

Hedonic Estimation of the Impact of HOPE VI on Neighborhood Property Values
An Honors Paper for the Department of Economics
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Abstract

Designed as a program to revitalize distressed public housing, one would anticipate that projects which are rebuilt with HOPE VI funds would have a positive effect on surrounding property values. This study uses hedonic methods employed by researchers on earlier public housing programs to test this hypothesis. Comparisons are made between HOPE VI and other types of public housing programs. If indeed HOPE VI has had a positive effect on property values then the program has achieved one of its primary goals, the beginning of a transformation of some of America's worst neighborhoods into healthy communities.

The findings of the study are that HOPE VI had a statistically significant positive impact on surrounding property values on the order of 8.25-10.25 percent for every quarter-mile closer that a housing unit was located to the development. Other public housing developments were found to have little if any effect on property values. The results ranged from 0-.5 percent increases in property value over that same distance.

HOPE VI was created in 1992 to rebuild failing housing projects around the country. The scope of the plan was broad. It would lower the density of existing public housing developments and allow for the development of mixed-income communities. The process was designed to renew entire neighborhoods so that surrounding residents (as well as public housing tenants) would benefit from the renovations. HOPE VI would become a revolutionary program which would attempt to change attitudes towards public housing.

Central to measuring the success of public housing programs is measurement of the program's perception by both residents and surrounding community members. The "not in my backyard" or NIMBY phenomenon displayed by lawmakers and community members has plagued public housing programs since their inception and is still prevalent today. In communities throughout the U.S., public housing is widely perceived to cause negative externalities. One approach to evaluating the extent of this phenomena is to poll community members about impacts of public housing. Almost all of the research which has been commissioned by Housing and Urban Development (HUD) on HOPE VI has relied on first-hand interviews and other anecdotal evidence to evaluate the program's impact. Yet, this type of research is subjective in nature. What is provided is a snapshot of how targeted populations feel about their neighborhood. Because of the overwhelming size of the task, these types of studies cannot poll the entire population which is affected by one HOPE VI development, let alone developments in multiple cities. For example, there are 43,307 people with a 1.5mile radius of the Richard Allen Homes HOPE VI project in Philadelphia alone. The only way to understand the effect on the entire population is through the use of census data. The caveat to this approach is that the Census Bureau does not ask questions which are specifically related to public housing. Therefore, indirect methods of measurement must be employed. One such indirect approach is to focus on property values. If public housing causes negative externalities, then this should be reflected in lower property values surrounding the project. Since residents are all participants in the real estate market, it is reasonable to assume that each has made a purchasing decision which has maximized his or her utility based on set of preferences constrained by his or her budget. With 2000 census data, it is possible to obtain median housing values for large portions of the population. Through statistical techniques, one can obtain estimates of the implicit prices which community members, on the whole, have placed on attributes which comprise a neighborhood. One such attribute is the proximity to public housing. Therefore, property values can be used to obtain estimates of the price of proximity to public housing. In this study, the principal price examined will be proximity to a HOPE VI project.

Results

Descriptive Statistics

Variable	(1)	(2)	(3)	(4)
R ² value	0.3014	0.7555	0.7557	0.7636
N	157	157	157	157
Percentage of owner-occupied housing units	-0.5581*	-4.032712	-4.18032	-4.30913
Percentage of total population under 21	1.76693***	1.05381**	1.05402	963747**
Percentage of total population below the poverty line	-1.39918**	-6.44373	-7.00981	-6.094705
Mean travel time to work for total population	-0.0109	-0.03681	-0.0394	-0.03683
Median household income for total population	0.00013**	0.004952	0.004911	0.004975
Unemployment Rate for total workforce	-1.3301***	-1.25047***	-	-1.289722**
Percentage of total population with a Bachelor's degree	-0.0037	7.03383	6.57383	6.737621
Distance from center of block group to center of block group w/ HOPE VI development (miles)	-0.3318*	-3.85688**	4.12929*	-
Ln distance from center of block group to center of block group w/ HOPE VI development (miles)			(1.85574)	-3.054508*
Dummy for block groups w/ HOPE VI developments			-1.04832	-2.165569
Distance from center of block group to center of block group with other public housing (miles)	-0.0081***	-0.008947*	-0.104869*	-0.104869*
Ln distance from center of block group to center of block group with other public housing (miles)				0.141858
Dummy for block groups w/ other public housing developments			-1.73122	-1.837573
Vacancy rate for sale housing units	-1.75978***	-1.208334***	-	-1.275522**
Percentage of housing units with electric heat	1.24328***	1.067574***	1.074632	1.08828**
Average owner-occupied household size	-0.0112	-0.007759	-0.003076	-0.0077898
Owner-occupied housing units: median year built	0.003807	0.0041511	0.004198	0.0043079
Owner-occupied housing units: median number of rooms	0.00872	0.003674	0.002126	0.0031766
Owner-occupied housing units: median year that owner moved in	0.00522**	-0.002278*	-0.002278*	-0.002278*
percentage of multiple unit structures (Atlanta, GA is the excluded group)				1.094295
Dummy for city of Charlotte, NC				1.094295
Dummy for city of Kansas City, MO				1.094295
Dummy for city of Boston, MA				1.094295
Dummy for city of Denver, CO				1.094295
Dummy for city of Philadelphia, PA				1.094295

Table of Results for Models 1,2,3, and 4

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Note: Numbers in parenthesis are robust standard errors. The dependent variable is the natural logarithm of the median value of specified owner-occupied housing units. * p<0.10, ** p<0.05, *** p<0.01

Conclusions and Implications

Since the dummy variables which mark block groups that contain HOPE VI and other public housing were insignificant, the inter-block group effects of public housing on property values are unclear. Instead, conclusions are drawn on the effects of public housing on surrounding block groups.

This study finds that the common perception that public housing causes a negative externality is incorrect. In fact, public housing developments may even slightly increase property values. But the more likely conclusion is that housing values are not affected by their proximity to public housing. The NIMBY phenomenon which is displayed by community members in regards to public housing is therefore unjustified.

HOPE VI, on the other hand, displays a large positive externality. For the same \$200,000 home, locating one-quarter mile closer to HOPE VI increases that home's value by \$16,500-20,500, holding all else constant.

The policy implications of both these findings are important. Public housing developments should not be feared since they generally have no effect on the surrounding property values. HOPE VI redevelopment should be encouraged by community members because it substantially increases surrounding property values. Taking property values as a proxy for neighborhood strength, it can be concluded that HOPE VI substantially improves the neighborhoods in which it is located. This supports the overall findings of Zielenbach, although his study did not use statistical measures to control for other effects.

More research is needed on the effects of HOPE VI developments on property values. The release of the Long Form Neighborhood Change Database (NCDB) will allow statistical studies to be undertaken using the pre-/post- approach implemented by Galster et al. Relevant to HOPE VI, the Long Form NCDB will include census data from the 1990 and 2000 censuses. Longitudinal studies using these data will be able to control for more neighborhood and structural factors, thereby reducing some of the data limitations of the 2000 census data encountered in this study.