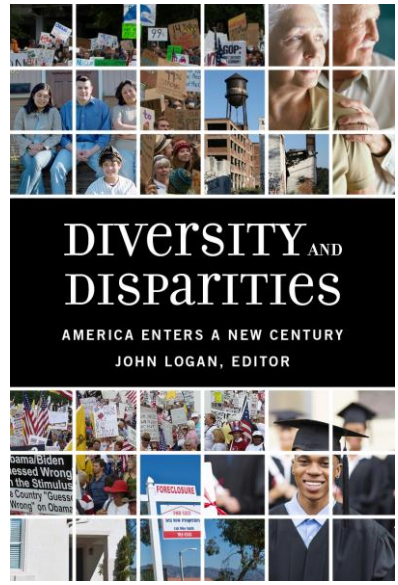

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Chapter 5

Residential Mobility in the United States and the Great Recession: A Shift to Local Moves

Michael A. Stoll

Americans are very mobile. Over the last three decades, the share of Americans who moved in a given year was always more than 10 percent. Despite this, mobility has been declining over this period. More telling, in the last decade, especially in the years just before and during the Great Recession, there was a consistent decline in long-range migrations and a rise in local moves. Interstate residential mobility, already in decline for the past thirty years, had slowed to a near-standstill by the end of the 2000s (Frey 2008a, 2009a). This study shows several ways in which the Great Recession was implicated in these trends. The Great Recession had an impact on many persons: job losses and pay cuts limited their financial resources, and many either lost their home or saw its value decline. Falling home prices made staying (especially in formerly high-cost areas) more plausible for more people. Moreover, the Great Recession probably increased people's fear about their future economic security. Because it was a national phenomenon, it shut off the lure of "better job pastures" elsewhere. People seeking better jobs (or any job) could not simply move west, south, east, or north. All these factors may have prompted many people who otherwise would have moved to stay put, thus reinforcing already low U.S. interstate residential mobility by the end of the decade (Frey 2009b).

Local moves in recent years have increased, but they have been especially high in metropolitan areas with the highest unemployment and the highest number of foreclosures—particularly the West and South, areas hard hit by the Great Recession. Unlike past decades, when local movers were trading up economically—from an apartment to a house, from one house to a better one—these movers were moving down, seeking a cheaper home. African Americans were particularly vulnerable. Not only did more black residents, proportionally, lose jobs or have their homes foreclosed, but those losses were more likely to force them to move.

In this study, I examine residential moves, focusing on the local level. I look at how they have changed over the past thirty years, and particularly over the recent decade, and at the characteristics of those who moved before and during the Great Recession. I also explore self-reported answers to questions about residential moves and whether these answers are consistent with factors associated with the recession as the reason for the move. Finally, I explore whether, to what extent, and how factors at the local level, such as unemployment and foreclosure rates, influence local move rates.

I use data from the Current Population Survey (CPS) and the American Community Survey (ACS) to examine whether those who moved during the Great Recession were more likely than people in other periods to be unemployed, to be poor, or to not own a home. The CPS also provides respondents' answers to questions about the reasons for their move. The expectation is

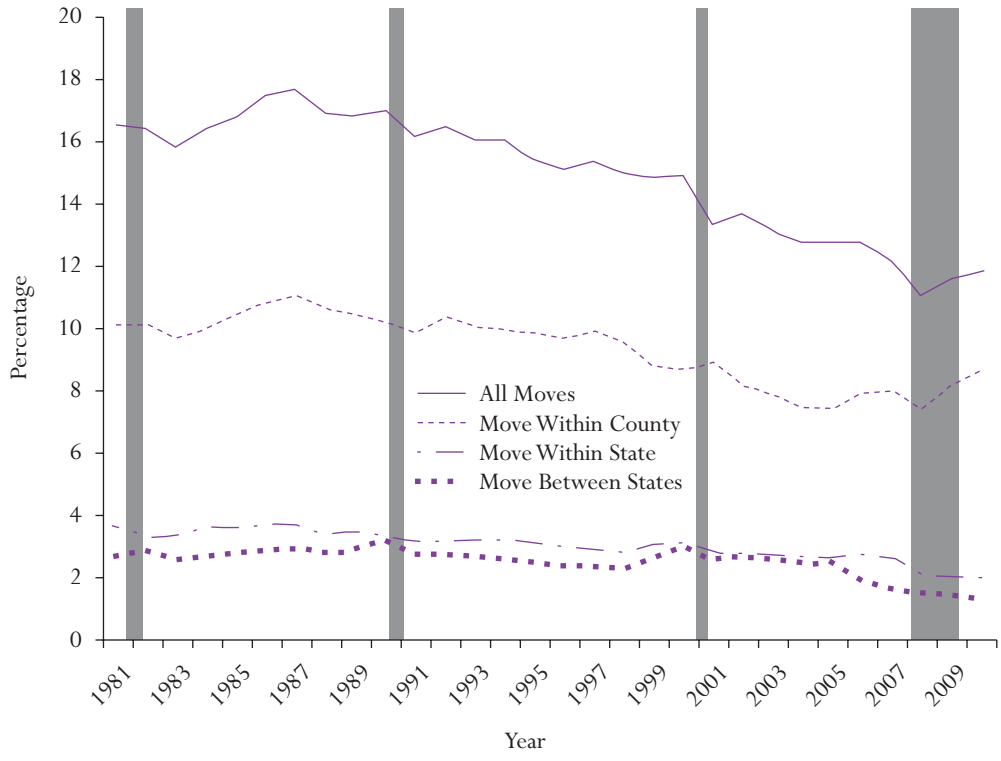
that their answers to these questions will be more directly related to factors associated with the recession. Finally, I determine which parts of the country have experienced more local moves and ask how these areas have been affected by unemployment and foreclosure.

RESIDENTIAL MOVEMENT OVER THE PAST THIRTY YEARS

Figure 5.1 uses data from the CPS to show how population migration has changed over the past thirty years in the United States and the different types of moves people made over this period.[1] Movers are defined as adults (ages eighteen and older) who responded affirmatively to the question of whether they moved in the year prior to the survey.[2] The one-year migration question is asked fairly consistently in the CPS from 1964 to the present, thus making it possible for mobility to be observed over long time periods at the national level.[3] Local movers are identified as those who moved within county, and the move rate is determined by taking the fraction of the total relevant population (ages eighteen and older) who moved over the past year.

There are a number of important highlights in figure 5.1. First, the percentage of people who move has dropped significantly over the past two decades. Indeed, the 12 percent who moved in 2010 is almost the lowest level recorded over this period, although an uptick in mov-

FIGURE 5.1 *U.S. Adults Who Moved over the Past Year in the United States, by Type of Move, 1980–2010*



Source: Author's calculations using Current Population Survey (CPS).
Note: Recession periods are shaded.

ing is observed toward the end of the most recent decade. Various reasons have been suggested for this slowdown in American domestic mobility. Traditional demographic causes, such as the aging of the population, the rise of two-earner households and household income levels, and regional or other types of compositional changes, have all been ruled out. Some scholars argue that technological and other transportation and communication advances have led to a decline in the geographic requirements of place, thus decreasing job-related moves (Kaplan and Schulhofer-Wohl 2012). Others cite greater affluence and security in American society over time as well as non-economic and historical factors, such as the end of great migrations (which in turn spurred local moves), as reasons for long-run declines in residential mobility (Fischer 2002).

More recently, some researchers have speculated that economic and housing crises played a major role in reinforcing the low level of interstate migration, which has been in decline for quite some time (Frey 2008a, 2008b, 2009a, 2009b). Many states that saw large in-migration during the boom period, such as California and Florida, saw a reversal to out-migration during the Great Recession. Moreover, those metro areas in the West and South that experienced the biggest increases in migration during the earlier housing boom period in the middle of the decade, such as Phoenix, Riverside, Las Vegas, Tampa, Orlando, and Atlanta, demonstrated the greatest recent migration declines during the Great Recession (Frey 2009c).

Second, the recent uptick in all moves in the United States was driven entirely by those moving locally. The local move rate increased from 2008 to 2010, while the interstate migration rate remained low and flat over this period. Thus, especially at the end of the decade, there was a shift from long-distance to local moves. Counter to overall migration trends, the percentage of local movers increased over the decade; at just below 9 percent, it was at its highest level in ten years.

Historically, local movers have represented the majority of moves made in the United States.[4] However, the percentage of people who moved farther away, especially to another state, declined over this period to less than 2 percent, the lowest level observed over the past two decades.[5]

Although the changes in the percentages of movers over the latter part of the decade may seem small, they translate into larger changes in the absolute number and percentages of people who moved locally or between states since the initial impact of the Great Recession. According to estimates from the CPS (as shown in table 5.1), in 2010 about 24.2 million people moved locally, representing an 18 percent increase in local movers from 2008. On the other hand, in 2010 about 3.8 million people moved across state lines, representing a decline of about 400,000 movers from 2008, or a 10 percent decrease.

Two other important trends are observed in table 5.1. More people moved locally in 2010 than at any other point in the 2000s, and fewer people moved across states lines than in any other time period over the past thirty years. Moreover, in 2010 there were more people (in absolute numbers) moving locally than in 1980, even though the percentage of those who moved in 1980 was higher than the percentage in 2010 (as shown in figure 5.1). This is the case because, since 1980, the U.S. population has increased by nearly 80 million persons.

These trends indicate a greater shift to local moves at the end of the 2000 decade. Figure 5.2 highlights this shift by showing the composition of all moves—within county, within state, or across states—over the past thirty years. The figure shows that the percentage of all moves that are local increased rather dramatically at the end of the 2000s decade, while these percentages declined or remained flat for interstate and within-state movers. Over the past twenty-five years or so, the share of local moves hovered between 59 and 65 percent, but by the end of the 2000s decade it had increased to nearly 73 percent. However, the increase in this ratio from 2005 to 2007 was driven almost entirely by the decline in interstate and within-state moves,

TABLE 5.1 *The Number of People Who Moved over the Past Year, by Type of Move, 1981–2010*

	All Moves	Move Within County	Move Within State	Move Between States
1981	32,415,032	20,242,406	6,770,298	5,402,305
1982	32,515,202	20,253,637	6,508,180	5,753,382
1983	31,982,542	20,071,426	6,605,478	5,305,639
1984	33,805,965	20,885,632	7,293,276	5,627,064
1985	35,409,633	22,060,436	7,510,110	5,839,097
1986	37,013,302	23,235,240	7,726,944	6,051,130
1987	37,761,205	24,022,103	7,890,782	5,848,301
1988	36,317,365	23,258,926	6,916,175	6,142,251
1989	36,543,618	23,067,532	7,131,080	6,344,994
1990	37,208,348	22,823,927	7,319,094	7,065,337
1991	35,655,982	22,302,526	7,100,280	6,253,180
1992	36,954,969	23,575,343	7,144,477	6,235,142
1993	36,082,654	23,158,635	6,910,556	6,013,458
1994	36,808,124	23,485,761	7,438,240	5,884,124
1995	36,552,839	23,436,426	7,333,466	5,782,957
1996	36,297,554	23,387,091	7,228,692	5,681,789
1997	37,512,746	24,695,645	7,135,545	5,681,576
1998	36,667,332	24,007,369	7,048,764	5,611,202
1999	36,562,012	22,317,799	7,627,440	6,616,781
2000	36,898,050	21,632,660	7,834,857	7,430,520
2001	33,525,351	20,068,293	6,875,890	6,581,175
2002	34,733,541	20,852,517	7,059,595	6,821,403
2003	34,471,983	20,752,026	6,887,654	6,832,322
2004	33,729,608	20,082,729	7,088,275	6,558,628
2005	33,912,034	20,185,104	7,067,557	6,659,378
2006	34,434,942	22,150,353	7,234,662	5,049,939
2007	33,572,024	22,506,227	6,705,079	4,360,723
2008	30,459,688	20,548,935	5,698,997	4,211,776
2009	32,181,618	22,780,172	5,720,583	4,082,893
2010	33,038,676	24,227,589	5,649,010	3,804,706

Source: Data from the 1981 to 2010 March CPS.

while its increase from 2008 to 2010 was driven more by the increase in the local move rate. That is, from 2005 to 2007 the local move rates remained basically the same, while the combined interstate and within-state move rate decreased by one and a half percentage points.[6]

On the other hand, from 2008 to 2010, the height of the Great Recession, the local move rate increased by almost one and a half percentage points while the combined interstate and within-state move rate remained virtually flat. By the end of this decade, the shares of within-state and across-state moves, at nearly 20 and 17 percent, respectively, had dropped to their lowest level in thirty years.

RESIDENTIAL MOVES AND RECESSIONS

The secular and cyclical trends of migration come into fuller view when American residential movement is viewed in the context of major economic recessions. As noted, over the last two

FIGURE 5.2 *Moves Within County, Within State, or Between States, 1981–2000*

Source: Author's calculations using CPS.

decades, for all types of moves, migration's secular trend has been downward. But during periods of economic recession, such migration appears to have a cyclical nature too, although such trends differ by whether the residential move is more distant or local.

Figure 5.1 also indicates periods of economic recession as defined by the National Bureau of Economic Research (NBER).[7] The figure illustrates that the number of interstate moves tends to fall at the start of a recession, to rise years later after the recession ends, only to fall again during the next recession (and with the caveat of a secular downward trend in these moves over the past twenty-five years). Interstate migration slowed even further during the Great Recession, probably for all the reasons mentioned earlier. That is, more limited financial means, fewer attractive alternative places to live, and declines in home values in many places (thus making these same places more affordable) may have prompted many who otherwise would have moved to stay put. In contrast, the number of local moves tends to fall at the start of a recession but ticks upward immediately after; this pattern was especially true during the Great Recession. Local moves may increase after a recession because of growing pent-up demand to move or because, in the case of the Great Recession, persistent job or housing affordability problems made staying put financially impossible.

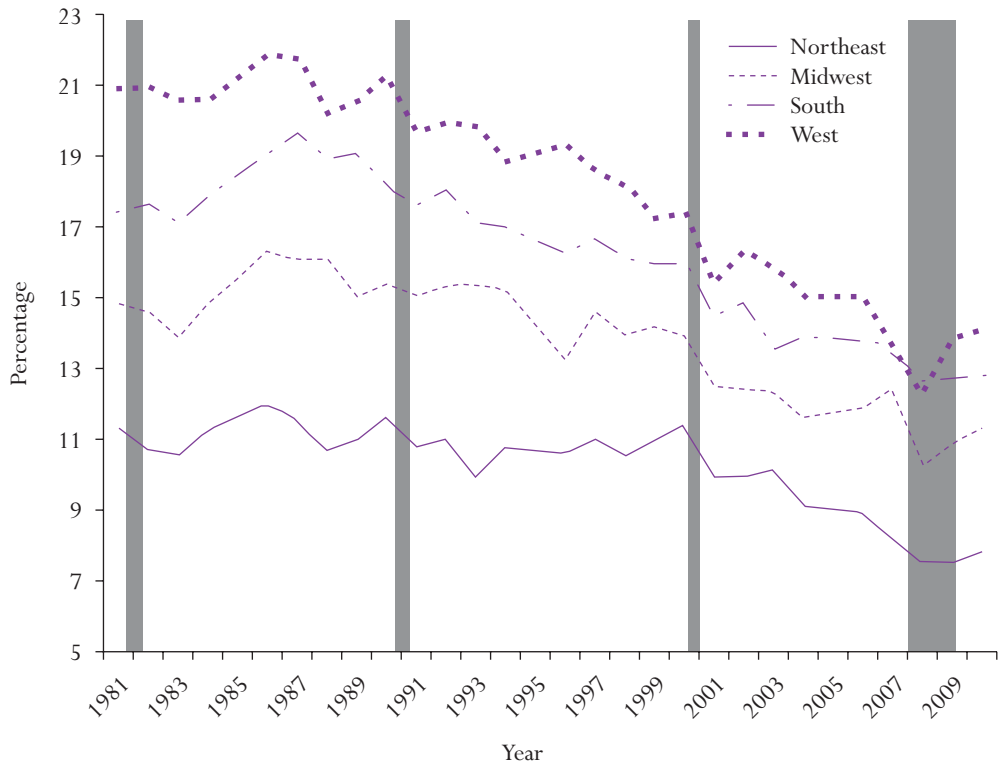
Regional Variation in Residential Movement

Did these trends vary at the regional level, especially recently? This is an important question, since the recession may have had uneven impacts at the regional level. Figures 5.3 to 5.8 present graphs similar to figure 5.1, but at the regional level. Figure 5.3 displays the overall move rate over the same time period, while figures 5.4 and 5.5 show the move rate within counties and the between-state move rate, respectively.[8]

A couple of important trends appear in figure 5.3 for the total move rate at the regional level. First, in general, the patterns at the regional level reflect those at the national level. The move rate over the past thirty years has followed a downward secular trend; however, as in the nation as a whole, the regional move rate showed a slight upward tick during the Great Recession, though this was more true in the West, the Midwest, and to a lesser extent the Northeast. Second, the move rates were consistently higher in the West and South, even during the Great Recession. It is not entirely clear why move rates were higher in these regions than elsewhere.[9] But demographic composition differences across regions were not a factor.[10]

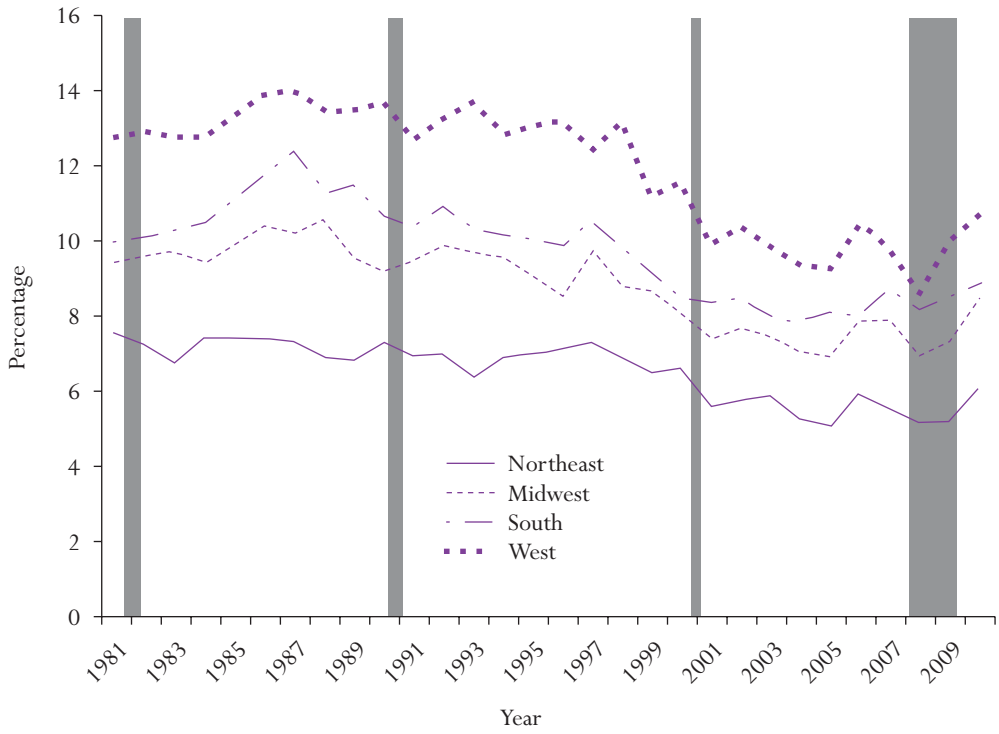
Figure 5.4 shows move rates within county by region. Again, these patterns are similar to those for the nation as a whole. However, local move rates jumped slightly more noticeably in the West and Midwest than in the South and Northeast during the Great Recession, possibly

FIGURE 5.3 *All Moves During the Past Year, by Region, 1981–2010*



Source: Author's calculations using CPS.

FIGURE 5.4 *Moves Within the County over the Past Year, by Region, 1981–2010*



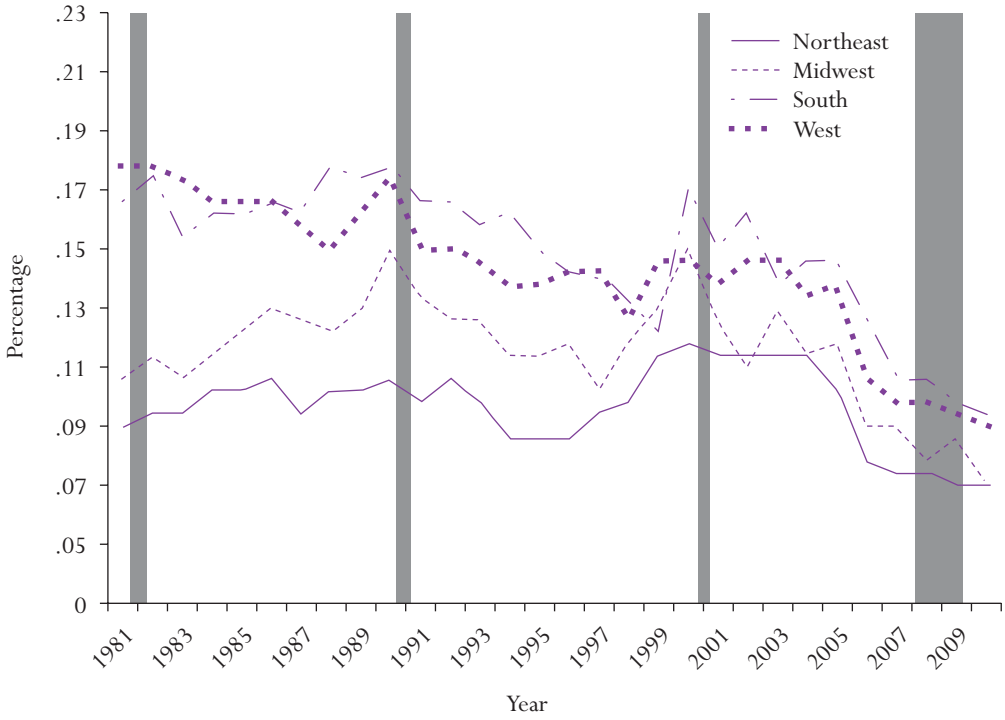
Source: Author's calculations using CPS.

because the factors that were likely to influence these rates, such as unemployment and foreclosures, hit fairly hard in Western and some Midwestern areas. Note also, again, that local move rates were consistently higher in the West and South over this thirty-year period, and that demographic factors played little role in determining these differences across regions.[11]

Finally, figure 5.5 shows between-state moves at the regional level over the past thirty years. The regional trends for these data also reflect trends in the nation as a whole. There was a clear secular decline in interstate migration in each region, and these declines continued through the Great Recession. As before, the interstate move rates were higher in the South and West. However, the greatest decline in interstate moving was also in the South and West. One reason for this pattern may be that many of the states that boomed economically during the 1980s and 1990s are in these regions, and interstate moves were high because so many people were migrating there from the Midwest and Northeast. The sharp declines in the South and West could have occurred because the recessions of the 2000s, in cutting back on migration, hit the South and West hardest.

The following analysis demonstrates that regional moving patterns largely followed national trends, suggesting that the patterns of shifts to local moves observed for the nation as a whole should have also occurred in each region. Figures 5.6 and 5.7 explore this question by showing the composition of all moves over the past thirty years at the regional level. Figure 5.6 shows at

FIGURE 5.5 *Moves Between States over the Past Year, by Region, 1981–2010*



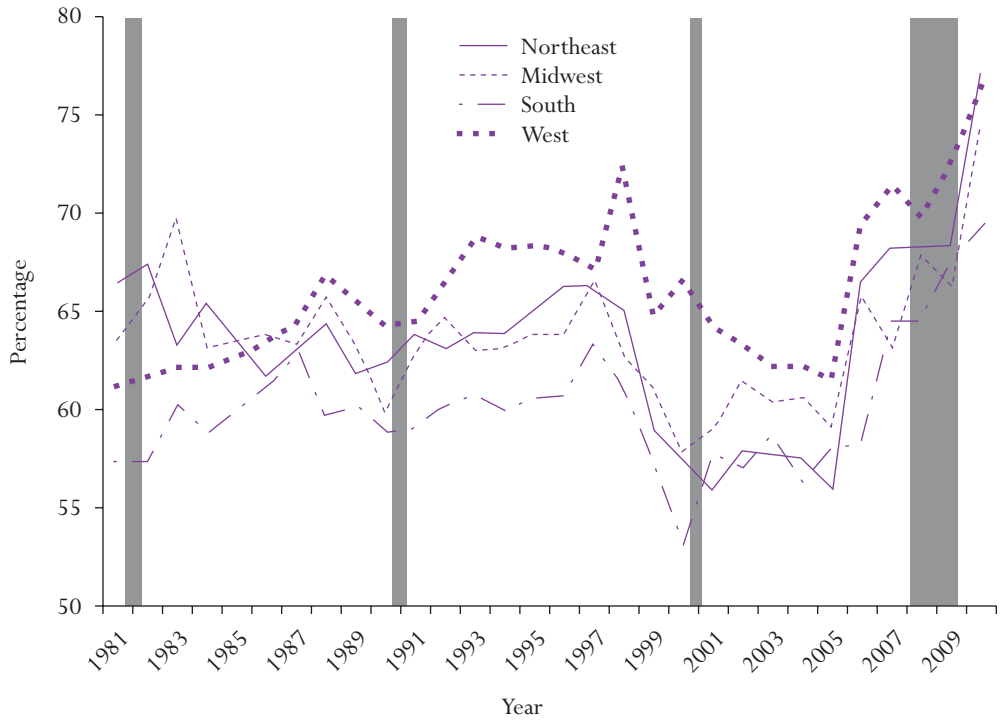
Source: Author's calculations using CPS.

the regional level the percentage of all moves that were within-county, while figure 5.7 shows this percentage for across-state moves. The within-state portion of this calculation mirrors that of the between-state data and so is not shown here.

Viewed together, the data in these figures demonstrate that the shift to local moves observed at the national level during the Great Recession occurred in each region of the United States. Although the regional differences in move rates by the end of the decade were not that large, the percentage of all moves that were local increased fairly strongly in the West, Midwest, and Northeast.[12] Figures 5.6 and 5.7 show that, for all regions, the high point for the local move share was at the end of the decade, in 2010, and that it jumped from 2005 to 2010. As in the national data, however, for all regions the increase in this ratio from 2005 to 2008 was driven almost entirely by the decline in interstate and within-state moves, while its increase from 2008 to 2010 was driven more by increases in local move rates.

These combined results suggest that the Great Recession influenced moving decisions. The remainder of this analysis focuses on the 2000s decade to examine to what extent and how it did so. I examine the characteristics of movers over different time periods associated with the Great Recession and analyze the subjective reasons provided by individuals for moving. I then turn to local move rates at the metropolitan level, examining the factors associated with the Great Recession, such as unemployment and foreclosure, that may have influenced local move rates.

FIGURE 5.6 *Moves Within the County, by Region, 1981–2000*



Source: Author's calculations using CPS.

The Characteristics of Local Movers

Before directly addressing the question of whether the Great Recession had an impact on moving patterns, it is useful to examine more generally the characteristics of those who move (and by type of move) and those who do not, because the literature on migration points to the importance of mover selectivity. That is, movers' characteristics are not typical of the overall characteristics of the area population from which they have moved. Rather, they are highly selective (on certain characteristics such as age), for a number of well-documented reasons (Long 1988). In this section, I examine whether this selectivity is different for those who move locally as opposed to those who move farther, such as between states.

The General Selectivity of Movers

Table 5.2 uses CPS data and shows means for a host of demographic characteristics for those who moved (and by type) or did not move over the entire 2000s decade. Here the entire decade is examined to capture the general characteristics of movers. Note that those who moved within state are included with those who moved between states because their characteristics are not statistically different.[13]

FIGURE 5.7 *Moves Between States, by Region, 1981–2000*

Source: Author's calculations using CPS.

The data in table 5.2 reveal that movers are quite different from those who do not move. Moreover, these differences depend on the type of move. Compared to those who do not move, local movers share some characteristics with those who move farther, but also differ from them. Local movers and those who move farther are both younger and, perhaps as a consequence, less likely to be married, retired, or homeowners than those who do not move. They are also more likely to be recent immigrants, to have younger children, to live in poverty, and to live in a metropolitan area or in the South or West (as opposed to the Northeast or Midwest). Finally, they are also more likely to be in the labor force (either employed or unemployed).

Major theories of why people move, including push-pull factors, life-cycle events, and benefit-cost decisions, would all predict that these factors are important in the decision to move (Long 1988; Mincer 1978; Quigley and Weinberg 1977). For example, life-cycle and cost-benefit frameworks would predict that younger, single people who do not have homes are more likely to move because they are more likely to search for new schooling or employment opportunities and because for them there are fewer social and economic transaction costs to moving (that is, they have no children and no need to sell a home).

In addition, those who move farther are different from those who move locally in that they are more likely, relative to those who do not move, to be college-educated. Such individuals arguably face a broader geographic labor market and are prompted to make more distant moves

TABLE 5.2 *Mean Characteristics of Movers (by Type of Move) and Nonmovers During 2000–2010*

	No Move	Move Within County	Move Longer Distance
Age			
Eighteen to twenty-five	0.109	0.257**	0.246**
Twenty-six to thirty-five	0.178	0.350	0.340
Thirty-six to forty-five	0.401	0.301	0.292
Forty-six to sixty-five	0.143	0.051	0.070
Older than sixty-five	0.169	0.041	0.053
Education			
Less than high school	0.153	0.182***	0.131**
High school degree	0.318	0.320	0.286
Some college	0.272	0.286	0.288
College graduate or more	0.257	0.212	0.295
Race			
White	0.720	0.612**	0.711***
Black	0.113	0.154	0.119
Latino	0.122	0.184	0.119
Asian	0.046	0.049	0.051
Other	0.050	0.007	0.080
Married	0.583	0.388*	0.431*
Homeowner	0.771	0.344*	0.395*
Male	0.479	0.487	0.491
Foreign-born	0.157	0.192*	0.153***
Recent immigrant	0.023	0.058*	0.046*
Children under age five	0.109	0.184*	0.156*
Retired	0.082	0.020*	0.035*
Disability	0.008	0.006	0.004
Enrolled in school	0.055	0.083*	0.078*
Poverty	0.094	0.198*	0.163*
Income (in 2009 dollars)	$37,071	$30,210*	$32,899*
Labor market status			
Employed	0.626	0.705**	0.669**
Unemployed	0.036	0.068	0.071
Not in labor force	0.338	0.227	0.260
Nonmetropolitan area	0.173	0.134*	0.162
Region			
Northeast	0.199	0.135**	0.140**
Midwest	0.227	0.214	0.212
South	0.355	0.369	0.412
West	0.219	0.282	0.235

Source: Based on annual data from the 2000 to 2010 CPS.

*Difference from nonmovers is significant at <0.05.

**Chi-square distribution statistically different at <0.05 from that for nonmovers.

***Difference between local and farther movers significant at <0.05.

Age, education, race, labor market status, and region categories sum to 1.

in search of opportunity. Local movers are more likely to be black and Latino (a factor explored in more detail later) and to be foreign-born.

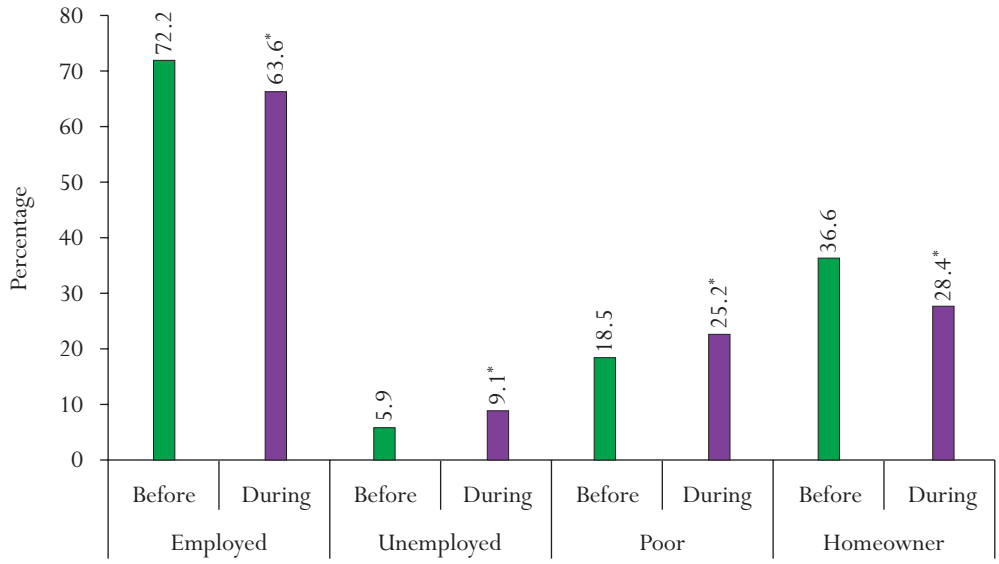
Key Characteristics of Movers Before and During the Great Recession

Having established that movers are selected on certain characteristics, the key question is whether the Great Recession influenced moving. If it did, the expectation is that the observable characteristics of movers who were most likely to be influenced by the Great Recession, such as their unemployment and homeownership rates and their poverty status, would have been different (and normatively worse) during the Great Recession than before it. These are characteristics that are observable with the CPS at the individual level.

Figure 5.8 first focuses on the largest share of movers: those who moved locally and whose move rate rose quickly at the height of the Great Recession toward the end of the 2000s decade. It also focuses on the characteristics associated with the Great Recession (employment, homeowner, and poverty status) that are observable by the CPS. The figure highlights these selected characteristics of individuals who moved locally before and during the Great Recession.

The 2000s decade is split between the periods termed "before the Great Recession" and "during the Great Recession." These periods coincide with the years 2000–2007 and 2008–2010, the latter a period when the local move rate jumped.[14] The data are disaggregated in this way to coincide with the height of and therefore the full impact of the Great Recession. The National Bureau of Economic Research's (NBER) Business Cycle Dating Committee, the most respected authority to date recessions, identifies December 2007 as the start of the Great Reces-

FIGURE 5.8 *Selected Characteristics of Movers Within Metropolitan Areas Before and During the Great Recession*



Source: Author's calculations using CPS; before the Great Recession is 2000–2007 and during is 2008–2010.
*Difference before/after statistically significant at $p < 0.05$.

sion (with an end date in June 2009). Moreover, the Case-Schiller housing price index, a leading indicator of housing prices in large U.S. metropolitan areas, shows that in most metropolitan areas, housing prices began to fall dramatically during late 2007 (after the credit squeeze entered full effect) and continued to fall through the end of the decade. The period 2008 to 2010 should thus be treated as the height of the impact of the Great Recession.[15]

The results in figure 5.8 are consistent with expectations of the consequences of the Great Recession on local moves. They demonstrate that those moving locally during the recession were statistically less likely to be homeowners than local movers in previous periods. They were also more likely to be without work and to be poor.[16] These data are consistent with the expected impacts of the Great Recession, which prompted local moves when it resulted in more people losing their jobs, living in poverty, and losing their homes or being unable to afford rent.

However, the biggest differences over the period were with homeownership, which experienced greater impacts than unemployment or poverty status. For example, homeownership among local movers before the recession was about nine percentage points higher than it was during the recession, whereas unemployment status was only three percentage points lower at that point, and poverty status was six percentage points lower. Thus, the housing-related factors associated with the Great Recession may have been more important than job- or poverty-related factors as motivations for moving locally.

A reasonable conclusion is that the Great Recession caused the uptick in local moves—that is, that it pushed more people who were without work, who were in poverty, or who were renters to move locally, possibly because they either lost their homes or could no longer afford rent. Clouding this interpretation, however, is the possibility that these changes in individuals' characteristics could have been caused by changes in the composition of people regardless of whether they moved during the Great Recession. That is, more people would have experienced more unemployment and poverty as a result of the recession, whether they moved or stayed put.

Another way to answer this question is to take a difference-in-difference approach. Table 5.3 presents difference-in-difference estimates of the effects on moving of employment status, homeownership, and poverty. The approach first calculates the difference in each of the selected characteristics for movers and nonmovers before the recession. For example, before the Great Recession, about 2.7 percent of nonmovers were unemployed, while 6 percent of movers were unemployed, a difference of about three percentage points. This same calculation for nonmovers and movers during the Great Recession results in a difference of about four percentage points. Then we calculate the "differences in these differences" between movers and nonmovers over the period before and during the Great Recession. A statistically significant difference in this difference would indicate that the change in characteristics for movers before and during the recession was systematically distinct from the change for nonmovers.

Table 5.3 indicates that all differences-in-differences for these selected characteristics were statistically significant and in the expected direction. These results strongly suggest that the Great Recession influenced the increase in local moves over the decade.[17] For example, the difference in homeownership between nonmovers and movers was about thirty-eight percentage points before the Great Recession and climbed to forty-six points during this period. This results in a statistically significant difference-in-difference estimate of eight percentage points, which strongly suggests that, because there were fewer of them, homeowners were less likely to move as a result of the Great Recession. With higher rates of foreclosure during this period and more people unable to afford their homes, there would have been fewer people selling their homes and thus fewer people buying them.

This same pattern was observed for the variable measuring unemployment status. The difference-in-difference estimate for the unemployed is 0.015 percentage points, which indicates

TABLE 5.3 *Difference-in-Difference Estimates of Key Great Recession Variables: Within-County Movers Versus Nonmovers and Before Versus During the Great Recession*

	Before			During			Difference-in-Difference
	Nonmovers	Local Movers	Difference	Nonmovers	Local Movers	Difference	
Unemployed	0.030	0.059	0.029*	0.048	0.091	0.043*	0.014*
Homeowners	0.775	0.366	–0.409*	0.764	0.286	–0.478*	–0.069*
Poverty	0.091	0.185	0.094*	0.099	0.229	0.130*	0.036*

Source: Data from the 2000 to 2010 CPS.
Note: Before the recession is 2000–2007; during the recession is 2008–2010.
*Difference statistically significant at at least the 5% level

TABLE 5.4 *Characteristics of Those Who Moved Within Counties Before and During the Great Recession*

	Before	During
Age		
Eighteen to twenty-five	0.258	0.254
Twenty-six to thirty-five	0.351	0.348
Thirty-six to forty-five	0.301	0.300
Forty-six to sixty-five	0.049	0.057
Older than sixty-five	0.041	0.042
Education		
Less than high school	0.185	0.176
High school degree	0.320	0.319
Some college	0.283	0.290
College graduate or more	0.211	0.215
Married	0.402*	0.351
Male	0.487	0.491
Foreign-born	0.191	0.194
Recent immigrant	0.055	0.051
Median income (in 2009 dollars)	$30,775	$31,338
Children under age five	0.184	0.173
Retired	0.021	0.018
Disability	0.020	0.020
Enrolled in school	0.082	0.088
Nonmetropolitan area	0.134	0.113*

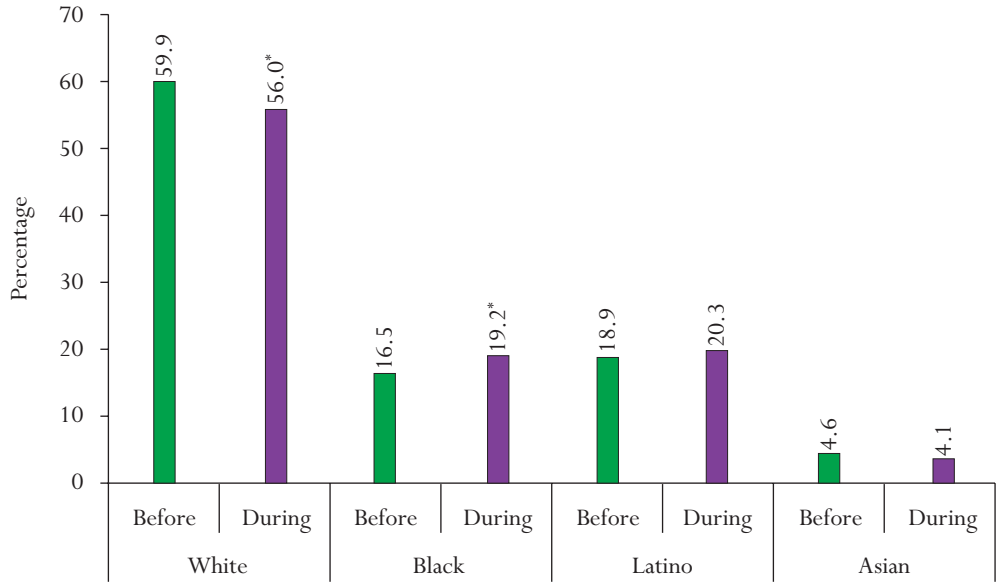
Source: 2000 to 2010 CPS.
*$p < 0.05$

that, relative to nonmovers, local movers were more likely to be unemployed during the Great Recession than before it. However, consistent with the results in figure 5.13, the difference-in-difference estimates are larger in magnitude for homeownership than for unemployment or poverty status, suggesting again that the housing-related factors associated with the Great Recession were more important than job- or poverty-related ones as motivations for moving locally.

Interestingly, these recession-related variables appear to be the only ones systematically different for local movers during the Great Recession compared to before that period. Table 5.4 presents several demographic variables available from the CPS.[18] Those with these characteristics were mostly not affected by the Great Recession. For example, the fraction of those with a college degree or higher was similar for local movers before and during the Great Recession. There is one exception, however: local movers were more likely to live in metropolitan areas than in nonmetropolitan areas during the Great Recession compared with before it. This would make sense to the extent that local move rates were influenced by factors related to the recession, factors that would have been more influential in metropolitan than nonmetropolitan areas.

Another notable exception to this pattern is race and ethnicity—figure 5.9 shows that a smaller share of whites and a larger share of blacks were movers during the Great Recession than before it. For example, about 19.0 percent of movers after the recession were black, whereas about 16.5 percent were black before the recession. Hence, racial differences in move rates increased during the Great Recession, and by implication the increase in local moves at the end of

FIGURE 5.9 *Racial-Ethnic Characteristics of Movers Within Counties Before and During the Great Recession*



Source: Author's calculations using CPS; before the Great Recession is 2000–2007 and during is 2008–2010.
*Difference before/after statistically significant at $p < 0.05$.

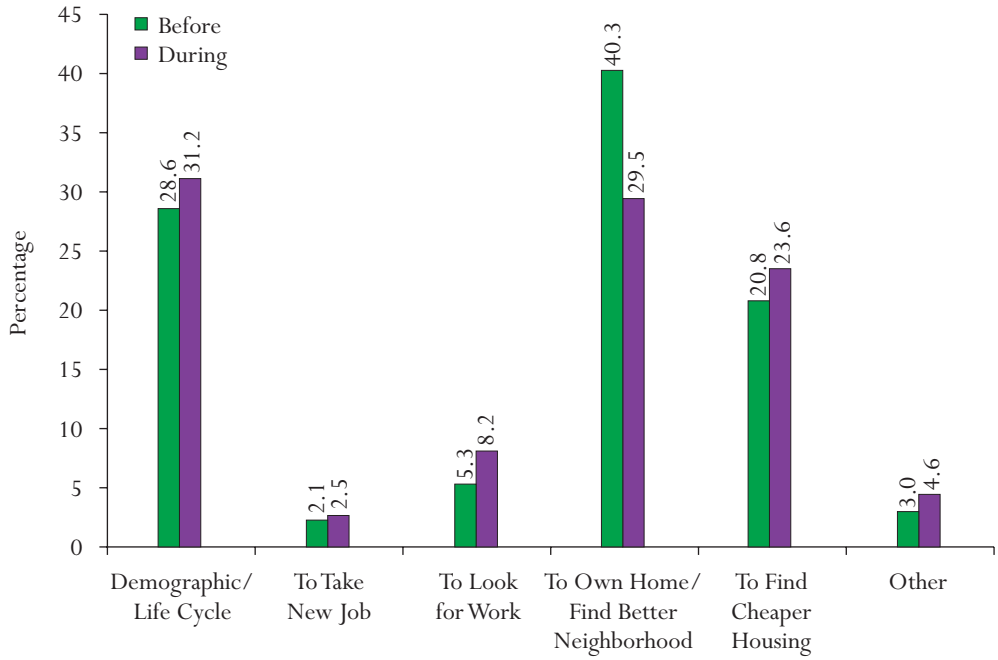
the decade was partly fueled by black and, to a lesser extent, Latino movers.[19] This trend suggests that the recession itself had stronger impacts on minorities, an issue explored in more detail later.[20]

Similar comparisons were conducted for those who moved farther before and during the Great Recession. Recall, however, that move rates for this group declined and then stagnated over the period before and during the Great Recession. Though not shown here, those moving farther were more likely to be unemployed and impoverished and less likely to be homeowners before the recession than during it. But only the difference in unemployment status remained significant after the more strict difference-in-difference test was conducted, and the effect was quite small. Therefore, the remainder of this study focuses on local moves.

CHANGING REASONS FOR LOCAL MOVES

Self-report data on moving can also provide clues about whether the Great Recession prompted local moves. The CPS is unique in that in the recent decade it asked those who moved the reason for their move. It provided respondents with a number of predetermined answers to the question, and this information provides an opportunity to unearth more direct evidence on what drove recent increases in local move rates.[21] Figure 5.10 provides data on local movers' responses to questions regarding the reasons for their move. These data are summarized and presented for periods before and during the Great Recession. If the Great Recession events prompted local moves, it is expected that responses related to it—such as finding cheaper hous-

FIGURE 5.10 *Major Reasons for Moves Within Counties Before and During the Great Recession*



Source: Author's calculations using CPS; before the Great Recession is 2000–2007 and during is 2008–2010.

ing, owning a home, or looking for work—would be more affected over this period than would other answers, and in the expected direction.[22]

First, at the general level, figure 5.10 indicates that in either period (both before and during the Great Recession), housing-related and other demographic and life-cycle changes were primary drivers of local moves. For example, about 41 percent of movers (a plurality of responses) before the Great Recession indicated that they moved to purchase a home or to live in a better neighborhood. Moreover, when combined with the response of finding cheaper housing as a reason for moving, housing-related reasons represent the majority of responses in either period. To the extent that demographic and life-cycle events, such as getting married, also prompted the search for new living arrangements, housing-related issues became even more important reasons for moving locally.

Second, figure 5.10 indicates that the percentage of residents who moved locally to find cheaper housing or look for work increased during the Great Recession.[23] The biggest change in responses during the Great Recession compared with before it was the ten-percentage-point decline in those who indicated that they moved to own a home or to live in a better neighborhood.[24]

Although more people were moving locally during the Great Recession than before it, fewer were doing so to purchase homes or find better neighborhoods, perhaps because they had lost their homes or could not afford to live in better places. Further, the differences in these responses across the two time periods are statistically significant.[25] This evidence is consistent with the idea that more people moved locally partly as a consequence of housing- and job-related

problems brought on by the Great Recession.[26] These findings are also consistent with those in figure 5.8 and table 5.3 and suggest that housing issues related to the Great Recession appear to have been more important than job-related reasons for local moves.

RACIAL DIFFERENCES IN LOCAL MOVES

I turn now to racial differences in local move rates and the effect of the Great Recession on them. This is an important topic in light of earlier findings that the local move rate increased during the recession, and that the share of those moving locally who were black or Latino increased as well, implying that racial gaps in local move rates increased during the recession. I use individual-level CPS data to explore whether racial differences in local moves changed over the period of the Great Recession, and whether unemployment, homeownership, and poverty status help explain these changing racial gaps in local moves.

Table 5.5 examines racial and ethnic differences in local move rates in selected years over the 2000s decade. This table also presents differences in levels of unemployment, homeownership, and poverty status. (Appendix table 5A.5 presents more detailed racial differences in these variables over the same years.) Table 5.5 provides the means of these key variables by race-ethnicity over the 2000s decade in key years—2000, 2008, and 2010. The low point of local move rates over the decade occurred in 2008, which also marked the onset of the Great Recession, while 2010 represents the peak period for the increase in local move rates over the decade, as well as the midpoint of the Great Recession. The year 2000 is provided as the starting point.[27]

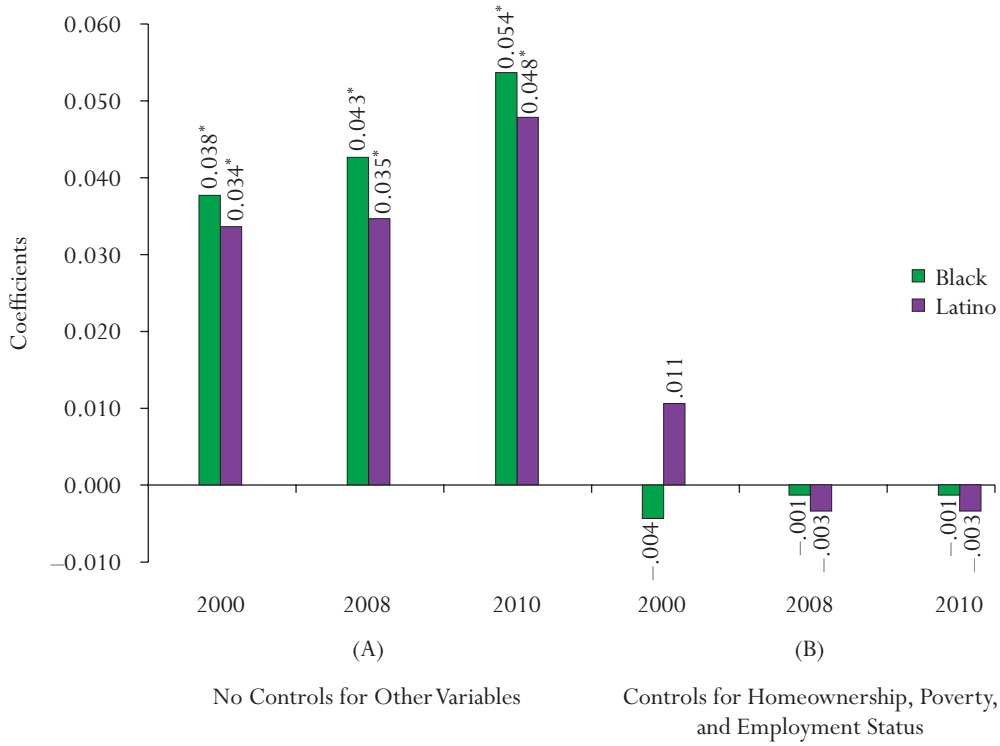
The table reveals a few noteworthy patterns. First, it documents that for each period blacks' and to a lesser extent Latinos' and Asians' local move rates were higher than they were for whites, a pattern that, interestingly, is not found for farther moves.[28] The magnitudes of these differences are shown in appendix table 5A.5. Second, the data show that local moves increased significantly for blacks and Latinos only over the period of the Great Recession (between 2008

TABLE 5.5 *Means of Key Great Recession Ethnic-Racial Variables over the 2000s Decade*

	Local Mover	Unemployed	Homeowner	Poverty
White				
2000	0.071	0.022*	0.778	0.071*
2008	0.068	0.027*	0.789	0.075*
2010	0.070	0.056	0.777	0.088
Black				
2000	0.109*	0.050*	0.548*	0.192*
2008	0.111*	0.060*	0.568*	0.195*
2010	0.124	0.106	0.521	0.215
Latino				
2000	0.105*	0.046*	0.494*	0.187*
2008	0.103*	0.048*	0.527*	0.179*
2010	0.118	0.090	0.512	0.212
Asian				
2000	0.101*	0.026*	0.594*	0.101*
2008	0.079	0.025*	0.644	0.095*
2010	0.086	0.051	0.645	0.119

Source: 2000 to 2010 CPS.
*$p < 0.05$

FIGURE 5.11 *Black and Hispanic Coefficients for Models Predicting Moves Within County, 2000, 2008, and 2010*



Source: Author's calculations using CPS.
*Difference from whites statistically significant at $p < 0.05$.

and 2010), such that the racial gaps in local moves (relative to that of whites) increased from 2008 to 2010. For example, the black-white gap in local move rates was 0.038 in 2000, grew slightly to 0.043 in 2008, a period at the start of the Great Recession, and grew a little over a percentage point, to 0.054, by 2010, a time near the end of the Great Recession. Thus, racial gaps exist in local move rates, and they grew during the Great Recession.[29]

Table 5.5 also demonstrates that in each period for most racial and ethnic groups, the normative outcomes for variables related to the Great Recession (unemployment, homeownership, and poverty) worsened, as expected. Moreover, in each period the normative outcomes for these variables were worse for blacks and, to a lesser extent, Latinos compared to outcomes for whites, as should also be expected. Racial inequality in these outcomes is well documented. What is also noteworthy is that racial inequality in these gaps grew from 2008 to 2010, as appendix table 5A.5 shows. For example, blacks' homeownership rate dropped by nearly five percentage points from 2008 to 2010, while the rate for whites (and others) dropped by a little over one percentage point, thus increasing the black-white homeownership gap during the Great Recession.

What accounts for these racial gaps in local moving rates? To what extent were they fueled by the Great Recession? Simple regression analysis can help answer these questions. Figure 5.11 presents coefficients from race-ethnicity indicator variables from a series of (linear probability

OLS) regressions that are intended to address these questions.[30] All the regressions (with nonmovers as the reference group) predict local moves, and do so for the years 2000, 2008, and 2010. Each year represents a separate regression. Panel A includes only baseline independent variables for race and ethnicity (with whites as the reference category); panel B includes controls for the Great Recession–related variables (unemployment, homeownership, and poverty).

The empirical strategy to assess whether and the degree to which the racial gaps in local move rates (as indicated by the coefficients on the race and ethnicity variables) are accounted for by the Great Recession–related variables is to first enter the racial and ethnic variables into the model to assess baseline racial gaps in move rates as shown in panel A. Then, the Great Recession–related variables are entered into the model in panel B. Changes in the racial and ethnic variable coefficients after these variables are entered indicate whether and to what extent Great Recession–related variables can account for the racial gaps in local moves and how this may change over time.[31]

This strategy is based on the expectation that the decision to move locally was influenced by factors (among many others) related to the Great Recession, in this case unemployment, homeownership, and poverty status. That is, it is expected that higher unemployment and poverty rates and lower homeownership rates are associated with a higher likelihood of moving locally. Unemployment and poverty status may prompt local moves either because limited income or financial assets make current living arrangements unaffordable or because of the need to find work. On the other hand, lower homeownership rates imply lower transaction costs of moving, which would make relocating administratively easier. To the extent that lower homeownership is influenced by foreclosure, the act of moving would be required.

Panel B in appendix table 5A.6 provides evidence that this is the case. For each year, the coefficients for unemployment, homeownership, and poverty status predict moving locally in these expected ways. Thus, given that these Great Recession–related variables influence local moves, and that blacks and Latinos suffered disproportionately from the Great Recession (that is, they displayed worse outcomes among these variables, as demonstrated in table 5.5), it should be expected that these variables will account for some of the racial gaps in moving locally, especially during the Great Recession.

Figure 5.11 (first panel) presents the baseline models that include only dummy variables for race-ethnicity (with non-Hispanic whites as the reference category). The coefficient results for Asians are not reported because few were statistically significant. In the figure, the coefficient for blacks in 2000 indicates a gap in local moves between blacks and whites of about 3.8 percentage points. This gap increased in 2010, at the height of the Great Recession, to 5.4 percentage points. The magnitudes of these gaps are identical to those shown in table 5.5. A similar pattern of increasing disparities is observed between Latinos and whites over this period.

The second set of coefficients in figure 5.11 reflects the inclusion of controls for homeownership, poverty, and employment status.[32] The inclusion of these controls eliminates racial gaps in local moves between blacks and whites, and between Latino and whites, over the period of the Great Recession.[33] There are two possible explanations. The first is that the influence of these factors related to the Great Recession on local moves could have increased in importance during the recession (relative to the preceding period). That is, these variables are likely to influence local moves more generally, but their coefficients could have increased in importance during the Great Recession, even if these groups experienced (hypothetically) only slight changes in unemployment, poverty, or loss of homeownership over this period.

The second explanation is that unemployment, homeownership, and poverty could have always influenced local moves in a consistent way over time, but that these groups experienced increases in unemployment, poverty, or loss of homeownership over this period (as demon-

strated in table 5.5) as a result of the recession. This would result in greater racial gaps in moving locally. That is, the effect (the coefficients) of these variables could be constant over time, while the means of these variables increased over time, such that exposure to the risk of moving increased over this period.

The evidence in figure 5.11 (see also appendix table 5A.6) is consistent with both explanations. I believe that the former is a more plausible explanation of the role of homeownership. The latter more plausibly explains the influence of unemployment and poverty, however, because, as table 5A.6 indicates, the influence of unemployment and poverty on local moves remained consistent over the three periods in the 2000s decade. For example, the data show that those who were unemployed (relative to those who were employed) were more likely to move locally by about 1.3 percentage points. The magnitude of this coefficient is similar in 2000, 2008, and 2010. On the other hand, the influence of homeownership on local moves strengthened during the Great Recession. In 2000 and 2008, periods before the Great Recession, the coefficient for homeownership is about 0.13, indicating that homeowners were thirteen percentage points less likely to move than their non-homeowning counterparts. The negative influence of homeownership on moving strengthened, however, in 2010, during the Great Recession. Note that homeownership rates declined over this period, especially for blacks.

Hence, variables such as unemployment, poverty, and homeownership status appear to have always influenced local moves and account for much of the racial and ethnic gap in local moves during this period, though in differing ways. Housing-related factors led to the increase in racial gaps in local moves by the height of the Great Recession in 2010 as a result of both the increased likelihood of moving locally for those who did not own homes as well as the increased loss in homeownership status by blacks and Latinos (especially relative to whites) over this period.

On the other hand, unemployment- and poverty-related factors led to the increase in racial gaps in local moves by the height of the Great Recession because, over time, and irrespective of recessions, the unemployed or impoverished have a fairly constant risk of moving locally. During the recession, more blacks and Latinos became unemployed and impoverished. Moreover, though not shown here, there is evidence that housing-related factors are more important than unemployment or poverty status in accounting for these racial gaps in moving locally, a finding consistent with results reported earlier.[34]

SOURCES OF VARIATION ACROSS REGIONS

So far, local moves have been examined mostly at the national level. Such moves, however, occur in specific places, and these places are likely to vary in the extent to which people move locally more generally and the extent to which they did so during the Great Recession. Moreover, the previous analysis used individual-level data to assess whether and to what extent the Great Recession influenced local moves by examining individual characteristics, such as homeownership status, that were likely to be directly affected by the forces of the Great Recession. This is a reasonable approach, but it cannot assess directly how the changes in the larger economic environment influenced local moves. The Great Recession led to a number of specific concerns, including high unemployment, record foreclosures, and other measures of economic pain such as loss in income and wealth and disruptions in the stock market. The impacts of the Great Recession on local economic environments are likely to have varied as well, with some places hit harder than others and local moves correspondingly affected. This section examines the variation in local move rates across places, as well as whether some measures of the local economic environment that were significantly affected by the Great Recession, such as unemployment and foreclosure rates, influenced local moves in expected directions.

Ranking Metropolitan Areas by Local Move Rates

First, local areas are ranked by their local move rates during the Great Recession to assess those areas with high and low local move rates. I use the American Community Survey to do this because the CPS is not designed to sample smaller geographic areas. The much larger sample size of the ACS allows for analysis of local movers in areas with populations above 50,000, and like the CPS, it uses a relatively full set of demographic variables. Moreover, with its one-year migration question, the ACS measures movers in the same way as in the CPS—that is, it measures the number of respondents age eighteen or older who responded affirmatively to the question of whether they had moved in the year prior to the survey. Again, the move rate is determined by taking the fraction of the total relevant population who moved over the past year.

Another issue in using the ACS is that it provides reliable data for local movers only at the metropolitan level; the CPS asks about within-county moves.[35] While some metro areas overlap perfectly with county lines, this is not always the case, so local movers are not perfectly comparable across the two surveys. Still, these local areas share much common geographic turf, since some metro areas are counties or comprise contiguous counties; thus, comparison of move rate estimates using these two data sets did not provide cause for concern.[36]

Tables 5.6 and 5.7 use data from the ACS and look behind the aggregate national values to rank the top and bottom twenty-five of the one hundred largest U.S. metropolitan areas, respectively, in the percentage of residents who moved in the local metro area in 2010, as well as the change in this percentage from 2008.[37] These years were selected because 2008 represents the onset of the Great Recession, and 2010 was the height of it. Also, this period represented the biggest percentage change in local move rates (and movers) over the 2005–2010 period.[38] Data limitations also played a role: the ACS series begins in 2005, and foreclosure data at the metro level are not readily available until 2007. In addition, unemployment and foreclosure data for each metro area in the list are presented for the relevant years to provide an initial assessment of whether such factors are correlated with local move rates in the expected direction.[39]

Table 5.6 shows that the top metro areas with respect to local move rates are mostly located in the West and South. Las Vegas, Phoenix, and many metropolitan areas in California and Texas are some of the metro areas with the highest movement of residents. Many states in the West and South suffered disproportionate job losses and foreclosures during the Great Recession, in particular Nevada, Arizona, Florida, and California. At the end of the 2000s decade, nearly 20 percent of Las Vegas residents, or one in five, had moved over the previous year.

On the other hand, an overwhelming majority of the metro areas with the lowest local move rates were in the Northeast, including Bridgeport, Connecticut; Pittsburgh, Philadelphia, and New York, among others, followed by Southern metro areas. Still, these local move rate differences correlate with the long-standing regional differences in move rates noted earlier in the chapter, so care must be taken in attributing the observed metropolitan differences in move rates to factors related to the Great Recession.

Unemployment and foreclosure rates indicate an initial positive correlation with these local move rates. The highest absolute unemployment and foreclosure rates are found among the twenty-five metro areas with the highest local move rates. Also, average unemployment and foreclosure rates are higher in those top twenty-five areas than in the twenty-five metro areas with the lowest local move rates. For example, the average unemployment rate among the top twenty-five metro areas for local move rates is 11.5 percent, while the average rate among the bottom twenty-five areas is 9.6 percent.

Table 5.7 ranks the top and bottom twenty-five of the one hundred largest U.S. metropolitan areas in terms of the change in the percentage of people who moved within those metro

TABLE 5.6 *Top and Bottom Twenty-Five Metropolitan Areas Ranked by Within–Metropolitan Area Move Rate, 2010*

Top Twenty-Five	Move	Unemployed	Foreclosed	Bottom Twenty-Five	Move	Unemployed	Foreclosed
Las Vegas–Paradise, Nev.	19.3%	15.1%	13.1%	San Francisco–Oakland–Fremont, Calif.	9.9%	10.5%	3.6%
Austin–Round Rock, Tex.	16.0	6.5	1.8	Greenville–Mauldin–Easley, S.C.	9.9	13.9	3.8
Phoenix–Mesa–Scottsdale, Ariz.	15.7	9.3	6.5	Boston–Cambridge–Quincy, Mass./N.H.	9.9	8.4	3.5
Stockton, Calif.	15.3	16.3	6.5	Buffalo–Niagara Falls, N.Y.	9.8	8.4	4.7
Bakersfield, Calif.	15.3	22.1	6.8	Greensboro–High Point, N.C.	9.5	12.1	3.9
Modesto, Calif.	15.0	21.7	6.4	New Orleans–Metairie–Kenner, La.	9.4	3.7	6.1
Sacramento, Calif.	14.5	12.2	5.2	Augusta–Richmond County, Ga./S.C.	9.4	10.7	4.4
Provo–Orem, Utah	14.2	5.6	3.9	Baltimore–Towson, Md.	9.3	8.4	3.9
Tucson, Ariz.	14.0	12.7	4.4	Hartford–West Hartford–East Hartford, Conn.	9.1	8.6	3.9
San Antonio, Tex.	13.6	5.7	2.8	Washington, D.C./Va./Md./W.Va.	9.0	7.9	3.3
Columbus, Ohio	13.5	10.1	6.4	Worcester, Mass.	9.0	10.1	5.4
Milwaukee–Waukesha, Wisc.	13.5	11.7	5.7	Allentown–Bethlehem–Easton, Penn./N.J.	8.9	7.9	5.5
Atlanta–Sandy Springs–Marietta, Ga.	13.4	11.3	5.4	Knoxville, Tenn.	8.7	8.9	3.4
Cape Coral–Fort Myers, Fla.	13.4	14.9	15.1	Honolulu, Hawaii	8.5	5.9	3.9
Seattle–Tacoma–Bellevue, Wash.	13.3	8.9	4.1	Providence–New Bedford, R.I./Mass.	8.5	12.9	5.9
Ogden–Clearfield, Utah	13.2	8.7	3.8	New Haven–Milford, Conn.	8.3	8.2	5.6
Salt Lake City, Utah	13.2	10.5	4.5	Scranton–Wilkes-Barre, Penn.	8.2	7.8	5.8
Memphis, Tenn./Miss./Ark.	13.1	9.0	7.7	Albany–Schenectady–Troy, N.Y.	8.1	9.3	5.7
Dallas–Fort Worth–Arlington, Tex.	13.0	9.3	3.3	New York–Northern New Jersey, N.Y./N.J./Penn.	8.1	10.1	7.1
Grand Rapids–Wyoming, Mich.	12.9	13.5	3.6	Youngstown–Warren–Boardman, Ohio/Penn.	7.9	18.3	9.7
Riverside–San Bernardino, Calif.	12.9	16.4	6.8	Akron, Ohio	7.9	14.1	7.9
Little Rock–North Little Rock, Ark.	12.7	7.7	4.5	Philadelphia–Camden, Penn./N.J./Del./Md.	7.9	9.8	5.3
Nashville, Tenn.	12.6	7.8	4.2	Pittsburgh, Penn.	7.6	11.2	4.5
Houston–Sugar Land–Baytown, Tex.	12.4	9.8	2.9	Bridgeport–Stamford–Norwalk, Conn.	5.5	8.3	5.0
Birmingham–Hoover, Ala.	12.3	10.1	4.4	Chattanooga, Tenn./Ga.	2.8	4.9	5.6

Source: Author's calculations using the 2010 American Community Survey (ACS).

TABLE 5.7 *Top and Bottom Twenty-Five Metropolitan Areas Ranked by Change in Within–Metropolitan Area Move Rate, 2008–2010*

Top Twenty-Five	Move	Unemployed	Foreclosed	Bottom Twenty-Five	Move	Unemployed	Foreclosed
Cape Coral–Fort Myers, Fla.	4.2%	4.9%	4.2%	Honolulu, Hawaii	–0.7%	3.2%	2.1%
San Jose–Sunnyvale–Santa Clara, Calif.	3.5	7.3	0.3	Toledo, Ohio	–0.8	11.1	–3.4
Las Vega–Paradise, Nev.	3.4	9.6	3.2	Virginia Beach–Norfolk, Va./N.C.	–0.8	5.6	–0.1
Bakersfield, Calif.	2.7	12.6	3.7	Raleigh–Cary, N.C.	–0.9	3.1	0.1
Provo–Orem, Utah	2.6	2.6	1.2	Buffalo–Niagara Falls, N.Y.	–0.9	–2.7	0.2
San Francisco–Oakland–Fremont, Calif.	2.5	5.7	0.1	Youngstown–Warren, Ohio/Penn.	–1.0	10.2	0.0
Phoenix–Mesa–Scottsdale, Ariz.	2.5	5.8	0.0	Jacksonville, Fla.	–1.0	11.2	3.7
Los Angeles–Long Beach–Santa Ana, Calif.	2.4	0.3	5.2	Little Rock–North Little Rock, Ark.	–1.1	3.9	1.1
Omaha–Council Bluffs, Neb./Iowa	2.3	3.9	–1.1	Albuquerque, N.M.	–1.1	4.1	1.6
Salt Lake City, Utah	2.1	4.9	1.9	Albany–Schenectady–Troy, N.Y.	–1.2	4.3	1.9
Ogden–Clearfield, Utah	2.1	3.1	0.1	Des Moines–West Des Moines, Iowa	–1.4	6.1	0.0
Milwaukee–Waukesha–West Allis, Wisc.	2.0	7.6	–1.3	Syracuse, N.Y.	–1.7	1.4	2.1
Miami–Fort Lauderdale–Pompano Beach, Fla.	1.9	4.7	9.5	Augusta–Richmond County, Ga./S.C.	–1.7	5.3	–1.3
Austin–Round Rock, Tex.	1.9	1.8	–0.1	Greenville–Mauldin–Easley, S.C.	–1.8	10.8	–0.2
Grand Rapids–Wyoming, Mich.	1.9	8.8	–2.5	Knoxville, Tenn.	–2.0	2.4	–0.7
Palm Bay–Melbourne–Titusville, Fla.	1.8	7.9	3.9	Memphis, Tenn./Miss./Ark.	–2.0	0.8	1.2
Charleston–North Charleston, S.C.	1.6	4.9	0.0	Lakeland–Winter Haven, Fla.	–2.2	16.0	4.3
Minneapolis–St. Paul, Minn./Wisc.	1.6	4.1	–1.6	Baton Rouge, La.	–2.3	4.0	–0.1
Modesto, Calif.	1.5	12.3	–4.5	Colorado Springs, Colo.	–2.4	5.0	–2.6
Harrisburg–Carlisle, Penn.	1.5	7.2	0.2	El Paso, Tex.	–2.4	7.2	–2.5
Stockton, Calif.	1.4	7.7	–5.1	Dayton, Ohio	–2.7	1.2	–1.3
Seattle–Tacoma–Bellevue, Wash.	1.1	4.9	2.2	Madison, Wisc.	–2.8	4.7	2.3
Oxnard–Thousand Oaks–Ventura, Calif.	1.1	4.9	–1.5	Jackson, Miss.	–3.1	2.1	–0.2
Hartford–West Hartford–East Hartford, Conn.	1.0	2.1	0.0	Boise City–Nampa, Idaho	–3.2	7.5	1.4
New York–Northern New Jersey, N.Y./N.J./Penn.	0.8	3.4	5.5	Wichita, Kans.	–4.3	2.4	–0.1

Source: Author's calculations using the 2008 and 2010 ACS.

areas from 2008 to 2010. Like table 5.6, almost all of the metro areas with the greatest change in this percentage were located in the West, and to a lesser extent in the South, including Fort Myers, Florida; Las Vegas, Nevada; and Bakersfield, California—areas known to have been particularly hard hit by the job and housing crises fueled by the Great Recession.

On the other hand, metro areas with the smallest (or negative) changes in these move rates were mostly found in the South, including Jackson, Mississippi; El Paso, Texas; and Baton Rouge, Louisiana, followed by metro areas in the Northeast. Moreover, an initial review indicates that changes in unemployment and foreclosure rates are correlated with changes in local move rates in the expected direction. For example, the average changes in the unemployment and foreclosure rates over the period are higher in the top twenty-five metro areas with the highest local move rates than in the bottom twenty-five.

We turn now to an exploration of the strength of the association between local move rates and indicators of the impact of the Great Recession, such as unemployment and foreclosure rates.

Metropolitan-Area Local Move Rates and the Great Recession

The central question is whether and to what extent the Great Recession influenced local move rates. The recession was characterized by high levels of unemployment and foreclosures, among other factors. To the extent that the recession influenced an uptick in local moves, there are two ways in which it may have done so: first, the influence of factors such as unemployment and foreclosures may have increased in importance during the recession; second, considering that unemployment and foreclosures have always predicted local moves, when more people live in metro areas where the risk of becoming unemployed or losing their home (as occurred during the Great Recession) is higher, more local moves are likely to occur as well.

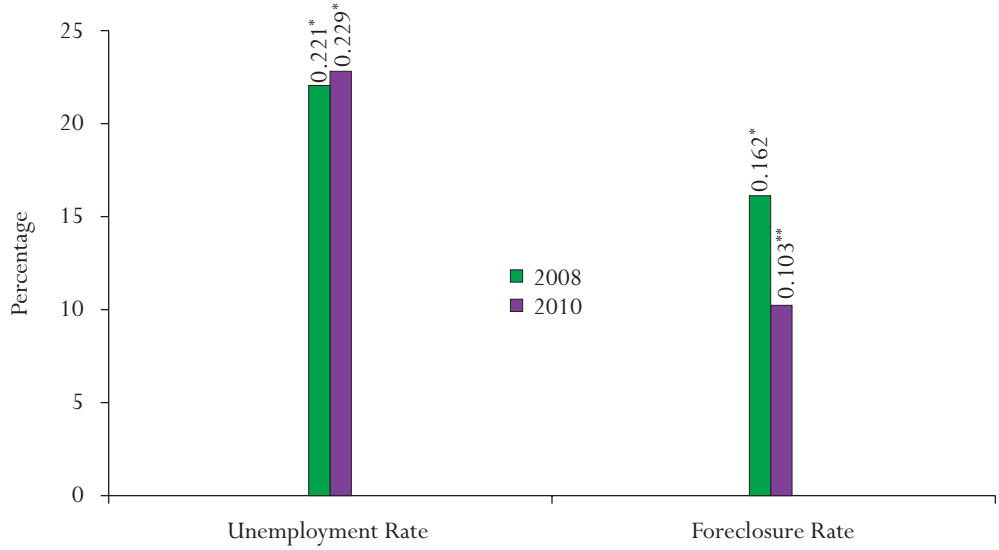
I tested these two possibilities using regression analysis. I estimated regressions of local move rates as a function of local unemployment and foreclosure rates in both 2008 and 2010.[40] Did economic predictors become more important during the Great Recession than before, or was the increase in local move rates driven simply by the changing economic risks?[41]

Figure 5.12 presents OLS regressions of the local move rates in 2008 and 2010 for the total population for the one hundred largest metro areas as a function of unemployment rates in the appropriate periods.[42] I also estimated separate regressions of the local move rates in 2008 and 2010 as a function of the foreclosure rate.[43] Thus, each bar represents a separate regression, and the coefficient estimates for either the unemployment or foreclosure rate for the relevant period are presented.[44]

All regressions include control variables for a set of metropolitan area characteristics: metro area size, region, percentage of the population that is black (Latino), age sixty-five or older, or in possession of four or more years of college, median income, and the industrial composition of the workforce. The inclusion of these control variables, however, does not alter the basic findings presented here.

Figure 5.12 shows a positive and statistically significant relationship between overall local move rates and local unemployment rates in both 2008 and 2010, and it is nearly identical in both periods. The coefficients indicate that a ten-percentage-point increase in the local unemployment rate is predicted to increase the local move rate by about 2.2 points. This prediction is close to the actual changes in the local move rate and unemployment rate from 2008 to 2010 observed in the ACS data. The average metropolitan move rate increased from 2008 to 2010 by a little over one percentage point (from 11.4 to 12.6 percent), while the average unemployment rate for the metropolitan areas in the sample rose by about five percentage points (from 5.3 to 10.3 percent) between 2008 and 2010.

FIGURE 5.12 *Effects of Unemployment and Foreclosure Rates in 2007 and 2009 on Move Rates in 2008 and 2010 (with Controls)*



Source: Author's calculations using the 2008 and 2010 American Community Survey (ACS).
*Statistically significant at $p < 0.05$.
**Statistically significant at $p < 0.01$.

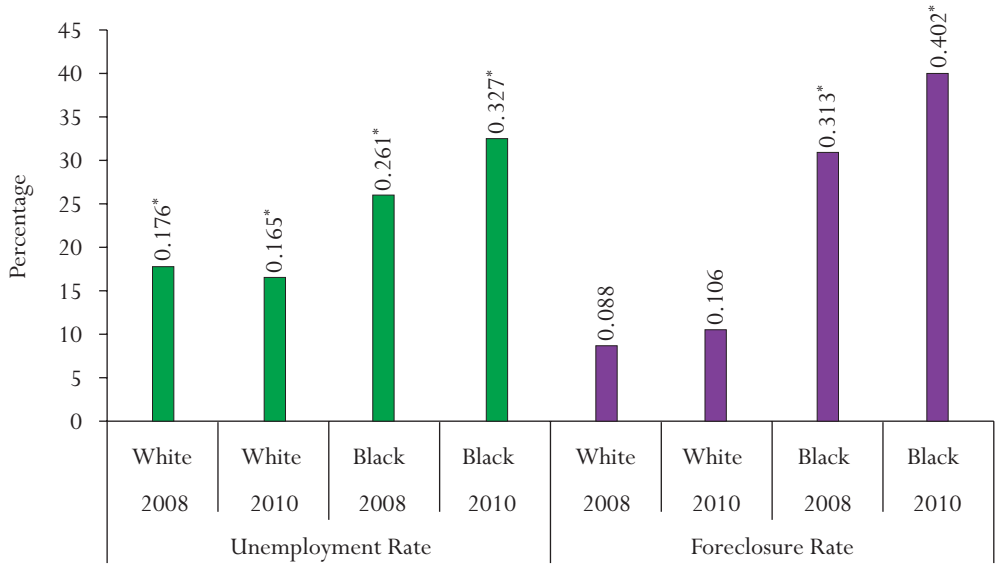
Figure 5.12 also shows a positive and statistically significant relationship between local move rates and local foreclosure rates in both 2008 and 2010. However, the coefficient in 2008 is larger than that in 2010. The 2008 coefficient indicates that a ten-percentage-point increase in the local foreclosure rate is predicted to increase the local move rate by 1.6 points. The average metropolitan foreclosure rate increased from 2008 to 2010 by a little over two percentage points (from 3.6 to 5.8 percent), while, as noted previously, the average metropolitan move rate increased from 2008 to 2010 by a little over one percentage point (from 11.4 to 12.6 percent).

This evidence is consistent with the conclusion that the Great Recession, especially in the case of unemployment, led to increases in local move rates. The influence of unemployment on moving did not change, but moving increased because of the rise in unemployment.[45] The effect of foreclosures declined somewhat even though the rate at which people lost their homes to foreclosure increased.[46]

I conclude that the unemployment rate is a stronger predictor of local moves than foreclosures. However, a region's foreclosure rate measures only one kind of housing market challenge—the point at which a bank takes ownership of a home. It does not measure other housing challenges, such as the affordability of rent or short sales by homeowners, which are better captured in the individual-level measures used in the previous section.

Given the large racial differences in observed local move rates and the finding that blacks and, to a lesser extent, Latinos helped fuel the increase in local move rates, figure 5.13 presents similar regressions using 2008 and 2010 data for racially specific measures of local move rates. (Only the results for whites' and blacks' metro area move rates are shown since none of these results are significant for Latinos or Asians. There is no evidence that local unemployment or

FIGURE 5.13 *Effects of Unemployment and Foreclosure Rates in 2007 and 2009 on Move Rates in 2008 and 2010 (Separate Equations for Whites and Blacks, with Controls)*



Source: Author's calculations using the 2008 and 2010 ACS.
*Indicates statistically significant at $p < 0.10$.

foreclosure rates influenced the local move rates of Latinos and Asians in either 2008 or 2010.) Each bar in figure 5.13 represents a separate regression for each year and each racially specific local move rate measure.

There are three key findings. First, there are positive and statistically significant relationships between local move rates and local unemployment rates in both 2008 and 2010 for blacks and whites. Metropolitan areas with higher unemployment rates are predicted to have higher move rates for both races.

Second, the pattern of results across the two time periods is different for these groups. For whites, the magnitude of the unemployment rate coefficient is nearly identical in both periods. This indicates that whites who lived in areas with higher unemployment rates faced the same propulsion to move in 2008 as in 2010. More whites moved in 2010 than in 2008 because the unemployment risk increased in metropolitan areas over this period. For blacks, on the other hand, the magnitude of the unemployment rate coefficient is greater in 2010 than in 2008.[47] This indicates that the increase in blacks' local move rates was driven both by their exposure to higher unemployment risks and by the greater influence of unemployment on moving during the Great Recession than before it.

Third, in each year the impact of the unemployment rate on moving was greater for blacks than for whites.[48] Blacks may have had less money in savings or less wealth to shield them during periods of increased risks of joblessness; they may have had fewer family members who could contribute or mitigate the impacts; they may have taken on greater debt from refinancing or subprime mortgages; or they may have had greater expenses. All of these possible reasons would exert more pressure to move as a result of the unemployment shock.

The same pattern is noted for foreclosures. Figure 5.13 shows very little influence of foreclosure rates on whites' local move rates. This effect is statistically significant for blacks, however, and the coefficient estimate is larger in 2010 than in 2008. On the one hand, the foreclosure crisis hit African Americans and Latinos harder than whites. On the other hand, the greater risk of foreclosure (represented by higher foreclosure rates in the metropolitan area) was more likely to force blacks to move. Foreclosure is a process that can last as long as two years. During that time, homeowners may be paying rent, or living in the house without paying rent, or negotiating a reduced payment schedule or short sale. White owners may be better able to extend the foreclosure process and possibly even avoid eviction.[49]

CONCLUSION

By the end of the 2000s decade, there was a shift from long-distance to local moves in the United States. Interstate migration had slowed to a crawl, while local residential movement had increased to its highest level in over a decade. This increase was fueled to some extent by black and, to a lesser extent, Latino movers, and local move rates were fairly high by the end of the decade in metropolitan areas known to have been hit particularly hard by the Great Recession. Indeed, in some metro areas with the highest move rates in 2010, nearly one in five residents moved in one year.

Did the Great Recession contribute to this increase in local moves? The evidence presented here makes a strong case that it did. During the recession, local movers were more likely than before to report recession-related reasons for their move, such as to find affordable housing or to look for work. At the level of individuals, local movers were more likely than nonmovers to be poor, unemployed, and renters over the period of the Great Recession. Moreover, as the recession continued, movers remained more likely to cite these reasons related to housing and job difficulties as their reasons for moving.

At the metropolitan level, further statistical analysis of local movers highlighted the recession's impact as well. In particular, local areas with higher unemployment and foreclosure rates had higher move rates. Unemployment limits income and therefore people's ability to afford current housing, thus prompting moves. Moreover, the evidence strongly indicates that local unemployment rates have a fairly consistent effect on local moves over time, so that the increase in local moves during the Great Recession resulted from more people becoming unemployed and facing a similar risk of moving during this period.

These effects hit African Americans and Latinos particularly hard. Indeed, the increase in local moves over this period was driven almost entirely by these groups, leading to increased racial gaps in local move rates by the end of the decade. Local unemployment and foreclosure rates strongly predict blacks' local move rates, and these effects were stronger during the recession than before it.

The consequences of the increase in local moves are likely to have been both short- and longer-term. At the individual level, to the extent that the Great Recession spurred many to move as a last resort, the short-term costs must have been severe. The immediate disruption to daily (family) life, the psychological pain of losing one's home, and the direct monetary and nonmonetary costs of moving and setting up anew were surely difficult. To the extent that those who moved doubled up with family or friends for either the short or longer term, additional costs in the form of lost privacy and greater sharing of space and resources would have been borne by those who took them in, even while economies from living together would have provided some benefits. These impacts would compound the pressures already faced by the economically marginal, who are more likely to move locally and who did so to a greater degree during the recession.

For homeowners who could no longer afford their homes or who lost them to foreclosure, the short- to medium-term costs would have been no less severe. Credit scores would have taken a negative hit for those who suffered foreclosure and even short sales. Moreover, renting would have become more expensive as more people searched for rentals whose supply could not grow appreciably in the short term. Those with credit problems surely faced even more obstacles to renting. Finally, banks and federal regulators made credit standards and down-payment requirements more rigorous and demanding; thus, for those who hoped to own a home again, it would have become even more difficult to regain that part of the American dream.

Communities are likely to have suffered short-term costs as well, particularly in those areas where move rates increased the most. To the extent that these moves were driven by those losing ownership of their homes, communities surely suffered, at minimum, from vacated properties, neighborhood deterioration, and the loss of municipal income and therefore services.

The longer-term consequences are less clear. For communities, market-based responses over the longer term should mitigate the long-term or permanent economic distress caused by the Great Recession from its impact on local moves. Vacated properties eventually become either realistically available for those who previously could not afford homes or bargains for investors, who may rehabilitate and refurbish them, thus helping to restore market and neighborhood stability and the local tax base. Federal policies such as the Neighborhood Stabilization Program (NSP) have also provided resources to communities hit hard by the Great Recession, with the goal of increasing neighborhood social and economic stability.

Of greater concern is that those who move locally are more likely than nonmovers to have children (though, fortunately, the share of those moving with children did not increase during the recession). There are likely to be negative long-term consequences of such moves for children. Forced moves lead to negative outcomes for children mostly through school performance (as a result of school disruption) and behavioral adjustments.[50] Yet there is considerable evidence from some studies that the long-term effects of residential disruption on adults are modest.[51] In the same way, the residential mobility of the poor to more prosperous areas has little positive long-term impact on adults.[52] Having to move could lead to more affordable housing options in the longer run (or housing better matched to income), thus allowing those who have moved to save more money, invest in productive activities, or make other compensatory adjustments.

Historically, many Americans have moved to improve their lives. In the Great Recession, more people moved locally just to cope with their losses.

APPENDIX

TABLE 5A.1 *Interregional Migration Before and During the Great Recession*

	Moved From:							
	Northeast		Midwest		South		West	
Moved To:	Before	During	Before	During	Before	During	Before	During
Northeast	0.594	0.465	0.053	0.075	0.101	0.180	0.057	0.070
Midwest	0.057	0.097	0.570	0.421	0.133	0.151	0.123	0.160
South	0.261	0.315	0.200	0.281	0.603	0.520	0.126	0.230
West	0.087	0.124	0.177	0.223	0.164	0.149	0.694	0.540

Source: Data from the 2000 to 2010 CPS.
Notes: Before the recession is 2000–2007 and during is 2008–2010.

TABLE 5A.2 *Difference-in-Difference Estimates by Race-Ethnicity: Within-County Movers Versus Nonmovers and Before Versus During the Great Recession*

	Before			During			Difference-in-Difference
	Nonmovers	Movers	Difference	Nonmovers	Movers	Difference	
White							
Unemployed	0.024	0.051	0.027*	0.037	0.080	0.043*	0.016*
Homeowners	0.820	0.443	–0.377*	0.808	0.360	–0.448*	–0.071*
Poverty	0.073	0.156	0.083*	0.078	0.192	0.114*	0.031*
Black							
Unemployed	0.046	0.100	0.054*	0.064	0.129	0.065*	0.011*
Homeowners	0.573	0.222	–0.351*	0.555	0.167	–0.388*	–0.037*
Poverty	0.215	0.331	0.116*	0.219	0.360	0.141*	0.025*
Latino							
Unemployed	0.035	0.064	0.029*	0.056	0.095	0.039*	0.010*
Homeowners	0.545	0.268	–0.277*	0.558	0.181	–0.377*	–0.100*
Poverty	0.201	0.278	0.077*	0.209	0.329	0.120*	0.043*
Asian							
Unemployed	0.025	0.040	0.015*	0.033	0.050	0.017*	0.002
Homeowners	0.662	0.389	–0.273*	0.682	0.306	–0.376*	–0.103*
Poverty	0.100	0.165	0.065*	0.109	0.182	0.073*	0.008

Source: Data from the 2000 to 2010 CPS.
Note: Before the recession is 2000–2007 and during the recession is 2008–2010.
*$p < 0.05$

TABLE 5A.3 *Characteristics of Those Who Moved Within Counties Before and During the Great Recession, by Race-Ethnicity*

	White		Black		Latino		Asian	
	Before	During	Before	During	Before	During	Before	During
Age								
Eighteen to twenty-five	0.258	0.266	0.253	0.235	0.281	0.268	0.199	0.193
Twenty-six to thirty-five	0.335	0.332	0.343	0.337	0.400	0.391	0.398	0.406
Thirty-six to forty-five	0.303	0.285	0.331	0.340	0.267	0.288	0.317	0.309
Forty-six to sixty-five	0.055	0.066	0.044	0.055	0.033	0.033	0.046	0.054
Older than sixty-five	0.050	0.051	0.029	0.032	0.019	0.021	0.041	0.040
Education								
Less than high school	0.117	0.107	0.200	0.183	0.433	0.394	0.104	0.098
High school degree	0.316	0.312	0.401	0.385	0.299	0.315	0.207	0.195
Some college	0.314	0.320	0.285	0.309	0.189	0.197	0.235	0.249
College graduate or more	0.253	0.261	0.114	0.123	0.080	0.094	0.454	0.458
Labor market								
Employed	0.743	0.685**	0.652	0.587**	0.713	0.662**	0.698	0.677
Unemployed	0.048	0.081	0.101	0.133	0.064	0.098	0.040	0.051
Not in labor force	0.209	0.235	0.247	0.280	0.224	0.240	0.262	0.272

(*continued on p. 170*)

TABLE 5A.3 *Continued*

	White		Black		Latino		Asian	
	Before	During	Before	During	Before	During	Before	During
Poor	0.147	0.186*	0.290	0.321*	0.241	0.291*	0.152	0.180*
Homeowner	0.429	0.352*	0.229	0.177*	0.261	0.178*	0.375	0.292*
Married	0.408	0.394	0.258	0.230	0.468	0.431	0.538	0.521
Male	0.484	0.491	0.432	0.444	0.528	0.534	0.508	0.477
Foreign-born	0.053	0.047	0.079	0.087	0.606	0.583	0.778	0.744
Recent immigrant	0.014	0.012	0.024	0.027	0.202	0.189	0.247	0.242
Median income (in 2009 dollars)	$32,732	$34,352	$23,093	$25,862	$22,646	$23,914	$35,640	$37,238
Children under age five	0.165	0.156	0.198	0.186	0.263	0.246	0.189	0.187
Retired	0.028	0.024	0.013	0.013	0.006	0.005	0.010	0.011
Disability	0.020	0.022	0.025	0.030	0.011	0.011	0.010	0.010
Enrolled in school	0.089	0.097	0.076	0.078	0.054	0.061	0.110	0.112
Nonmetropolitan area	0.178	0.163	0.096	0.073*	0.069	0.062	0.035	0.030
Region								
Northeast	0.150	0.139	0.128	0.110	0.108	0.102	0.144	0.149
Midwest	0.259	0.262	0.212	0.200	0.091	0.077	0.124	0.119
South	0.326	0.345	0.552	0.575	0.374	0.381	0.212	0.213
West	0.264	0.255	0.109	0.115	0.426	0.440	0.519	0.520

Source: Author's calculations using the 2000 to 2010 CPS.

*Difference before/during recession significant at $p < 0.05$.

**Chi-square distribution of variable before/during recession significant at $p < 0.05$.

TABLE 5A.4 *Major Reasons for Moves Within Counties Before and During the Great Recession, by Race-Ethnicity*

	White		Black		Latino		Asian	
	Before	During	Before	During	Before	During	Before	During
Demographic/ life cycle	0.294	0.332	0.290	0.313	0.269	0.285	0.223	0.256
To take new job	0.020	0.025	0.017	0.017	0.025	0.026	0.025	0.052
To look for work	0.049	0.077	0.051	0.080	0.062	0.093	0.069	0.109
To own home/find better neighborhood	0.400	0.291	0.383	0.296	0.411	0.293	0.471	0.345
To find cheaper housing	0.203	0.213	0.227	0.253	0.214	0.268	0.190	0.192
Other	0.034	0.064	0.032	0.041	0.019	0.035	0.023	0.044

Source: Author's calculations using the 2000 to 2010 CPS.
Note: Chi-square test for distribution across categories before/during recession is significant at $p < 0.05$ for all groups.

TABLE 5A.5 *Racial Differences in Means of Recession-Related Variables over 2000s Decade*

	Local Move	Unemployed	Homeowner	Poverty
Black-white				
2000	0.038*	0.028*	–0.230*	0.121*
2008	0.043*	0.033*	–0.221*	0.120*
2010	0.054*	0.050*	–0.256*	0.127*
Latino-white				
2000	0.034*	0.024*	–0.284*	0.116*
2008	0.035*	0.021*	–0.262*	0.104*
2010	0.048*	0.034*	–0.265*	0.124*
Asian-white				
2000	0.030*	0.004*	–0.184*	0.030*
2008	0.011	–0.002	–0.145*	0.020
2010	0.016	–0.005	–0.132*	0.031*

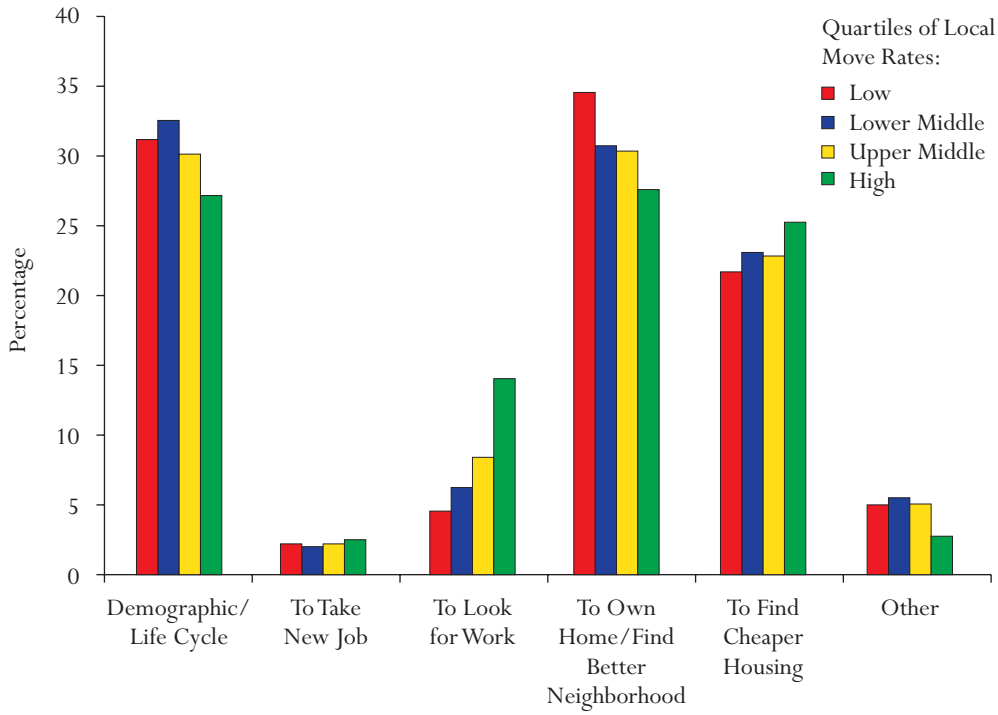
Source: Author's calculations using the 2000 to 2010 CPS.
*Racial difference significant at $p < 0.05$.

TABLE 5A.6 *Effects of Recession-Related Variables Predicting Moves Within County, 2000–2010*

	2000–2010	2000	2008	2010
Race (white is reference)				
Black	0.040*	0.038*	0.043*	0.054*
Latino	0.041*	0.034*	0.035*	0.048*
Asian	0.014*	0.030*	0.011	0.016
Homeowner	—	—	—	—
Poverty	—	—	—	—
Unemployed	—	—	—	—
Demographics controlled	No	No	No	No
N	1,412,326	88,658	130,134	131,639
Race (white is reference)				
Black	–0.001	–0.004	–0.001	–0.001
Latino	0.002*	0.011*	–0.003	–0.003
Asian	–0.009*	0.002	–0.013*	–0.007*
Homeowner	–0.138*	–0.131*	–0.135*	–0.158*
Poverty	0.043*	0.045*	0.045*	0.042*
Unemployed	0.013*	0.013*	0.014*	0.013*
Not in labor force—standard reason	–0.043*	–0.047*	–0.043*	–0.042*
Not in labor force—other reasons	–0.051*	–0.053*	–0.051*	–0.050*
N	1,412,326	88,658	130,134	131,639

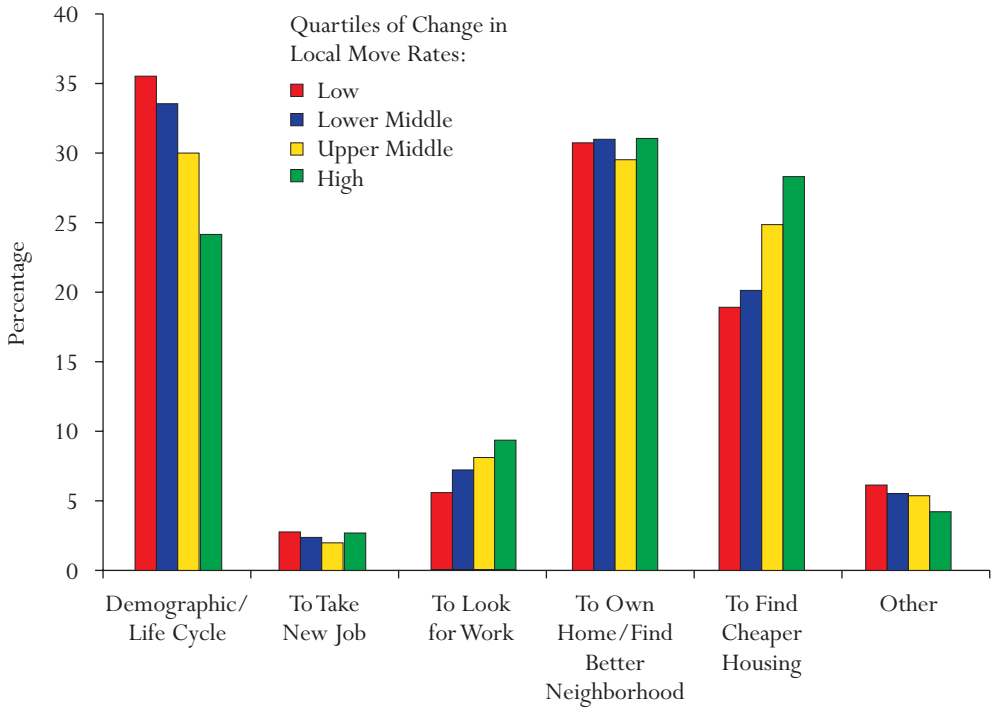
Source: Author's calculations using the 2000 to 2010 CPS.
*$p < 0.05$.

FIGURE 5A.1 *Reasons for Local Moves in 2010, by Level of Local Move Rates in 2010*



Source: Author's calculations using the 2010 March CPS.
Note: Chi-square distributions are statistically different at at least the 5 percent level across local move rate levels.

FIGURE 5A.2 *Reasons for Local Moves Between 2008 and 2010, by Change in Level of Local Move Rates Between 2008 and 2010*



Source: Author's calculations using the 2008 and 2010 March CPS.
Note: Chi-square distributions are statistically different at at least the 5 percent level across local move rate levels.

NOTES

1. There are two basic migration questions—the one-year and five-year questions. The one-year migration question is best suited for the purposes of this study. The five-year question asks where respondents lived five years prior to the survey. This question has several measurement issues: it misses those who moved before the interceding five-year period, as well as those who may have had multiple migrations during this period, and the long time period examined may be too long to identify the push-pull factors that influenced the move. Thus, this question fails to capture those who moved in shorter time periods, perhaps in response to the major events that influenced the questions of this study.
2. The literature has historically defined the move rate with a population of those ages five and older (see Long 1988). Here I use a population that is age eighteen and older because the factors that are believed to influence moving, such as unemployment, would affect only those who are at least younger adults. However, the basic results (such as move rate estimates and reasons for moving, among others) were not significantly different when those age five to seventeen were included, nor were they significantly different when only heads of households were included in the sample.
3. There are exceptions. One-year migration questions were not asked in 1980, 1985, or 1995. The time series thus begins in 1981, and data for 1985 and 1995 are interpolated using data from the previous and next years.
4. That local movers have long made up the majority of movers in this country should be no surprise and is attributable to a variety of factors, such as moving costs and family ties (Long 1988; Quigley and Weinberg 1977).

5. To be sure, a shift to local moves from more distant ones also speaks to notions about the meaning of migration or mobility. Many have argued that there is a significant difference between migration and strictly local moving. The former is more often viewed as an avenue toward social and economic mobility and as more disruptive, often entailing a multitude of other changes such as job relocations and the need to alter social networks and the like. Shorter-distance or local moves are thought of as entailing some changes in daily habits, such as commuting, but not the more disruptive changes associated with migration (Long 1988).
6. It is arguable that the housing boom during this period could have led to a slowdown in farther moves. The Case-Schiller home price index shows that housing prices on average reached their peak over the 2000 decade during this 2005–2007 period. The high housing prices, especially in high-flying states characterized by high population growth states whose housing prices grew astronomically over the mid-2000s such as California, could have influenced this slowdown in farther moves because of relatively higher costs of moving. Frey (2008b) shows that migration slowed in hot housing markets toward the end of the 2005–2007 period.
7. These periods of recession are those defined by the NBER as technical recessions, or periods when there are at least two straight quarters (six months) of economic decline as measured by the gross domestic product (GDP). The period of economic hardship associated with these recessions is likely, however, to last much longer than that shown here.
8. For those who moved within the last year, the region of residence refers to that region where they lived previous to the move, irrespective of whether the move was within county, between states, or within the state. A figure for those who moved within state is not presented since results are similar to those for between-state moves. Those who moved within state, however, are included in the total move rate calculation.
9. Some argue that areas with greater in-migration are also likely to have higher levels of within-county migration, because in-migrants, after learning about the local housing market, are more likely to move locally (Long 1988). In-migration has been much higher in the West and South for the past couple of decades.
10. This conclusion is based on the results of regressions of total move rates over the 2000s decade that first included dummy variables only for the region of residence, and then included demographic characteristics (listed in table 5.1) as controls. The statistically significant differences in move rates still remained across regions after inclusion of these demographic control variables, and the magnitude of the regional coefficients remained nearly identical to those in regressions without these controls. The same pattern was also observed in regressions that were estimated in periods before or during the Great Recession.
11. Regressions similar to those described in note 10 were run except for local move rates. Once again, the statistically significant differences in local move rates remained after inclusion of these demographic control variables, and the magnitude of the regional coefficient remained nearly identical to those in regressions without these controls. Estimating these regressions for periods before or during the Great Recession did not change these results.

    In a separate analysis using local move rate data for metropolitan areas in 2010, the age of the oldest central city and unemployment rates alone can help account for almost all of the differences in metropolitan move rates across regions. Local (or within) metropolitan move rates are lower in older areas, and older metropolitan areas are found more in the Northeast, the Midwest, and, to a lesser extent, the South than in the West.
12. A related question is whether the Great Recession led to more local interstate moves, which could occur if those who moved out of state were constrained in the distance of their move by moving costs or other related factors. Appendix table 5A.1 shows interregional migration patterns over the 2000s decade before and during the Great Recession. It reports at the regional level where individuals who moved across states moved from and to. The data show the opposite of this prediction. In each region, the percentage of those who moved within region actually decreased during the Great Recession, in most instances by large amounts. For example, about 60 percent of those from the Northeast who moved between states moved to another state in the Northeast before the Great Recession, while about 47 percent did so during the Great Recession. Similar patterns are observed in each region. Thus, while overall interstate migration slowed to a crawl during the Great Recession, those who moved between states were more likely to move out of region over this period than before.
13. Further analysis also indicates that these factors predict moving similarly for those moving within state and those moving between states; thus, for the rest of the analysis these moving categories are combined.
14. In reality, the 2000s period could best be disaggregated into three periods: 2000–2003 (the time prior to the housing boom, characterized by a mild recession and weak recovery), 2004–2007 (the height of the housing

boom), and 2008–2010 (the housing bust and a period of severe economic recession). Analysis demonstrates that grouping the first two periods does not change the study's results, and thus, for the sake of simplicity and space conservation, only two periods are shown in the analysis.

15. One could argue for alternative periods that characterize "before" and "during" the Great Recession. For example, in figure 5.2 (as well as in figures 5.3 to 5.8), the share of all moves that are local began to increase sometime between 2005 and 2006. To the extent that the impacts of the oncoming recession were felt at that time and influenced local move rates, for instance, then the periods could arguably be disaggregated as 2000–2005 (or 2000–2006) and 2006–2010 (or 2007–2010). When this is done, the differences in characteristics observed in figure 5.8 become less salient, especially when the periods are defined as 2000–2005 and 2006–2010. This should be expected because the unemployment and foreclosure rates did not increase significantly until 2008, at least nationally, and thus are unlikely to show up in individual data measuring unemployment or homeownership. Also, disaggregating in this way smooths out the jump in the local move rate, thus obscuring the extent to which it increased over the period characterized as the height of the Great Recession. A concern in using these alternative timing periods based on the local moving share increasing around 2005–2006 is that the increase in this share from 2005 to 2008 was driven almost entirely by the continuing secular decline in interstate and within-state moves over this period, a decline that appears not to be strongly related to the Great Recession.
16. Homeownership status is attributed to individuals based on household head status, irrespective of the age of individuals observed in the data.
17. Appendix table 5A.2 provides difference-in-difference estimates of these same data by race-ethnicity. The results are largely very similar for all racial and ethnic groups, with few exceptions. For example, for Asians, only homeownership status was significant based on the difference-in-difference estimate.
18. Educational attainment is calculated only for those who completed schooling. Median income is calculated only for those with positive income.
19. Appendix table 5A.3 provides data on the same characteristics for local movers before and during the Great Recession by race-ethnicity. Differences in characteristics for those who moved locally before or during the recession were similar across racial-ethnic groups, with a few exceptions. There were fewer differences for Asians, while for Latinos, smaller shares of movers were immigrants and recent immigrants after the recession. This same pattern was not observed for Latino nonmovers, raising questions about the impact of the Great Recession on Latino immigrants' decisions about local moves.
20. Of course, this result could also occur if the population share of these groups grew over this period. The fact that similar changes were not observed for these nonmovers before and during the recession, however, makes this explanation implausible.
21. These predetermined answers were grouped into six logical and mutually exclusive categories; thus, the data across this set of answers sum to 1.
22. Alternatively, I stratified the CPS respondent data according to different local move rates. I calculated move rates at the local level, and then sorted these local move rates into quartiles (four equal parts). I reported individual responses to questions about why respondents moved for each quartile and then compared these responses across the different quartile levels of local move rates. These data are presented in figure 5A.1. They show that in local areas with higher overall move rates, respondents who moved were more likely to cite looking for work or looking for cheaper housing as major reasons for the move. In addition, in areas with higher move rates, they were less likely to cite looking for another home or looking for a better neighborhood as reasons for the move. I performed a similar exercise for the change in local move rates between 2008 and 2010 (figure 5A.2), and the results were very similar to these: respondents in areas where local move rates changed more significantly were much more likely to cite looking for work or looking for cheaper housing as reasons why they moved.
23. On a year-to-year basis from 2000 to 2010, these responses remained fairly constant from 2000 to 2007, then changed significantly, starting in 2008, in the direction of those reported in the "during recession" category.
24. A number of interesting differences emerge when these responses are compared to those from movers who went farther (either interstate or within state). First, those who moved farther were much more likely than local movers to indicate that they moved for a job or to find work, both before and during the Great Recession. Interestingly, interstate movers' reasons for moving were no different before the Great Recession than during it; their responses offered little evidence that the Great Recession influenced farther moves. On the other hand, this

result should be expected given that the move rate for those moving farther did not change appreciably over the two periods.

25. Appendix table 5A.4 displays these same data by race-ethnicity. The data show a strong similarity in responses across racial-ethnic groups both before and during the Great Recession. In addition, the changes in responses before and during the recession are similar across racial and ethnic groups. For all groups, the share looking for cheaper housing (especially in the case of Latinos) and for work increased significantly during the Great Recession.
26. In 2011 the CPS added foreclosure eviction as an additional reason for moving. About 1.2 percent of respondents indicated that they moved locally for this reason. However, when the data are disaggregated by local move rates, as in appendix figure 5A.1, the data conform to expectation. More people responded that they moved in areas with the highest level of local move rates (2.5 percent) than in areas at the lowest level of these move rates (0.5 percent).
27. The means for these variables for racial and ethnic groups remain similar and fairly stable over the 2000–2007 period; thus, to conserve space, only data for the years 2000, 2008, and 2010 are highlighted.
28. The data show that there are no racial-ethnic differences in moving farther (within or between states) and that this did not change during the Great Recession.
29. This pattern is confirmed by more rigorous methods as well. In a regression predicting local moves that pooled the 2000–2010 data and included variables for race, year, and interactions between race and year, the racial gaps in local moves (between blacks and whites and between Latinos and whites) increased from 2008 to 2010.
30. I also used logit models and obtained the exact same results as those shown here. OLS linear probability models are shown because of the ease of coefficient interpretation.
31. Of course, this method relies on the assumption that the Great Recession–related variables influence local moves for each racial and ethnic group similarly. Further empirical probes of the data indicate that this is indeed the case. The coefficients of the Great Recession–related variables are very similar for each racial and ethnic group when separate regressions are estimated for each group.

    It should be noted that the static measures of homeownership and unemployment included here are likely to produce fairly conservative estimates of the effects of the recession (and the ability of these factors to explain racial differences in mobility). These measures do not fully capture the changes in housing tenure and employment that are likely to have been generated in the recession and are most likely to have prompted mobility.
32. For the unemployment variable, the reference variable is the employed. Other categories of persons not in the labor force were also included in the regression (such as those in school). The results of these variables are shown in appendix table 5A.6.
33. Further controlling for the demographic characteristics listed in table 5.4 does not change these results. In regressions similar to those shown in table 5A.6, when demographic characteristic variables are added to the equation that includes only race indicator variables, the coefficients drop by about half for blacks and by about 70 percent for Latinos, yet remain statistically significant. After adding the Great Recession–related variables to the equation, the race-ethnicity variables are not significant.
34. The evidence comes from two approaches. First, entering homeownership, unemployment, and poverty status variables into the regression equation separately indicates that homeownership status reduces the racial gaps in moving locally by the greatest amount in each year, and by similar magnitudes. Second, entering homeownership, unemployment, and poverty status variables into the regression equation together and using standardized beta coefficients indicates that homeownership status has the biggest influence in each year.
35. The ACS also asks respondents about local moves in the last year at the level of both the city and the public use microdata area (PUMA). The city-level data, however, are unreliable and are unreported in most instances, and the PUMA-level data are arguably less of a geographic match for counties than the metro data.
36. As one test, I calculated local move rates using the ACS for the ten largest metro areas; then, using the CPS for the same metro areas, I calculated within-county local move rates. (Because of the limited sample size of the CPS, only a limited number of the largest metro areas are likely to have a representative sample.) I did so by selecting the respondent's current metro area of residence and then calculating move rates for those who indicated that they had moved within their county in the past year (in theory capturing those within metro areas made up of multiple counties.) Though the local move rates were not identical for each metro area using both of these methods, the two calculations were highly correlated across the ten metro areas, and their ordering by local move

rates was the same. Thus, we can be somewhat confident in using these alternative measures of local move rates together: they do not appear to generate completely different results for local move rate estimates.

37. I selected the largest one hundred metro areas because foreclosure data are readily available for large metro areas, and also because larger areas—and therefore samples taken from them—generate more confidence in the local move rate estimates.
38. The ACS began in 2005 to ask one-year migration questions about local moves, so a longer period of analysis is not possible with the data. However, when I calculated local move rates from 2005 to 2010 (and averaged them to the national level), I replicated the basic patterns shown in figure 5.1, using the CPS data. Local move rates were fairly flat and, if anything, declined somewhat between 2005 and 2007 before jumping slightly from 2008 to 2010. Selecting the years 2008 and 2010 does not bias the results or conclusions.
39. The unemployment rate data come from my calculations using the CPS for the respective years and metro areas; I calculated these rates in the standard way for those who were between the ages of sixteen and sixty-five and out of school. The metropolitan area foreclosure data come from the Local Support Initiatives Corporation (LISC), which analyzed data from LPS Applied Analytics. The unemployment and foreclosure rate data rose slightly from 2005 to 2007, then jumped from 2008 to 2010, consistent with the impacts of the Great Recession.
40. Easily available foreclosure data at the metro level were not available before 2007, so it was not possible to include previous years' data in the analysis. Also, the estimates for 2009 move rates using 2008 unemployment and foreclosure data are similar to those shown for 2008. The years 2008 and 2010 are shown because they represent the periods when local move rates were near their lowest and highest levels, respectively, late in the 2000s decade, the period characterized as the height of the Great Recession.
41. Arguably a better test is to conduct first-difference regression of the change in the local move rate from 2008 to 2010 to demonstrate how the change in the unemployment rate (and the foreclosure rate) influenced the change in the local move rate over the Great Recession. When I conducted this test, the change in the unemployment rate (and the change in the foreclosure rate) predicted the change in the local move rate in the expected direction, but the coefficients were never statistically significant. One explanation is that there was too little variation around the means of the change in the local move rate, unemployment rate, and foreclosure rate variables from 2008 to 2010. The empirical rule indicates that for a normally distributed variable, about 68 percent of the observations should fall within one standard deviation of the mean, 95 percent should fall within two standard deviations of the mean, and 100 percent should fall within three standard deviations. For these variables, at least 78 percent of the observations fell within one standard deviation of the mean, and 100 percent fell within two standard deviations, indicating that the percentage-point changes in these variables across metropolitan areas from 2008 to 2010 were very similar. Moreover, in separate stacked regressions of either the local move rate or the unemployment rate and foreclosure rate (including 2008 and 2010 values) with dummy variables for the metropolitan areas, the R-squared for all regressions was over 0.90, indicating that there was vastly greater variation in these variables across metro areas than within metro areas over time. The R-squared in these types of regressions indicates the percentage of variation in these variables that is explained by across-metro-area variation.
42. These regressions are weighted by metropolitan area population. Of course, weighting would place more emphasis on more populous metro areas. For example, New York, Los Angeles, and Chicago would all receive relatively large weights. Weighting by population size, however, does not appreciably change the estimated relationship between local move rates and unemployment (foreclosure) rates.
43. Multicollinearity problems prevented the unemployment and foreclosure rates from being entered into the equation simultaneously. With their inclusion, the standard errors in each variable increased markedly, and coefficient estimates became unstable and unreliable (relative to entering into the model separately). The correlation between the unemployment and foreclosure rates in 2010 was 0.55. This makes sense since unemployment is a leading cause of foreclosures (Ergungor 2007). Unfortunately, there is no easily available instrument to resolve this problem, and so each independent variable is entered separately in separate regressions.
44. The 2007 and 2009 unemployment (foreclosure) rates are used because respondents moved one year prior to the survey. For example, for those interviewed by the CPS in 2010, respondents who moved did so between 2009 and 2010.
45. Further analysis of the CPS data indicates that the unemployment rate trends across metropolitan areas are more temporally aligned with the trends in local move rates.

46. The timing of the height of foreclosures might be one reason why the foreclosure rate did not predict local move rates as strongly in 2010 as in 2008. For some metropolitan areas, the foreclosure crisis preceded the 2007–2008 period, the period when average observed metro local move rates were lowest. In San Diego and Boston, for example, the Case-Schiller Home Price Index shows that the housing market bubble burst before this period. On the other hand, the federal housing programs associated with the federal stimulus effort may have altered the extent to which people negotiated foreclosures by the end of 2010 thus weakening the influence of foreclosure on moving over this period.
47. Further statistical probes confirm that the difference in the effects of unemployment (and foreclosures) in 2008 and 2010 on blacks' local move rates are statistically significantly different, at least at the 5 percent level. This was confirmed by pooling the 2008 and 2010 data, including a year dummy variable, and interacting the year dummy with the unemployment rate. The year–unemployment rate interaction was statistically significant, indicating that the effect of unemployment on blacks' move rate was statistically greater in 2010 (at the height of the recession) than in 2008.
48. This was confirmed using an approach that tests the equality of coefficients across different models through seemingly unrelated estimation commands in Stata v11.
49. This finding is consistent with journalistic accounts. A recent Associated Press article notes that older Americans were hit hardest by the foreclosure crises, with African American and Latino older people hit hardest; see Associated Press, "Foreclosures Hit Older Americans Hard," CNBC, July 19, 2012, available at: http://www.cnbc.com/id/48240142/Foreclosure_Crisis_Hits_Older_Americans_Hard (accessed September 17, 2012). This finding is also consistent with recent evidence that among recent borrowers (or those who borrowed shortly before the Great Recession) the foreclosure rate was much higher for African Americans (and Latinos) than for whites. Moreover, from 2007 to 2009, while whites represented the majority of borrowers at risk of foreclosure, African American and Latino borrowers were more likely to be at imminent risk of foreclosure (Bocian, Li, and Ernst 2011).
50. In the same way, the residential mobility of the poor to more prosperous areas has been shown to have more beneficial effects on children than on adults through improved self-esteem and certain schooling outcomes (Ludwig, Duncan, and Ladd 2003).
51. See, for example, the older literature on this question in Newman and Owen (1982).
52. For a summary of the effects of the Moving to Opportunity (MTO) program, see Goering, Feins, and Richardson (2002).

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