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Coping with the Great Recession: Disparate Impacts on Economic Well-Being in Poor Neighborhoods

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Opportunity and Ownership Project
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Given the chance, many low-income families can acquire assets and become more financially secure. Conservatives and liberals increasingly agree that government's role in this transition requires going beyond traditional antipoverty programs to encourage savings, homeownership, and private pensions. The Urban Institute's Opportunity and Ownership Project presents some of our findings, analyses, and recommendations. The authors are grateful to the Pew Charitable Trusts for funding this study and providing thoughtful comments on the report. The authors thank the Ford Foundation and Annie E. Casey Foundation for funding related work under the Opportunity and Ownership Project at the Urban Institute.

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ABSTRACT

This study examines how residents of high- and low-poverty neighborhoods fared in terms of employment, wealth, and housing losses during the Great Recession, using the Panel Study of Income Dyanmics. While residents of high-poverty neighborhoods did not experience different rates of change in employment, wages, or home equity losses than residents of low-poverty neighborhoods between 2007 and 2009, their position prior to the onset of the Great Recession exposed them to much higher absolute levels of economic insecurity. Further, the recession severely diminished wealth holdings of families in high-poverty neighborhoods and put them at an increased risk of foreclosure.

Introduction

Neighborhoods are key drivers of economic mobility in the United States. Economic Mobility Project studies show that neighborhood poverty explains one-quarter to one-third of the black-white gap in downward mobility. Growing up in a high-poverty neighborhood instead of a low-poverty neighborhood leads to 52 percent more downward mobility among children in middle- or high-income families.[1]

Did the Great Recession's devastating impact on jobs and incomes worsen these and other economic problems differentially across families in poor and nonpoor neighborhoods? Normal recessions hit residents in poor neighborhoods especially hard, because they have less education, less work experience, fewer occupational credentials, and fewer stable jobs than do residents of other neighborhoods.

In the 2007–2009 recession, the unusually high employment losses and the dramatic drop in home prices may have been especially devastating to residents of poor neighborhoods. Higher rates of foreclosures among residents of poor neighborhoods may have meant far higher displacement rates and residential instability; increased vacancy rates induced by foreclosures may have led to external effects, such as increased crime and weakened social relationships. These additional negatives may have weakened property values and the revenue base for schooling.

On the other hand, the 2007–2009 recession may have harmed residents of nonpoor neighborhoods as much as those in poor neighborhoods. People living in poor neighborhoods may have suffered less severe capital losses, since they are less likely to own homes and they own fewer financial assets. In addition, the Great Recession caused significant job losses among the more educated as well as the less educated.

The role of homeownership is of particular interest for the Great Recession. In a normal economic downturn, homeownership can help families weather the downturn and limit their economic hardships by allowing them to draw on home equity and pay low housing costs. If they lose their jobs, they can even sell their homes and withdraw equity. Residents in poor neighborhoods are less likely to take advantage of these options because they are less likely to own homes. These patterns may have changed during the 2007–2009 recession because the sharp declines in home values wiped out large amounts of equity and left many grappling with how to keep up mortgage payments on their homes. Many have lost all their equity; some have fallen behind on mortgage payments or experienced foreclosure. In poor neighborhoods, homeowners may have felt forced to sacrifice other basics to remain in their homes. Thus, while low homeownership rates are generally a disadvantage among families in poor neighborhoods, the effects are unclear in the Great Recession, especially if homeowners were less protected than renters in the 2007–2009 period.

The transition into and out of homeownership has important implication on economic mobility. Studies show that students from low- and middle-income families are much more likely to enroll in college, to select higher-quality schools, and to graduate with a four-year degree when their families experienced gains in housing wealth.[2] Declines in home prices created new opportunities for gaining homeownership. Houses became more affordable in poor neighborhoods, potentially attracting

moderate-income families to buy houses in these neighborhoods, which, in turn, could have reduced the concentration of poverty. The Great Recession may have altered the flow in and out of poor neighborhoods in various ways. Families living in poor neighborhoods may have felt trapped because they did not want to abandon their homes after the sharp fall in home values. They may have decided to wait out the downturn, thereby limiting their geographic mobility and thus their chances of remaining employed. In addition, families that can no longer afford rents in better neighborhoods may have been forced to move into poorer neighborhoods.

This study analyzes how families in poor and nonpoor neighborhoods experienced economic losses or gains during the Great Recession. Specifically, we answer three research questions:

1. Did families initially living in poor neighborhoods suffer more serious economic losses than residents of other neighborhoods in the 2007–2009 period?
2. Within poor neighborhoods, did job prospects worsen more for renters or for homeowners during the housing crisis and the recession?
3. What share of people starting in low-income neighborhoods in 2007 changed their housing status or moved away from low-income neighborhoods by 2009?

In answering these questions, the analysis deals with what took place among families in poor neighborhoods, including whether residents did worse than those with similar characteristics initially living in other neighborhoods. The data requirements include information on a representative sample of the same individuals and families before and after the onset of the Great Recession, including whether they initially lived in a poor neighborhood. The 2007–2009 waves of the Panel Study of Income Dynamics (PSID) meet these requirements when used with restricted geographic data on census tracts of respondents' residences. With the geographic information, we match individuals with local area data on poverty and metropolitan changes in home prices, employment, and foreclosures.[3]

The next section briefly describes existing studies relevant to our study. Section III presents descriptive and multivariate results for each of the research questions. Section IV discusses the main findings.

Literature

The Great Recession's negative impacts on vulnerable populations most likely to live in poor neighborhoods are becoming well documented. African Americans, Hispanics, high school dropouts, and unskilled workers experienced the highest increase in unemployment rates between 2007 and 2009.[4] Poverty rates increased most among those who were unemployed or underemployed and among young adults without a high school diploma. Between 2005 and 2009, median black and median Hispanic households suffered much larger percentage declines in wealth than did white families.[5] At the same time, economic losses were widespread and likely to hit all types of neighborhoods; over 60 percent of U.S. families experienced wealth losses between 2007 and 2009, and declining home values accounted for the greatest dollar losses.[6]

This evidence on individuals suggests but does not demonstrate differential effects of the Great Recession on residents of different neighborhoods. One study of the Great Recession's impacts on families in poor neighborhoods comes from an analysis of data from the Making Connections surveys of about 2,500 families living in low-income neighborhoods of seven cities in 2005–2007 and again in 2008–2011.[7] A variety of findings emerged. Average household debt among these residents increased significantly by $3,500, with average debt reaching $35,400 in 2008/2009. Even within these neighborhoods, low-income families disproportionately lost equity during the financial crisis.[8] Another

study examining homeownership using the same data found that poor families and those with less home equity were more likely to move out of homeownership. Two-parent and Hispanic families were more likely while blacks and single-parent families were less likely to take advantage of new chances for homeownership.[9] These studies provide information on selected low-income neighborhoods but no comparative data on how the incidence of economic and social losses was spread across individuals initially living in poor versus nonpoor neighborhoods.

Within low-income neighborhoods, the deflation of the housing bubble might have locked in homeowners and thereby impeded upward mobility associated with moving to a middle- or high-income neighborhood. Selected studies of prior downturns in home prices show a negative impact on household geographic mobility.[10] With the wide dispersion in unemployment rates across the country, many are concerned that the weak housing market further increases structural unemployment by preventing homeowners who have negative equity from moving to better job markets.[11] Recent studies using data that cover the Great Recession have produced mixed results. Despite using the same American Housing Survey, some researchers find that homeowners with negative equity are one-third less likely to move,[12] while others conclude that homeowners with negative equity are slightly more likely to move.[13] A separate study of state-to-state migration between 2006 and 2009 (using data from the Internal Revenue Service) yielded evidence that negative home equity decreased geographic mobility, although the reduction had a negligible impact on the national unemployment rate.[14] Certainly, moves are especially common among the low-income population. One study on 10 low-income neighborhoods found that roughly half the families with children had moved to a new address three years later, though many of the movers remained nearby. Reductions in neighborhood poverty occurred in 3 out of 10 neighborhoods.[15]

The sharp decline in home prices brought new homebuying opportunities to poor neighborhoods. But, no analysis has documented whether this increase in affordability indeed attracted middle-income families. One neighborhood study of an episode between 1985 and 1990 in New Orleans uncovered some surprising results. It was middle-income whites who had recently bought housing with high loan-to-value ratios who were forced to sell or underwent foreclosure. The lower housing prices in these areas made housing affordable to middle-class blacks. When middle-income whites moved to these areas, they altered the racial composition in many New Orleans neighborhoods.[16]

Our study is one of the first that examines the differential impacts of the Great Recession across families living in neighborhoods that differ by neighborhood poverty level. It also offers new findings on whether homeowners or renters experienced higher losses in economic and social welfare, which in turn has important implications for economic mobility in the coming years. Finally, the study examines changes in homeownership and renter status across poor and nonpoor neighborhoods, while taking account of county differences in changing home prices.

Results

Who Lives in Poor Neighborhoods?

The characteristics of people living in neighborhoods at different poverty levels reveal few surprises. From the American Community Survey (ACS) five-year estimates 2005–2009 of all census tracts in the United States, blacks, Hispanics, single mothers, people with less than a high school diploma and households with less than $15,000 in annual income, and the foreign-born are more likely to live in neighborhoods with higher rates of poverty (table 1a). People living in neighborhoods with higher poverty rates are also less likely to be employed or own homes, though the homeownership rate is over 40 percent in the poorest group of neighborhoods.

Table 1a. Demographic Distribution by Neighborhood Poverty from the American Community Survey

		By Neighborhood Poverty Rate							
	All	Less Than 10% Poor	10%–19.9% Poor		20%–29.9% Poor		30% or More Poor	
% Non-Hispanic white population	65.0	76.9	65.6	***	47.6	***	28.6	***
% Non-Hispanic black/African American population	12.0	6.3	11.4	***	20.3	***	29.3	***
% Hispanic/Latino population	16.2	9.1	16.6	***	25.8	***	36.2	***
% Foreign born	12.4	10.7	12.5	***	16.0	***	16.1	***
% of households that are female-headed families with own children under 18	7.6	5.1	7.8	***	11.0	***	14.9	***
% Population age 16–19 not high school graduates and not enrolled in school	6.7	3.9	7.6	***	10.5	***	12.0	***
% Persons 25+ years old with no high school diploma or GED	16.1	9.0	17.6	***	25.8	***	32.4	***
% Households with less than $15,000 income in the past 12 months	13.2	6.5	13.7	***	20.8	***	34.4	***
% Population 16 years old and over who are employed	60.3	64.7	59.8	***	55.4	***	47.5	***
Homeownership rate	67.4	78.0	64.8	***	53.5	***	42.7	***

Source: Authors' calculations from American Community Survey five-year estimates 2005–2009.

Notes: (1) Statistics are weighted by total population of census tracts. (2) *** p<0.01, the difference is compared with less than 10% poor.

The racial and ethnic distribution across neighborhoods in the ACS data is consistent with our PSID study sample (table 1b). In neighborhoods with a poverty rate over 30 percent, the majority of families are headed by blacks and Hispanics (65.3 percent). In contrast, families headed by blacks and Hispanics only account for 11.9 percent of total families in neighborhoods less than 10 percent poor.

Given differences in education across neighborhoods, one would certainly expect residents in poor neighborhoods to experience disproportionally high losses in a normal economic downturn. However, it is not clear whether they would be hit harder in the Great Recession, especially in terms of wealth and housing status, since residents initially in poor neighborhoods have lower homeownership rates and fewer assets to lose than residents in other neighborhoods.

How Did Economic Outcomes during the Great Recession Vary among Residents of Poor and Nonpoor Neighborhoods?

Changes in Employment Outcome

Employment plays an important role in economic mobility. Labor earnings are a major component of income for most low-income families. Joblessness and limited work experience directly affect a worker's opportunity to climb the economic ladder. In addition, high levels of local unemployment may change the social norms around work, which could in turn cause underinvestment in education of children.[17]

The share of employed working-age individuals dropped significantly between 2007 and 2009 in all neighborhoods for both men and women, except for women living in high-poverty neighborhoods (with more than 30 percent poverty).[18] In 2007, 73.5 percent of

Table 1b. Percentage of Families by Race/Ethnicity of Head from PSID 2007, by Neighborhood Poverty in 2007 Census Tract

		Neighborhood Poverty Rate							
	All	Less Than 10% Poor	10%–19.9% Poor		20%–29.9% Poor		30% or More Poor	
% Non-Hispanic white-headed families	74.0%	84.5%	76.0%	***	57.9%	***	32.2%	***
% Non-Hispanic black-headed families	14.8%	6.6%	13.1%	***	27.7%	***	47.9%	***
% Hispanic-headed families	8.0%	5.3%	8.0%	***	10.9%	***	17.4%	***
% Families headed by other race, non-Hispanic	3.2%	3.6%	2.9%		3.5%		2.5%	

Source: Authors' calculations from the Panel Study of Income Dynamics 2007.

Note: *** p<0.01, the difference is compared with less than 10% poor.

working-age men living in high-poverty neighborhoods were employed, compared with 65 percent in 2009 (table 2a). Both men and women living in neighborhoods with more than 20 percent poor residents had significantly lower employment than individuals in nonpoor neighborhoods (less than 10 percent poor) in both years 2007 and 2009. These patterns also hold for estimates based on percentage change.

Another perspective is to examine changes of employment status for each individual (table 2b). Job loss certainly involves downward mobility in earnings and income, while reentering employment means more opportunities to move up the income ladder. The proportion of working-age individuals employed in 2007 and no longer employed in 2009 was most pronounced in the poorest neighborhoods among men but not among women. At the same time, job finding (moving from nonemployed to employed) was at least as high in the poorest neighborhoods as in other neighborhoods. However, because of their lower initial levels of employment, men and women living in the poorest neighborhoods were

Table 2a. Proportion Employed in 2007 and 2009, by Neighborhood Poverty

	Currently Employed (%)				Changes 2007–2009	Percentage Change 2007–2009
	2007		2009			
Men 25–59						
Less Than 10% Poor	88.1		82.1		–6.0	–6.8%
10%–19.9% Poor	87.2		79.6		–7.6	–8.7%
20%–29.9% Poor	76.7	***	72.2	***	–4.5	–5.8%
30% or More Poor	73.5	***	65.0	***	–8.5	–11.6%
Women 25–59						
Less Than 10% Poor	78.4		73.8		–4.5	–5.8%
10%–19.9% Poor	78.5		72.2		–6.3	–8.0%
20%–29.9% Poor	64.4	***	57.7	***	–6.7	–10.4%
30% or More Poor	59.7	***	59.6	***	–0.1	–0.2%

Source: Authors' calculations from the Panel Study of Income Dynamics 2007–2009.

Table 2b. Individual Changes in Employment 2007–2009, by Neighborhood Poverty

	Employed in '07 & '09 (%)		Not Employed in '07 & '09 (%)		Employed in '07, Not Employed in '09 (%)	Not Employed in '07, Employed in '09 (%)	
Men 25–59							
Less Than 10% Poor	78.4		7.8		10.0	3.7	
10%–19.9% Poor	76.2		8.8		11.3	3.7	
20%–29.9% Poor	67.2	***	18.0	***	9.6	5.2	
30% or More Poor	58.6	***	19.7	***	15.2	6.5	
Women 25–59							
Less Than 10% Poor	67.3		15.2		11.1	6.4	
10%–19.9% Poor	65.5		14.8		12.9	6.9	
20%–29.9% Poor	50.5	***	28.1	***	14.2	7.3	
30% or More Poor	48.5	***	30.1	***	10.4	11.0	**
	Employed in '07, Retired in '09 (%)						
All 50–59							
Less Than 10% Poor	9.2						
10%–19.9% Poor	8.7						
20%–29.9% Poor	3.3	***					
30% or More Poor	3.0	**					

Source: Authors' calculations from the Panel Study of Income Dynamics 2007–2009.

Notes: (1) Employment status "employed" is defined as currently employed by the time of 2007 or 2009 interview. "Not employed" includes temporarily laid off, unemployed, retired, student, and other nonworking status. (2) Neighborhood poverty category is defined using poverty rate at 2007 census tract residence, from the American Community Survey 2005–2009 summary file. (3) *** p<0.01, ** p<0.05, * p<0.1, the difference is compared with less than 10% poor.

far less likely to hold jobs in both periods and far more likely to be jobless in both periods. Among older workers (ages 50–59), nonemployment linked to retirement was less common in poor than in other neighborhoods (not shown); as a result, only 3.0 percent of workers living in the poorest neighborhoods were retired in 2009, while 9.2 percent of those living in nonpoor areas were retired.

Surprisingly, women living in the highest-poverty neighborhoods experienced no decline in their employment rate; women in neighborhoods with over 30 percent poverty sustained their employment rates at about 60 percent in 2007 and 2009 (table 2a). As table 2b shows, the reasons are that (1) these women were slightly less likely to leave employment than women in nonpoor neighborhoods and (2) of the women who were not employed in 2007, the share that held jobs in 2009 was almost twice as high in poor relative to nonpoor neighborhoods.

Changes in Wage, Wealth, and Family Income

What about changes in income and wealth? Table 3 reveals a mixed picture across neighborhoods. The share of heads who experienced wage losses over 20 percent does not rise by neighborhood poverty. (Note that this sample includes only those who held jobs in both periods and thus includes a smaller share of residents of high-poverty neighborhoods.) Families living in higher-poverty neighborhoods did not have a significantly higher likelihood of experiencing family income loss in 2006–2008. In terms of wealth changes, fewer families in high-poverty neghborhoods experienced losses in family net worth between 2007 and 2009.

Table 3. Losses in Wage, Income, and Wealth, by Neighborhood Poverty

	Share of Head's Wage Loss over 20%	Share of Family Income Loss over 20%	Share of Families with Wealth Loss		Median Dollar Change in Wealth among Families with Wealth Loss ($)		Median Percentage Change in Wealth among Families with Wealth Loss	
Less Than 10% Poor	8.6%	23.7%	61.8%		-85,613		–41.5%	
10%–19.9% Poor	10.4%	23.9%	55.4%	***	-42,459	***	–49.1%	***
20%–29.9% Poor	10.2%	23.3%	54.2%	***	-23,390	***	–63.2%	***
30% or More Poor	8.5%	24.5%	49.7%	***	-22,892	***	–63.6%	***

Source: Authors' calculations from the Panel Study of Income Dynamics 2007–2009.

Notes: (1) Neighborhood poverty category is defined using poverty rate at 2007 census tract residence, from American Community Survey 2005–2009 summary file. (2) *** p<0.01, ** p<0.05, * p<0.1, the difference is compared with less than 10% poor. (3) Income and wealth are inflated to 2009 dollars using the Consumer Price Index research series (CPI-U-RS).

Among families that did lose net worth, families in neighborhoods over 20 percent poor lost only about one-fourth of the wealth families in neighborhoods with less than 10 percent poor did. This is partly because residents in poor neighborhoods had fewer assets in 2007. The percentage loss of residents initially in high-poverty neighborhoods was more severe than among residents in neighborhoods with less than 20 percent poor.

Housing Outcomes

Residents in poor neighborhoods were less likely to own homes and have mortgages, and less likely to experience drops in home equity (table 4). But, among those residents with home equity declines between 2007 and 2009, the median percentage loss was about 30 percent in neighborhoods with over 20 percent poor. Research suggests that the recent housing bust and the resulting loss in home equity could negatively affect postsecondary decisions of low- and middle-income families, thus affecting the foundation of economic mobility.[19]

In 2009, more than one out of five home mortgage holders in high-poverty neighborhoods were experiencing mortgage distress, defined as falling behind on mortgage payments in 2009 or reporting they were "very likely" to fall behind on mortgage payments in the next 12 months. The higher the neighborhood poverty rate, the higher the share of families in mortgage distress.

These housing and mortgage outcomes reveal a mixed picture. Residents in high-poverty neighborhoods were less likely to own homes and thus less likely to suffer from the housing bust, and fewer homeowners experienced home equity loss. However, homeowners with mortgages in high-poverty neighborhoods suffered a higher level of mortgage distress. In the next section, we look further into the relationship between housing status, metropolitan home price declines, and economic outcomes in high-poverty neighborhoods.

Families who owned homes and initially lived (in 2007) in the poorest neighborhoods were much less likely to remain homeowners by 2009. Renter families in poor neighborhoods were less likely to become homeowners than were renters in nonpoor neighborhoods. Table 5 examines additional housing outcomes—changes in homeownership between 2007 and 2009. The proportion of families owning homes in both 2007 and 2009 in the poorest neighborhoods was 35.6 percent, only half the rate of families living in neighborhoods with less than 10 percent poverty (69.7 percent). Families living in the poorest neighborhoods were also twice as likely to be renters in both periods

Table 4. Housing and Mortgage Outcomes by Neighborhood Poverty

	Own Home in 2009		Own Home and Have a Mortgage in 2009		Share of Homeowners with Home Equity Fell '07–'09		Median % Decline in Home Equity for Families Whose Home Equity Fell '07–'09
Less Than 10% Poor	73.0%		52.1%		70.3%		–25.7%
10%–19.9% Poor	62.8%	***	41.9%	***	64.7%	**	–27.9%
20%–29.9% Poor	50.8%	***	34.4%	***	59.6%	***	–29.2%
30% or More Poor	38.4%	***	21.9%	***	55.9%	***	–33.7%
Among Homeowners with a Mortgage in 2009							
	Whether Behind Mortgage Payment		**Very Likely Behind Mortgage Payment in the Next 12 Months**		**Any Distress (Currently Behind or Very Likely Behind)**		**Whether Had a Mortgage Modification**
Less Than 10% Poor	4.6%		2.2%		5.7%		10.3%
10%–19.9% Poor	5.6%		4.1%	*	7.4%		12.4%
20%–29.9% Poor	6.8%		4.6%		9.2%		15.9%
30% or More Poor	15.2%	**	8.5%	**	22.6%	***	13.4%

Source: Authors' calculations from the Panel Study of Income Dynamics 2007–2009.

Notes: (1) Neighborhood poverty category is defined using poverty rate at 2007 census tract residence, from American Community Survey 2005–2009 summary file. (2) *** p<0.01, ** p<0.05, * p<0.1, the difference is compared with less than 10% poor. (3) The bottom panel on mortgage distress is on a subsample of homeowners with a mortgage in 2009.

Table 5. Changes in Housing Tenure by Neighborhood Poverty

	Owned in '07 & '09 (%)		Owned in '07, Rented in '09 (%)	Rented in '07 & '09 (%)		Rent to Own (%)		Stay Owned among '07 Home-owners (%)		Stay Rented among '07 Renters (%)	
Less Than 10% Poor	69.7		3.6	23.4		3.3		95.1		87.6	
10%–19.9% Poor	58.4	***	4.8	32.4	***	4.5		92.5	**	87.9	
20%–29.9% Poor	45.1	***	4.7	44.5	***	5.7	**	90.6	**	88.6	
30% or More Poor	35.6	***	4.2	57.5	***	2.7		89.5	*	95.5	***

Source: Authors' calculations from the Panel Study of Income Dynamics 2007–2009.

Notes: (1) Neighborhood poverty category is defined using poverty rate at 2007 census tract residence, from American Community Survey 2005–2009 summary file. (2) *** p<0.01, ** p<0.05, * p<0.1, the difference is compared with less than 10% poor.

(57.7 percent versus 23.4 percent in nonpoor neighborhoods). Conditional on initial housing status in 2007, 90 percent or more families were able to retain their homes after the housing crisis, even among families in the poorest neighborhoods. On the other hand, less than 5 percent of families in poor neighborhoods took advantage of low home prices and became homeowners, compared to over 11 perent in all other areas.

Changes in Employment in Poor Neighborhoods, by Housing Tenure and Area Housing Market Conditions

This section examines differences by housing status in the impacts of the housing crisis and the recession on families within high-poverty neighborhoods. It asks whether homeowners did better or worse than renters and whether neighborhood outcomes varied with the size of changes in the area housing market. For several reasons, job losses might be particularly high in areas where home prices fell most. Home construction and the associated hiring may have dropped most in these areas; larger declines in housing wealth could have generated a more negative impact on consumption; and the perception and actual worsening of neighborhood markets may have discouraged investment, encouraged residents to move out of the area, and discouraged nonresidents from moving into the area. The idea of a "lock-in" effect is that homeowners avoid moving to jobs in other regions because they cannot sell their homes. If such an effect materialized, it should induce more employment losses among homeowners than renters, especially in metropolitan areas that suffered the largest declines in prices.

Table 6 shows that employment rates in high-poverty neighborhoods were higher among homeowners than among renters. Moreover, renters experienced a bigger decline in employment than did homeowners. The employed share of homeowners dropped 3.2 percent (71.3 percent to 69.0 percent) in high-poverty neighborhoods, while the employed share of renters dropped 8.4 percent (60.6 percent to 55.5 percent); only slightly over half of them were employed in 2009.

There is no evidence that larger declines in home prices led to higher job losses. In poor neighborhoods in metropolitan areas where

Table 6. Changes in Employment by Homeownership and Housing Price Decline among Families Living in Neighborhoods with 30 Percent or More Poor, 2007–2009

	Currently Employed (%)				Change	% Change
	2007		2009		2007–2009	2007–2009
All Homeowners in High-Poverty Neighborhoods	71.3		69.0		–2.3	–3.2%
All Renters in High-Poverty Neighborhoods	60.6	**	55.5	***	–5.1	–8.4%
By MSA Home Price Change 2007–2009						
Price Increased /No decline, Homeowners	70.7		67.0		–3.7	–5.2%
Price Declined <10%, Homeowners	77.5		74.3		–3.2	–4.2%
Price Declined >10%, Homeowners	66.5		67.0		0.5	0.8%
Price Increased /No Decline, Renters	60.5		55.4		–5.1	–8.4%
Price Declined <10%, Renters	57.1	*	48.2		–8.9	–15.6%
Price Declined >10%, Renters	65.5		65.6		0.1	0.2%

Source: Authors' calculations from the Panel Study of Income Dynamics 2007–2009.

MSA = metropolitan statistical area

Notes: (1) Homeowners, renters, and neighborhood poverty are defined by initial status in 2007. (2) *** p<0.01, ** p<0.05, * p<0.1. (3) Between first two rows, the difference is compared between homeowners and renters. Among "By MSA Home Price Change 2007–2009," the difference in each year is compared between all homeowners and all renters, and by MSA home price change against the first group—MSA home price increase, homeowners.

home prices declined over 10 percent, employment dropped only 0.8 percent for homeowners and 0.2 percent for renters. These declines in employment were far lower than in metropolitan areas with little or no drop in home prices.

Another way to capture the nexus between employment outcomes, housing status, and the impact of the Great Recession is to estimate multivariate equations that control for residents' characteristics as of 2007. The results in table 7 control for age, education, gender, marital status, race and ethnicity of the household head, and family poverty status. The top panel includes all neighborhoods and captures the association between neighborhood poverty levels and labor market outcomes. The bottom panel includes only individuals initially living in high-poverty neighborhoods at the 2007 interview.[20]

Among all working-age individuals, living in poorer neighborhoods was associated with a 4–5 percentage point lower likelihood of being employed in both 2007 and 2009, even after controlling for initial characteristics, including family poverty status. However, neighborhood poverty was not associated with a higher likelihood of losing or obtaining employment or with a broader measure that incorporates earnings losses (job loss or a wage loss of over 20 percent).

Consistent with the descriptive statistics, homeownership was associated with better labor market outcomes, but the results are not statistically significant except for the group not employed in both years. The share not employed in both 2007 and 2009 was 3.1 percentage points lower among homeowners than renters. In addition, homeowners had a 4.0 percentage point lower rate of earnings loss, either due to wage reductions over 20 percent or the loss of a job. Neither changes in home prices between 2007 and 2009 nor the neighborhood foreclosure rate generated systematic significant effects on employment.

Tuning to estimates including only high-poverty neighborhoods (over 30 percent poor), we find no statistically significant effects of home price changes or of initial homeownership status. The results show that homeowners were over 4.5 percentage points more likely to hold jobs in 2007 and 2009, but the impact was not statistically significant.

Housing Outcomes by Changes in Area Housing Price and Labor Market

Moving into homeownership or moving to a better neighborhood is often associated with better social and economic outcomes, thus promoting upward economic mobility. Descriptive analysis suggests that families living in poorer neighborhoods were more likely to lose homeownership and less likely to become homeowners during the Great Recession. The multivariate analyses reported in table 8 offer a more detailed picture of how changes in housing tenure were associated with neighborhood poverty, area home price changes, and area employment changes, once we control for initial personal characteristics. Renters living in the poorest neighborhoods were 4 percent less likely to take advantage of low home price and move into homeownership than renters in neighborhoods with less than 10 percent poor. Note in the second column that the association between neighborhood poverty and shifting out of homeownership is no longer significant.

Surprisingly, metropolitan areas with the largest declines in home prices and employment did not exhibit any greater losses of homeownership. In fact, homeowners were less likely to become renters in areas with job losses up to 10 percent relative to areas with no job losses at all. The potential of externalities associated with high neighborhood foreclosure rates did not materialize, according to these results. High neighborhood foreclosure rates were not significantly associated with changes in housing tenure. One noteworthy finding is that subsidized renter households in poor neighborhoods were 3 percentage points less likely to become homeowners than unsubsidized renters, even when controlling for personal and economic

Table 7. Changes in Employment or Wages 2007–2009 among Working-Age Workers

	Changes in Employment 2007–2009				Head's Wage Loss over 20%, or Employed in '07 and Not Employed in '09
	Employed in '07 & '09	Not Employed in '07 or '09	Employed in '07 & Not Employed in '09	Not Employed in '07 & Employed in '09	
All					
Neighborhood Poverty 10–19.9%, 2007	0.021	–0.021	0.011	–0.011	0.011
Neighborhood Poverty 20–29.9%, 2007	–0.042**	0.046**	0.003	–0.007	–0.005
Neighborhood Poverty >30%, 2007	–0.046	0.039*	0.004	0.004	–0.000
MSA Home Price Declined <10%, 07–09	0.025	–0.003	0.001	–0.022**	–0.001
MSA Home Price Declined >10%, 07–09	–0.016	0.008	0.010	–0.002	0.015
Neighborhood Foreclosure Rate, 2008	–0.049	0.020	0.015	0.014	–0.008
Owned Home, 2007	0.048	–0.031**	–0.008	–0.008	–0.040**
Living in Neighborhood 30% or More Poor					
MSA Home Price Declined <10%, 07–09	–0.014	0.055	–0.020	–0.022	–0.028
MSA Home Price Declined >10%, 07–09	–0.041	0.074	–0.068	0.035	–0.045
Neighborhood Foreclosure Rate, 2008	–0.328	0.085	0.302	–0.059	0.356
Owned Home, 2007	0.045	–0.042	–0.036	0.034	–0.055

Source: Authors' calculations from the Panel Study of Income Dynamics 2007–2009.

MSA = metropolitan statistical area

Notes: (1) *** p<0.01, ** p<0.05, * p<0.1 (2) Multinomial Logit regression on the four types of changes in employment 2007–2009, with base outcome as employed in 2007 and 2009, and marginal effects are reported. Probit regression on head's wage loss over 20% or employed in 2007 and not employed in 2009, with marginal effects reported. (3) Other independent variables include age dummies (30 to 39, 40 to 49, 50 to 59, 60 and above, with age below 30 as omitted category), education dummies (less than high school, high school diploma only, some college, with college degree and above as omitted category), gender, marital status, race and ethnicity of head (black non-Hispanic, Hispanic, other race non-Hispanic, with white non-Hispanic as omitted category), and family poverty status (based on last year income). These independent variables are status as of 2007 interview. (4) The regression of "all" includes 5,518 individuals. The regression of "living in neighborhood 30% or more poor" includes 731 individuals.

Table 8. Changes in Housing Tenure 2007–2009

	All Renters	All Homeowners	Renters in High-Poverty Areas	Homeowners in High-Poverty Areas	Any Mortgage Distress (All Homeowners with a Mortgage)
	Rented in '07, Owned in '09	Owned in '07, Rented in '09	Rented in '07, Owned in '09	Owned in '07, Rented in '09	
Neighborhood Poverty in 2007 (Omitted Category: <10% Poor)					
10–19.9%	–0.005	0.003	—	—	0.002
20–29.9%	0.009	0.018	—	—	–0.006
>30%	–0.041**	0.025	—	—	0.044
MSA Home Price Change 07–09 (Omitted Category: Increased/No Decline)					
Declined <10%	0.029	–0.011	0.050	0.011	–0.001
Declined >10%	0.016	0.009	0.001	–0.020*	–0.006
County Employment Change 07–09 (Omitted Category: Increased/No Decline)					
Declined <10%	–0.006	–0.047***	–0.013	–0.017	–0.011
Declined >10%	0.012	0.013	–0.014	–0.006	0.037
Neighborhood Foreclosure Rate 2008					
	0.133	–0.004	–0.026	0.010	0.073
Housing Status in 2007 (Omitted Category: Above-Water Homeowner/Unsubsidized Renter)					
Underwater Owner	—	0.026	—	0.960***	0.039
Subsidized Renter	–0.029	—	-0.026**	—	—-

Source: Authors' calculations from the Panel Study of Income Dynamics 2007–2009.

MSA = metropolitan statistical area

Notes: (1) *** p<0.01, ** p<0.05, * p<0.1 (2) Probit regression with marginal effect reported. (3) Other independent variables include age dummies (30 to 39, 40 to 49, 50 to 59, 60 and above, with age below 30 as omitted category), education dummies (less than high school, high school diploma only, some college, with college degree and above as omitted category), headship (head is female, head is male with no wife/cohabitant, with omitted category as head is male with wife/cohabitant), race and ethnicity of head (black non-Hispanic, Hispanic, other race non-Hispanic, with white non-Hispanic as omitted category), family poverty status (in previous year). All variables are status as of 2007 interview. (5) Sample size for each of the five regressions is 2,310; 2,758; 457; 210; and 1,184 respectively.

characteristics. This result probably reflects the fact that subsidized renters will lose their subsidy if they become homeowners while unsubsidized renters will not.

Residential Mobility

Moving to a better neighborhood or moving into homeownership is often associated with upward economic mobility. The multivariate analyses reported in table 9 examine how residential mobility is associated with neighborhood poverty, home price changes, area employment changes, and initial ownership status, once we control for initial personal characteristics. Living in the poorest neighborhoods was associated with a 4 percentage point lower likelihood of moving from renting into homeownership. No significant association emerged between neighborhood poverty and likelihood of moving, or moving out of homeownership for the full sample.

The rate of home price reductions was not associated with residential mobility or with changes in homeownership status. Local employment changes did have several significant though complex linkages. Living in an area where county employment declined but by less than 10 percent was associated with a lower likelihood of moving and of moving out of a

Table 9. Residential Mobility and Neighborhood/Metropolitan Characteristics

	All Families	All Renters	All Homeowners	Families in Low-Income Neighborhoods (LINs)		Renters in LINs	Homeowners in LINs
	Whether Moved '07– '09	Rented in '07, Owned in '09	Owned in '07, Rented in '09	Whether Moved '07–'09	Moved Out of a LIN, '07–'09	Rented in '07, Owned in '09	Owned in '07, Rented in '09
Poor 10–19.9%, 2007	0.017	–0.005	0.003	—	—	—	—
Poor 20–29.9%, 2007	0.016	0.009	0.019	—	—	—	—
Poor >30%, 2007	–0.043	–0.040**	0.024	—	—	—	—
Family Poverty Status, 2007	0.042	–0.055***	0.068**	0.011	–0.018	–0.027*	0.047
HPI Decline <10%, 07–09	–0.000	0.029	–0.011	0.069	0.001	0.040*	0.006
HPI Decline over 10%, 07–09	0.023	0.017	0.009	0.032	0.076	–0.025	0.036
Employment Decline <10%, 07–09	–0.129***	–0.006	–0.046***	–0.117**	–0.101***	0.019	–0.051
Employment Decline >10%, 07–09	0.057**	0.012	0.014	–0.043	0.013	–0.008	–0.010
Foreclosure Rate, 2008	–0.209	0.140	–0.010	0.728**	–0.006	0.009	0.442
Underwater Homeowner, 2007	0.127*	—	0.025	0.099	0.087	—	0.168
Subsidized Renter, 2007	0.346***	–0.030	—	0.323***	0.168**	–0.012	—
Unsubsidized Renter, 2007	0.357***	—	—	0.360***	0.132***	—	—

Source: Authors' calculations from the Panel Study of Income Dynamics 2007–2009.

HPI = Housing Price Index

Notes: (1) *** p<0.01, ** p<0.05, * p<0.1 (2) Probit regression with marginal effect reported. (3) Other independent variables include age dummies (30 to 39, 40 to 49, 50 to 59, 60 and above, with age below 30 as omitted category), education dummies (less than high school, high school diploma only, some college, with college degree and above as omitted category), headship (head is female, head is male with no wife/cohabitant, with omitted category as head is male with wife/cohabitant), race and ethnicity of head (black non-Hispanic, Hispanic, other race non-Hispanic, with white non-Hispanic as omitted category), immigrant status (whether they come from the immigrant sample of the PSID). All variables are status as of 2007 interview.

low-income neighborhood, compared with living in areas with no decline in employment. But, the apparent linkage did not carry over to the comparison of areas with higher or lower job loss.

Not surprisingly, being a renter increased the likelihood of moving by more than 30 percent, for the full sample and for a sample of low-income neighborhood residents. Unsubsidized renters were only slightly more likely to move than subsidized renters. Renters in low-income neighborhoods were also more likely to move out of the low-income area than owners. Homeowners who were underwater on their mortgages in 2007 were 12.7 percentage points more likely to move compared to other homeowners. This result suggests the absence of a lock-in effect that limits the geographic mobility of homeowners who owe more than the equity in their home. The size of the linkage is similar in low-income neighborhoods but not statistically significant.

Summary of Key Findings

How did families initially living in poor neighborhoods fare in the Great Recession? Were the economic losses more serious for residents of poor neighborhoods than for those in other neighborhoods? Were differences in economic outcomes exacerbated during the Great Recession? Given the sharp drop in home prices associated with the recession, did homeowners bear the brunt of the downturn? This study examines an array of economic outcomes during the Great Recession in high-poverty and other neighborhoods. The analysis follows individuals between 2007 and 2009 using data from the Panel Study of Income Dynamics together with matched data on neighborhood poverty rates, county employment change, and changes in metropolitan statistical area home prices.

The results document how individuals and families in poor neighborhoods were hit hardest by the recession, though with some exceptions. Working-age men in high-poverty neighborhoods experienced more declines in employment in 2007–2009 than did working-age men living in low-poverty neighborhoods. At the same time, while women in poor neighborhoods had lower employment rates than other women, women in the poorest neighborhoods maintained their employment levels while other women experienced heavy job losses. Even after controlling for family poverty status and many family background characteristics, neighborhood poverty still explains a sizable share of the variation in employment.

Residents of high-poverty neighborhoods were more likely to experience wealth losses and, among those with wealth, a higher percentage loss in family net worth. There are no significant differences in wage loss or family income loss.

How homeowners fared during the Great Recession is particularly interesting in light of the jump in foreclosures and the decline in home prices. The negative outcomes for homeowners were particularly severe in high-poverty neighborhoods. While a smaller share of homeowners in high-poverty neighborhoods than owners in other neighborhoods have mortgages, more than one in five homeowners with mortgages in high-poverty neighborhoods faced foreclosure or an inability to meet future mortgages payments as of 2009. However, the vast majority of homeowners in high-poverty neighborhoods experienced no mortgage distress, and homeownership was associated with better labor market outcomes. Homeowners in high-poverty neighborhoods were only slightly less likely to remain homeowners in 2009 than homeowners in other neighborhoods. About 90 percent of 2007 homeowners remained owners, a result consistent with other asset-building studies showing that homeownership promotes automatic savings that could protect high-poverty people from economic shocks.

The steep declines in home prices in many geographic areas have often gone together with large declines in employment.[21] However, within high-poverty neighborhoods, the rate at

which home prices fell was unrelated to job losses. High declines in home prices were associated with more individuals dropping out of homeownership, but the link was not significant after controlling for individual characteristics.

Appendix: Analysis Details

Data and Sample

The primary data source for this study is the Panel Study of Income Dynamics (PSID) 2007–2009. The PSID is a nationally representative longitudinal study that has followed the same families over time since 1968. About 8,000 families were interviewed in 2007. PSID collects comprehensive socioeconomic information on individuals and families, including employment, income, wealth, and homeownership, as well as demographic information. In addition, information on mortgage distress was collected in the 2009 wave, including whether individuals were behind on their mortgage payments or received a mortgage modification.

One particularly useful feature of the PSID for this study is the geocoded data that contain identifiers of census tracts in which sample members have lived in each wave of the survey. Census tracts are designed by the Census Bureau to be relatively homogeneous and to have an average of about 1,500 housing units and 4,000 residents. They are commonly used boundaries for defining neighborhoods. In addition, the geocoded data also contain identifiers of county and metropolitan statistical area (MSA), allowing us to merge individual records with external data on county employment and MSA home price changes during the Great Recession.

Data on neighborhood poverty come from the American Community Survey (ACS) five-year summary file 2005–2009. This file provides a wide range of statistics on demographic composition of residents in a census tract, as well as average or median income, and poverty rate in each census tract. Neighborhood poverty is measured by the poverty rate in each census tract that a family lived in at the time of the 2007 interview from the ACS 2005–2009 census tract poverty rate. We acknowledge that this measure is an average over the period of 2005 to 2009; thus, it is a mixture of economic booms and downturns. To examine whether our results are robust to the measure of neighborhood poverty, we conduct analyses by defining neighborhood poverty using the census tract poverty rate in 2000, from the Census 2000 summary file. Both descriptive and multivariate analyses show very similar patterns when using the ACS measure or census measure of neighborhood poverty. Existing literature has documented that the population in extremely poor neighborhoods rose by one-third from 2000 to 2005–2009 and concentrated poverty was almost doubled in Midwestern metro areas, based on analysis of data on neighborhood poverty from the ACS 2005–2009 and Census 2000.[22] We believe the ACS 2005–2009 measure of neighborhood poverty provides a more up-to-date poverty status. Therefore, results presented in this report are based on neighborhood poverty in ACS 2005–2009.

The data on home price trends come from the Federal Housing Finance Agency Quarterly Housing Price Index (HPI). The HPI provides all-transactions housing price indexes in MSAs each calendar quarter. We measure area home price changes from percentage changes of HPI between 2007 and 2009 using the relevant quarters before each survey was fielded. Data on employment for measuring the 2007–2009 percentage change in employment come from the Quarterly Workforce Indicator (QWI), which is based on wage records collected for administrative purposes for the Unemployment Insurance systems and is available through the U.S. census. The QWI provides county-level quarterly employment statistics.

We use Neighborhood Stabilization Program (NSP) foreclosure need data to measure neighborhood foreclosure risks. The U.S.

Department of Housing and Urban Development NSP developed scores for census tracts that estimate number and percentage of foreclosures started over the past 18 months through June 2008.[23] Estimated foreclosure risk is used as an explanatory variable measuring neighborhood housing market conditions.

The main study sample includes all families observed in both 2007 and 2009. Wage, income, and wealth are inflated to 2009 dollars using the Consumer Price Index research series (CPI-U-RS). All descriptive and regression analyses use weights to account for sample attrition and the oversampling of low-income families.

In descriptive analyses, we divide neighborhoods into four categories: less than 10 percent poor, 10–19.9 percent poor, 20–29.9 percent poor, and 30 percent or more poor. Such division ensures sufficient sample size in the highest-poverty neighborhoods and is consistent with the literature.[24] Our main family sample in descriptive analysis contains 2,040 families living in areas less than 10 percent poor, 1,670 families living in areas of 10 to 19.9 percent poor, 858 families in areas of 20–29.9 percent poor, and 730 families in areas of at least 30 percent poor. Sample sizes in the regression analyses vary and are described in each regression table.

Variable Descriptions

Losses in Income and Wealth

We examine several measures of losses in income and wealth during the Great Recession. The first measure is whether the family head's wage loss exceeds 20 percent, based on wage rates in 2007 and 2009. The PSID collects information on whether the individual is paid by the hour or by salary on the current main job. For hourly workers, the hourly wage rate is reported. For salary workers, the amount of salary and pay unit is reported. Hours worked is not collected in either case. We impute hourly wage rate for salary workers based on the assumption that they work full-time. For example, we calculate wage rate of workers paid per week by dividing their salary by 40 for those who reported pay unit as "weekly."

The second measure is whether family income loss exceeds 20 percent between 2006 and 2008. The advantage of this measure is that it captures mobility for everyone: not just those who had employment earnings, but also those who had self-employment earnings and those who did not work. We acknowledge that this measure is based on the time period 2006–2008 and might not capture the impact of the recession well.

The last measure is based on total net worth from 2007–2009. We examine share of families with wealth loss by whether 2009 net worth is lower than 2007 net worth, and measure the magnitude of change by the median dollar change and percentage change in net worth among families with wealth loss between 2007 and 2009.

Mortgage Distress

Information on home mortgages has been collected in the PSID since the 2009 wave. The PSID asks the following questions on the first and second mortgages of all homeowners who have mortgages on their homes: "Are you, or anyone in your family living there, currently behind on your (mortgage/loan) payments?" and "Have you worked with your bank or lender to restructure or modify your mortgage/loan?"

In addition, it also asks this potential mortgage distress question on the first and second mortgage among all homeowners who have mortgages on their homes: "How likely is it that you will fall behind on your (mortgage/loan) payments in the next 12 months?" The answers are either "very likely," "somewhat likely," or "not at all likely" for each of the two mortgages. We define "very likely" as very likely to be behind in the next 12 months on either the first or the second mortgage, or both.

Housing Status

We examine whether economic outcomes differed by initial housing status in 2007 using the following groups: above-water homeowners, underwater homeowners, subsidized renters, and unsubsidized renters. An above-water homeowner is defined as owning a home in 2007 and having home equity in 2007 that was above zero. An underwater homeowner is defined as owning a home in 2007 but with home equity in 2007 either negative or zero. Subsidized renter is defined as having lived in a public-owned project or having at least part of the rent paid by the government in 2007.

Analytic Methods

We use multivariate regressions to estimate how economic outcomes during the Great Recession vary with neighborhood and metropolitan characteristics, as well as individual and family characteristics. Our main regression model is as follows:

$$y_i = X_i\beta + N_i\gamma + \varepsilon_i$$

where y_i is the economic outcome of interest, including changes in employment, income, and wealth, as well as housing outcomes. X_i includes a set of initial individual and family background characteristics. N_i contains a set of neighborhood and metropolitan characteristics, such as initial neighborhood poverty prior to the recession and area housing or labor market changes between 2007 and 2009, to capture the disparate impact of the Great Recession on different areas.[25] ε_i is an error term that incorporates unobserved characteristics of individual *i.*

The individual and family background control variables include age dummies (30 to 39, 40 to 49, 50 to 59, 60 and above, with age below 30 as omitted category), education dummies (less than high school, high school diploma only, some college, with college degree and above as omitted category), headship (head is female, head is male with no wife/cohabitant, with omitted category as head is male with wife/cohabitant), race and ethnicity of head (black non-Hispanic, Hispanic, other race non-Hispanic, with white non-Hispanic as omitted category), and family poverty status (whether below the 200 percent poverty line based on family income in the previous year). All variables are the status of the individual or family as of the 2007 interview. In housing outcome regression analyses, we further control for four types of housing status: being an underwater homeowner, a subsidized renter, an unsubsidized renter, or a homeowner with positive equity (the omitted category).

Neighborhood and metropolitan characteristics include neighborhood poverty rate dummies at 2007 residence census tract, MSA home price change between 2007 and 2009 (decline less than 10 percent, decline over 10 percent, with no decline/price increase as omitted category), and census tract percentage of foreclosures started over the past 18 months through June 2008. In regressions on housing outcome, we also include county-level employment change between 2007 and 2009 (decline less than 10 percent, decline over 10 percent, with no decline/price increase as omitted category). All geographic variables are tied to the individual's 2007 residence or to changes between 2007 and 2009.

All dependent variables in our regression models are discrete variables, and we use probit model and report marginal effect rather than the coefficients. That is, we report the change in the likelihood for an infinitesimal change in each continuous variable and report the discrete change in the likelihood for dummy variables. Standard errors are not clustered by individual/family, as outcome variables are a one-time change for each individual/family. Standard errors are not clustered by census tract, as about 60 percent of census tracts in our sample only contain one family, and we have multilevel geographic characteristics such as census tract, MSA, and county.

Discussion on Neighborhood Effect

Empirical studies on neighborhood effects are subject to multiple estimation problems, such as omitted variable bias, endogenous neighborhood selection, and the reflection problem.[26] Some studies use fixed effects or first difference estimators when panel data are available. Other studies use experimental data to control for selection bias that individuals with certain characteristics choose to live in certain neighborhoods. Quasi-experimental approaches, such as using regional variation as an instrumental variable, are also used in the literature.

This report focuses on the dispariate impact of the Great Recession on residents of neighborhoods with different poverty levels. This study does not identify a causal neighborhood effect. Rather, we describe how the Great Recession is associated with various economic outcomes in poor and nonpoor neighborhoods. The study goes beyond existing research on the relationship between the Great Recession and economic outcomes for individuals and families with certain characteristics (gender, age, education, race and ethnicity, etc.). The possibility of identifying a pure neighborhood effect is limited by the nature of data—about 60 percent of the neighborhoods in our sample do not have multiple families to control for fixed or random neighborhood effects.

Nonetheless, we conduct additional analysis to examine whether the association of the neighborhood poverty and economic outcomes in the Great Recession is related to the role of individual characteristics. First, the raw correlation between neighborhood poverty rate and family poverty status (0/1) is only 0.23. Second, we examine the links between neighborhood poverty and family poverty status using a sequence of regression models: (1) model with three neighborhood poverty dummies but not family poverty status, (2) model with family poverty status but not neighborhood poverty measure, (3) model with both family and neighborhood poverty,[27] and (4) model with both family poverty and neighborhood poverty, with a continuous measure of poverty rate rather than three dummies.[28] We find that including or excluding one poverty measure (family/neighborhood poverty) does not affect the precision of the other poverty measure estimate (i.e., the standard error). After including family poverty status, the estimated effect of neighborhood poverty dummies does shrink a bit, which suggests that family level poverty explains some variation in economic outcomes; thus we retain this variable in the regression model. Using a discrete or continuous measure of neighborhood poverty has little effect on estimates of family poverty status or of other explanatory variables. Results presented in this report use discrete measures of neighborhood poverty, as we consider its relation to economic outcomes to be nonlinear.

Notes

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1. Sharkey, 2009.
2. Lovenheim, 2011.
3. Some of the data used in this analysis are derived from Sensitive Data Files of the Panel Study of Income Dynamics, obtained under special contractual arrangements designed to protect respondents' anonymity. These data are not available from the authors. Persons interested in obtaining PSID Sensitive Data Files should contact PSIDHelp@isr.umich.edu.
4. Hout, Levanon, and Cumberworth, 2011.
5. Taylor et al., 2011.
6. Bricker et al. 2011.
7. The seven cities where Making Connections surveyed families in low-income neighborhoods are Denver, Des Moines, Indianapolis, Louisville, San Antonio, Providence, and White Center.
8. Hendey, McKernan, and Woo, 2011.
9. Hendey and Steuerle, 2011.
10. Quigley, 1987; Stein, 1995; Genesove and Mayer, 1997, 2001; Chan, 2001; Engelhardt, 2003.
11. Batini et al., 2010; Fletcher, 2010.
12. Ferreira, Gyourko, and Tracy, 2009, 2011.
13. Schulhofer-Wohl, 2012.
14. Modestino and Dennett, 2012.
15. Coulton, Theodos, and Turner, 2009.
16. Lauria, 1998.
17. Wilson, 1996.
18. Note the proportion of employed individuals is calculated from the number of individuals currently employed at the time of interview, divided by all individuals of the same age-gender group, rather than all those in the labor force. In economic downturns, many out-of-work individuals give up job search; the unemployment rate (number of employed/ number in labor force) would not be able to capture these discouraged job-seekers.
19. Lovenheim, 2011.
20. As there is little variation in neighborhood poverty rate among high-poverty neighborhoods (and insignificant estimates), we do not include neighborhood poverty as covariates when regressing on the subsample of residents of high-poverty neighborhoods.
21. Lerman and Kingsley, 2010.
22. Kneebone, Nadeau, and Berube, 2011.
23. Estimated foreclosure rate is calculated from Federal Reserve Home Mortgage Disclosure Act data on high-cost loans, Office of Federal Housing enterprise oversight data on falling home prices, and Bureau of Labor Statistics data on county unemployment rates. More technical details can be found at http://www.huduser.org/DATASETS/Desc_%20NSP_data.doc.
24. For example, Sharkey, 2009.
25. We have both neighborhood and individual characteristics in the model. Individual characteristics are not indexed with *t* (time period), as our outcomes are one-time changes between 2007 and 2009. Ideally we would like to control for neighborhood fixed effect. However, 59 percent of census tracts in the PSID data contain only one family. Controlling for neighborhood fixed effect would leave out 59 percent of the observations.
26. For example, Manski, 1989, 2000. For a literature review on theoretical and empirical studies of neighborhood effect, see Haurin, Dietz, and Weinberg, 2003.
27. As the correlation between family and neighborhood poverty is only about 0.2, including both variables in the regression does not have a multicollinearity issue.
28. In the sequence of four regression models, explanatory variables do not include any neighborhood or metropolitan characteristics (other than neighborhood poverty).

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