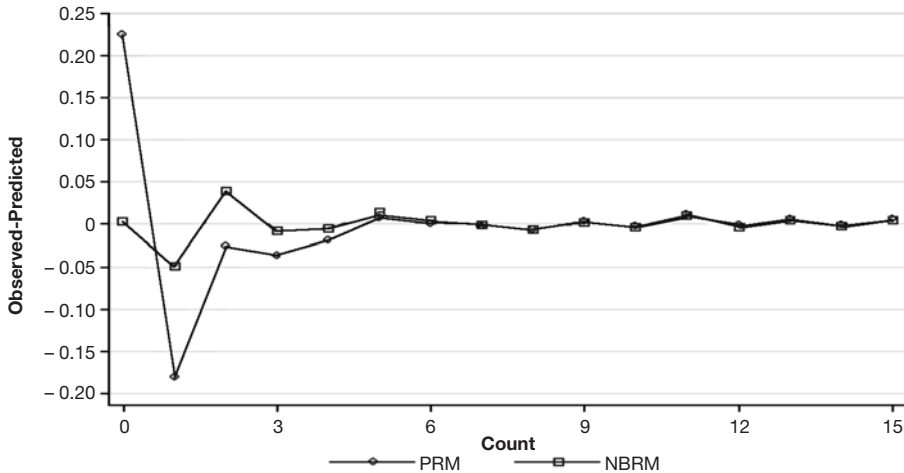
Poisson and Negative Binomial Regression Models

The dependent variable in this study is a count of the number of displaced HOPE VI residents per census block group. Standard linear regression models, in general, are inappropriate for count data due to overdispersion. The Poisson regression model better estimates data that are counts by assuming a nonlinear distribution. It is typical for count variables to be overdispersed, however, due to the presence of a high number of zero counts. Overdispersion describes the situation in which the variance of the dependent variable exceeds the mean (Long, 1997; Osgood, 2000). A key assumption of the Poisson regression model is that the variance must equal the mean for the model to accurately predict the dependent variable. In the social sciences it is rare for the Poisson regression model to fit the data distribution of a count variable. When data are overdispersed, the Poisson regression model underestimates zero counts, which is the case in the present study. To formally test for overdispersion, a likelihood ratio test was conducted comparing the Poisson model with the negative binomial model. There is significant evidence of overdispersion (G^2 = 152.17, $p < 0.01$); therefore, the negative binomial regression model is more appropriate for the analysis than the Poisson model.

Exhibit 4 compares the fit of Poisson regression model with that of the negative binomial regression model. Points greater than zero indicate that the model underpredicts the observed values, and

Exhibit 4

Comparing Poisson and Negative Binomial Regression Models

NBRM = Negative Binomial Regression Model. PRM = Poisson Regression Model.

points less than zero indicate that the model overpredicts the observed values of the dependent variable. Notice that the Poisson model drastically underpredicts zero counts for the dependent variable. To account for this problem, the negative binomial regression model includes a parameter that enables the variance of the dependent variable to exceed the mean. Exhibit 4 shows a much stronger fit for the negative binomial regression, especially when the number of relocations within a block group is zero.

Findings

The following sections describe the results of a t-test for neighborhood comparisons and the negative binomial regression analysis examining proxy variables for HOPE VI goals and controls for neighborhood choice among displaced residents.

Comparing Charlotte Court With Selected Neighborhoods

To examine the first hypothesis, the Charlotte Court neighborhood was compared with the rest of the neighborhoods that HOPE VI residents selected. A t-test was used to examine the mean differences between the selected neighborhoods and the Charlotte Court neighborhood. The number of neighborhoods that received at least one displaced resident was 48. Exhibit 5 shows the findings. Overall, the average levels of crime, poverty, and racial segregation were lower, and unemployment was higher, in the new neighborhoods. The differences were not significant, however. These findings do not support the initial hypothesis that neighborhoods selected by displaced residents would be significantly better than Charlotte Court, which leads to the conclusion that the neighborhoods that residents selected were not substantial improvements when compared with the conditions in their original neighborhood.

Exhibit 5

Comparing Charlotte Court With Selected Neighborhoods (n = 48)

	Charlotte Court	Selected Neighborhoods (n = 48)	Significance
Reported crime	49.0	44.0	0.87
Percent poverty	44.0	30.0	0.70
Percent unemployment	3.4	4.3	0.86
Percent African American	28.0	23.0	0.60

Because of the wide distribution of displaced residents around the city (see exhibit 1), the study included a secondary analysis, conducted between Charlotte Court and the neighborhoods that received a large number of displaced residents. A cutoff was selected for neighborhoods that received 10 or more displaced households. Neighborhoods that received 10 or more households were selected because they were public housing sites or places that were likely to accept Section 8 vouchers. Of the sample, 8 neighborhoods received more than 10 displaced residents, and, overall, these 8 neighborhoods accounted for 147 relocations—nearly 60 percent of the total displaced residential households. Exhibit 6 shows that the 8 neighborhoods had higher (but not statistically significant) levels of crime, poverty, unemployment, and African-American population than the Charlotte Court neighborhood.

Exhibit 6

Comparing Charlotte Court With Selected Neighborhoods (n = 8)

	Charlotte Court	Selected Neighborhoods (n = 8)	Significance
Reported crime	49.0	81.0	0.47
Percent poverty	44.0	47.0	0.91
Percent unemployment	3.4	3.9	0.72
Percent African American	28.0	31.0	0.89

Negative Binomial Regression Results

The first baseline model included only the control variables. Model 1 in exhibit 7 shows the results from the negative binomial regression analysis. HOPE VI resident presence in new neighborhoods was significantly associated with public assistance levels present in the neighborhood and with the amount of housing that was for rent and vacant. For every one unit increase in public assistance, the expected count of displaced residents increases by 15.8 percent ($z = 2.415$, $p < 0.01$). For every one-unit increase in rental vacancy, the expected number of displaced residents increases by 33.7 percent ($z = 4.09$, $p < 0.001$).

Model 2 in exhibit 7 shows the influence of the main explanatory variables. The number of reported crimes and amount of racial segregation were significant. For every one unit increase in reported crime, the expected count of displaced residents increases by 3.5 percent ($z = 4.65$, $p < 0.001$). For every one unit increase in African-American population, the count of displaced residents is expected to increase by 4.2 percent. Poverty and unemployment were not significantly associated with the number of displaced households within a neighborhood net of the other explanatory variables.

Model 3, in exhibit 7 includes both the explanatory and control variables. Reported crime and the African-American percentage of the population were significant indicators when holding all other variables constant. The percent changes in crime and African-American population were almost identical to the results from Model 2. The effect for poverty became negative when all of the variables are included; however, this effect is small and insignificant. Interestingly, the control variables, which were significant in Model 1, lose significance in Model 3. Consistent with past research, Model 1 appears to show that the amount of public assistance and vacant rental housing within a neighborhood affects residents' decisions in their move. Despite the effects that these factors had on residents' decisions, however, it appears that neighborhoods that residents selected were still significantly associated with reported crime and with the percentage of African Americans in the neighborhood population.

Many explanatory and control variables are correlated. Exhibit 8 shows the variables correlation matrix. Although none of the variables have very strong associations, many are significantly associated with one another. To account for the collinearity of the explanatory variables, each variable was evaluated independently with the control variables to remove any possibility of multicollinearity disrupting the results.

Model 4 in exhibit 9 shows that crime continues to be significantly associated ($z = 4.61$, $p < 0.001$) with displaced HOPE VI households and continues to have a similar expected percent change. Model 5 indicates that poverty is significant when considered independent of other explanatory

Exhibit 7

Negative Binomial Regression Results

Variables	Model 1				Model 2				Model 3			
	❏	SE	p	%Cg.	❏	SE	p	%Cg.	❏	SE	p	%Cg.
Reported crimes					0.034	0.007	0.000	3.5	0.033	0.007	0.000	3.4
Poverty					0.004	0.015	0.786	0.4	– 0.013	0.189	0.491	– 1.3
Unemployment					0.018	0.029	0.533	1.9	0.022	0.030	0.472	2.2
African American					0.040	0.010	0.000	4.2	0.034	0.009	0.015	3.5
Public assistance	0.146	0.060	0.016	15.8					0.064	0.043	0.140	6.6
Rental vacancy	0.290	0.070	0.000	33.7					0.085	0.052	0.107	8.9
Model x²(df)	34.48(2)				73.90(4)				78.34(6)			

%Cg. = percent change. p = p-value. SE = standard error.

Exhibit 8

Variable Correlations

	Relo-cations	Reported Crimes	Poverty	Unemploy-ment	African American	Public Assistance	Rental Vacancy
Relocations	1						
Reported crimes	0.49*	1					
Poverty	0.43*	0.39*	1				
Unemployment	0.07*	0.23*	0.31*	1			
African American	0.55*	0.37*	0.55*	0.14	1		
Public assistance	0.41*	0.22*	0.57*	0.09	0.57*	1	
Rental vacancy	0.52*	0.41*	0.44*	0.08	0.40*	0.23*	1

*0.05 significance level

Exhibit 9

Negative Binomial Regression Coefficients

Variable	Model 4				Model 5			
	❏	SE	p	%Cg.	❏	SE	p	%Cg.
Reported crimes	0.036	0.007	0.000	3.7				
Poverty					0.051	0.021	0.016	5.2
Unemployment								
African American								
Public assistance	0.127	0.046	0.000	13.6	0.082	0.065	0.208	8.6
Rental vacancy	0.131	0.057	0.023	14.0	0.230	0.069	0.001	26.0
Model x^2(*df*)	62.80(3)				40.83(3)			

Variable	Model 6				Model 7			
	❏	SE	p	%Cg.	❏	SE	p	%Cg.
Reported crimes								
Poverty								
Unemployment	0.049	0.051	0.332	5.1				
African American					0.046	0.012	0.000	4.8
Public assistance	0.144	0.060	0.017	15.5	0.039	0.044	0.373	4.0
Rental vacancy	0.258	0.071	0.000	33.0	0.195	0.339	0.000	21.6
Model x^2(*df*)	35.64(3)				54.65(3)			

%Cg. = percent change. p = p-value. SE = standard error.

variables. In addition, Model 3 showed that when all of the variables were considered simultaneously, the effect of poverty on relocation was negative. Model 5 indicates that, after controlling for the public assistance level and the percent of rental vacancies, poverty is a significant factor present in new neighborhoods. The fact that poverty is no longer significant when the other explanatory variables are included indicates that, while poverty continues to be a factor in new neighborhoods, crime and percent African American are stronger predictors of displaced residents in the neighborhoods. Model 6 indicates similar results as previous analyses. Neighborhoods that HOPE VI residents selected do not have significant problems associated with unemployment. Model 7 indicates that the percentage of population that is African American continues to be significant when considered independent of the other explanatory variables.

Summary and Implications

The findings presented in this study suggest that displaced HOPE VI residents in Lexington, Kentucky, chose to move to areas where crime and racial segregation are significant problems. The reason behind these choices is unclear, but indications from past research on HOPE VI displacement suggest that housing choice is highly dependent on the housing market at the time of the relocation (Kingsley, Johnson, and Pettit, 2003; Popkin et al., 2002; Smith, 2002). The findings from this study are consistent with those previous studies. Displaced residents chose neighborhoods that had high levels of public assistance available and that had a high number of vacant rental units. These findings suggest that residents moved to neighborhoods that were the next best available housing beyond the most severely distressed public housing.

Two important considerations must be understood before determining the effects of HOPE VI redevelopments. The first consideration is that project site evaluation results have little value in describing the outcomes of the original residents unless a high percentage of them returned to the redeveloped housing. In the present study, no previous residents returned to the original site. Thus, to gain the best understanding of the outcomes for the residents, it is important to focus attention on the types of places where HOPE VI residents move. The second consideration that must be made is that determining the level of improvement for HOPE VI residents is very difficult. Within practically any examination of HOPE VI, it will be difficult for researchers to argue that relocation housing is not at least somewhat better than the original public housing. It seems inevitable that a program designed to identify and redevelop the most severely distressed public housing would have high levels of residents reporting better living circumstances. Two questions remain: Are the new housing and neighborhoods areas that can sustain social cohesion? Were the areas that absorbed hundreds of displaced residents prepared to do so?

The purpose of this article is not to indicate that these neighborhoods were troubled because of the residents, but instead that the residents moved to neighborhoods with preexisting problems, and combining these preexisting problems with an already struggling population may be the recipe for future failure. This study's main finding is that crime levels and racial segregation in a city block group significantly predict the number of displaced residents after controlling for neighborhood choice factors. These findings raise serious questions for the city of Lexington about how effective the implementation of the Charlotte Court HOPE VI project was and if better planning would have positively affected the outcomes of residents involved in the relocation process.

This study's methodology is an example of how readily available data can be used to inform and guide public policy decisionmaking. Local police departments, local housing agencies, and a number of federal agencies have data available for analysis, which can greatly aid in predicting governmental program outcomes. A logical relocation method would be to provide residents with housing services in neighborhoods with lower crime and racial segregation levels.

One HOPE VI goal, to create local partnerships that can provide additional funding and services for the residents, was not analyzed in this study. A good use of HOPE VI funds would be to promote relationships between Section 8 voucher users and local property owners that are located in areas with better schools, lower crime, lower racial segregation, and, in general, more opportunities for success. This service would enable the city to provide a safeguard from increasing problems in neighborhoods on the brink of becoming troubled and would provide more economic and social opportunities to residents.

Another good use of local partnerships would be to develop design initiatives that are conducive to returning residents to the original neighborhood. Many original resident households do not have enough money to move back into mixed-use, affordable housing typical of HOPE VI redevelopments. Local partnerships should work with designers to develop new housing that is designed for the original residents. Designs should include considerations for social cohesion and crime prevention as well as for social and physical sustainability. Designing HOPE VI redevelopments for the original residents does more to attack the problems that most concern the individuals whom HOPE VI is supposed to help. In addition, working to return original residents to the HOPE VI sites eliminates problems associated with resident displacement. Neighborhoods selected by displaced residents in

this study were already struggling with issues related to crime, poverty, unemployment, and racial segregation. Thus, working to help residents avoid these areas is mutually beneficial for both the displaced residents and the potential new neighborhoods. By promoting partnerships in the local housing market, the concentration of displaced residents in already struggling neighborhoods can be reduced and more can be done to return residents to their original neighborhoods where more social capital is available.

Acknowledgments

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