METROPOLITAN OPPORTUNITY SERIES

Job Sprawl and the Suburbanization of Poverty

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"Employment decentralization is helping to drive the suburbanization of poverty."

Findings

An analysis of data on the location of people and jobs in the 50 largest U.S metropolitan areas in 1990 and 2006-2007 finds that:

- **The poor are more suburbanized in metropolitan areas with greater employment decentralization.** Overall, the poor are generally less likely to live in suburbs than the non-poor (55.8 percent versus 70.9 percent). Metropolitan areas with both high suburbanization of poverty and job sprawl are somewhat larger and lie mostly in the South and West, including Atlanta, Miami, San Francisco, Seattle, and Orlando.

- **Poor whites and Latinos are more suburbanized than poor blacks in metro areas with high job sprawl.** This disparity is most marked in metropolitan areas with higher poverty rates, indicating that in such regions, poor blacks may be less able to suburbanize in response to the outward movement of jobs than other groups.

- **Metropolitan areas where jobs decentralized more over time experienced greater suburbanization overall, but not among the poor.** This suggests that the outward movement of jobs in metropolitan areas in recent years does not by itself explain suburbanization of the poor during this time. Rather, other related factors may have propelled the decentralization of both the poor and jobs—such as lack of reverse commute public transit, or negative aspects of central cities.

- **Within suburbs, the poor generally live in communities that have somewhat below-average numbers of jobs.** About 68 percent of all suburban residents live in areas with above-average numbers of jobs compared with 62 percent of the suburban poor. Even lower shares of black and Latino suburban poor live in jobs-rich communities, particularly in higher-poverty metropolitan areas.

Together, these findings suggest that employment decentralization is a driver of the suburbanization of poverty. However, the responsiveness of the poor to the outward movement of jobs, particularly racial and ethnic minority poor, does not appear to be as strong as that for the population as a whole. Policies designed to minimize the frictions that limit broader access to jobs-rich suburbs, such as providing more incentives for multifamily housing, reevaluating existing zoning laws and development impact fees, using more housing vouchers in new suburban locations, and enforcing fair housing laws in suburban areas could go a long way toward easing mobility for the poor and enhancing their labor market outcomes.

Introduction

In nearly all U.S. metropolitan areas, jobs have been moving to the suburbs for several decades.[2] In the largest metropolitan areas between 1998 and 2006, jobs shifted away from the city center to the suburbs in virtually all industries.[3] As the U.S. population also continues to suburbanize, larger proportions of metropolitan area employment and population are locating beyond the traditional central business districts along the nation's suburban beltways and the more distant fringes.[4]

For city residents whose low incomes restrict their housing choices, job decentralization may make it more difficult to find and maintain employment.[5]

Understanding the association between employment decentralization and the suburbanization of poverty is important because of the continued growth of the suburban poor. In 2005, the suburban poor outnumbered their city counterparts by almost one million.[6] And during the first year of the recession that began in 2007, suburbs added more than twice as many poor people as did their cities.[7]

The suburban poor face unique disadvantages. These include concentration in inner-ring, disadvantaged, and jobs-poor suburbs; overreliance on public transportation, which often provides inferior access to and within suburban areas; and spatial mismatch between where the suburban poor live and the locations of important social services.[8]

If the decentralization of employment increases the suburbanization of poverty, this may signal that the poor are able to move closer to labor market opportunities. Policies designed to facilitate this process, such as housing vouchers, may therefore produce direct and immediate results. But housing market segregation on the basis of race and class could limit mobility to suburbs, thereby limiting the poor's access to opportunity. For example, in 2000, poor blacks were considerably less suburbanized than poor Latinos or Asians. Moreover, low-income housing is much less available in suburbs than cities.[9]

This report extends studies of poverty suburbanization by exploring one of its potential drivers, employment decentralization. It asks four key questions:

- Are the poor more or less suburbanized than the non-poor, and how does their location relate to employment decentralization in metropolitan areas?
- Does the relationship between poverty suburbanization and employment decentralization vary by race and ethnicity across different metropolitan areas?
- Do recent increases in the suburbanization of the poor relate to increases in employment decentralization?
- Do the suburban poor live in communities with similar levels of local employment opportunities as their non-poor counterparts?

Below we describe the data in greater detail, and then present our results on job sprawl and the suburbanization of the poor. We close with some implications for policy.

Methodology

We measure the suburbanization of a population as the proportion of metropolitan area residents that resides beyond a metropolitan area's designated central city or cities.[10] We calculate the proportion suburbanized for all residents, for poor residents, and by broad racial-ethnic groups (white, black, Latino).[11]

We measure "suburbanization" using data from the 2006 and 2007 American Community Surveys (ACS) and the 1990 Census Public Use Microdata Sample (PUMS) gathered from the uniform Integrated Public Use Microdata Samples (IPUMS).[12] We combine data from the 2006 and 2007 ACS samples to generate sufficient sample size to conduct the study. Because municipal boundaries are largely not identifiable in the household level data of the 1990 Census and the latter years of the ACS, we use Census Public Use Microdata Areas (PUMAs) to define central city-suburban boundaries. PUMAs are sub-state geographic units that have a population of at least 100,000. PUMAs are defined for both residential and work locations in the 5 percent PUMS decennial census data as well as in the ACS PUMS.[13] The borders of PUMAs generally follow the boundaries of large municipalities, counties, and metropolitan statistical areas (MSAs), although not always. A PUMA that crosses a relevant

boundary is allocated to the area encompassing more than 50 percent of the PUMA's population. We use geographic information systems (GIS) techniques to align those PUMAs that do not retain the same boundaries in 1990 and 2006–2007.[14]

To measure employment decentralization, we rely on a recent analysis of job sprawl by Elizabeth Kneebone.[15] She has created an index of job sprawl using the percentage of jobs within a metropolitan area that are within a three-mile and 10-mile radius of the primary city's (or cities) central business district (CBD). We employ a similar index based on a five-mile boundary, given that previous analysis indicates that the five-mile ring captures most jobs in the central city.[16] Specifically, job sprawl is calculated as the percentage of jobs within a metropolitan area that are more than five miles from the CBD, as we expect higher levels of job sprawl to be positively correlated with higher degrees of poverty suburbanization.[17] We also weight the cross-sectional correlations between job sprawl and the suburbanization of poverty by metropolitan area population to ensure we examine the experience of the typical metropolitan resident, rather than the typical metropolitan area (as metro areas vary considerably in size).

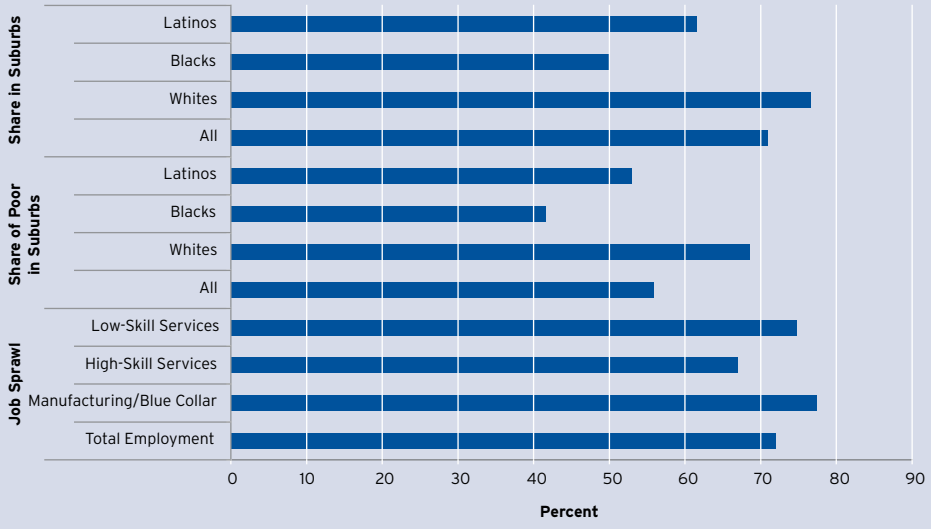
Building on earlier work, this report measures employment decentralization using data from the 1994 and 2006 U.S. Department of Commerce's ZIP Code Business Patterns files.[18] The job sprawl measure has a straightforward interpretation: Job sprawl is evident when a higher percentage of a metropolitan area's employment is located outside the five-mile ring than inside it. Of course, this measure isn't perfect. Perhaps the most serious qualification is that the index relates positively to metropolitan area population. In the current study, this problem is mitigated to some extent by our focus on the 50 most populous metropolitan areas, which had populations of more than 1 million in 2007. In addition, the decentralization index is calculated using only the area encircled in a 35-mile radius emanating from each area's central business district.[19]

Findings

A. The poor are more suburbanized in metropolitan areas with greater employment decentralization.

Decentralization of the poor goes hand in hand with decentralization of employment. Figure 1 displays how population and employment decentralization vary by demographic group and by industry for our 50 metropolitan areas during the 2006–2007 period.[20] The share of the poor residing in the

Figure 1. Levels of Suburbanization by Poverty Status and Job Sprawl Index, 2006-2007



Source: Authors' analysis of 2006-2007 American Community Survey and 2006 ZIP Business Patterns data

Table 1. Metropolitan Areas with High and Low Suburbanization of Poverty and Job Sprawl, 2006-2007

		% of Poor in Suburbs	Job Sprawl Index
High Poverty Suburbanization and High Job Sprawl			
1	Orlando, FL	89.1	75.7
2	Atlanta, GA	81.3	84.0
3	St. Louis, MO-IL	75.4	81.7
4	Miami, FL	72.7	83.3
5	San Francisco, CA	69.1	73.9
6	Cincinnati, OH-KY-IN	65.5	75.2
7	Seattle-Tacoma, WA	65.0	74.9
Low Poverty Suburbanization and Low Job Sprawl			
1	Austin, TX	31.8	62.8
2	Hartford, CT	32.2	64.5
3	San Jose, CA	32.3	58.1
4	New York, NY-NJ-PA	35.1	59.2
5	Oklahoma City, OK	37.5	56.0
6	Virginia Beach, VA	44.0	45.7
7	Phoenix, AZ	45.9	58.6

Source: Authors' analysis of data from 2006 and 2007 American Community Survey and 2006 ZIP Business Patterns
Metro areas among 50 largest in United States; names are abbreviated

suburbs (55.8 percent) is considerably lower than the share of all people living in the suburbs (70.9 percent). Black residents (both poor and non-poor) are considerably less likely to reside in the suburbs than other racial-ethnic groups, with poor blacks exhibiting the lowest suburbanization rate. Latinos are considerably more suburbanized than blacks, but less so than whites. These patterns are generally consistent with the well-documented racial-ethnic and economic segregation characteristic of U.S. metropolitan housing markets.

The employment decentralization indices reveal that most employment (72 percent) is located more than five miles from CBDs. Employment decentralization is highest for manufacturing (77.4 percent) and lowest for skill-intensive service industries (66.9 percent).[21]

To explore further the relationship between employment decentralization and the suburbanization of poverty, we compare 50 metropolitan areas with high and low levels of both suburbanization and job sprawl on the basis of their job sprawl index. We then examine the 15 metropolitan areas with the highest and lowest poverty suburbanization rates to determine which of these also rank in the top and bottom 15 on job sprawl. If there were no systematic relationships between these measures, one would expect about 4.5 metropolitan areas to overlap in these indices.[22] Table 1 shows instead that seven of the 15 metropolitan areas with the highest poverty suburbanization rates also ranked among the top 15 on job sprawl. At the other end of the distribution, seven of the 15 metropolitan areas with the lowest poverty suburbanization rates also ranked among the bottom 15 in their degree of job sprawl. This indicates a systematic relationship between poverty suburbanization and employment decentralization.[23]

Metropolitan areas with both high suburbanization of poverty and job sprawl are somewhat larger and lie mostly in the South and West, including Atlanta, Miami, San Francisco, Seattle, and Orlando. Metro areas with lower poverty suburbanization and job sprawl are more widely distributed geographically, from San Jose to Phoenix to Virginia Beach to New York. Table 1 also exhibits a great degree of variation in the degree to which poverty is suburbanized, from Austin at 31.8 percent to Orlando at 89.1 percent. There is also considerable variation in the proportion of jobs located outside central areas, with a 38 percentage point difference between the lowest and highest metro areas. Employment

Table 2. Share of Population Living in Suburbs by Poverty Status and Race/Ethnicity, High Job Sprawl versus Low Job Sprawl Metro Areas, 2006-2007

	Share of Population Living in Suburbs (%)		
	Low Job Sprawl	High Job Sprawl	Difference (High – Low)
All Residents	64	76	12
All Poor Residents	50	60	10
Black Residents	42	56	14
Black Poor	38	45	7
White Residents	70	81	11
White Poor	61	74	13
Latino Residents	53	69	16
Latino Poor	45	59	14

Source: Authors' analysis of data from 2006 and 2007 American Community Survey and 2006 ZIP Business Patterns

29 metro areas in low job sprawl category have indices below 50-metro average; 21 metro areas in high job sprawl category have indices above 50-metro average

decentralization rates are uniformly lower in the areas with the least amount of poverty suburbanization, such that the two distributions do not overlap.

B. Poor whites and Latinos are more suburbanized than poor blacks in metro areas with high job sprawl.

The above analysis demonstrates that job sprawl and suburbanization of the poor in metropolitan areas are related. But how strong is this relationship? Does it hold for different racial-ethnic subgroups and both the poor and non-poor? Does it vary by metropolitan characteristics, such as its overall racial composition or level of poverty?

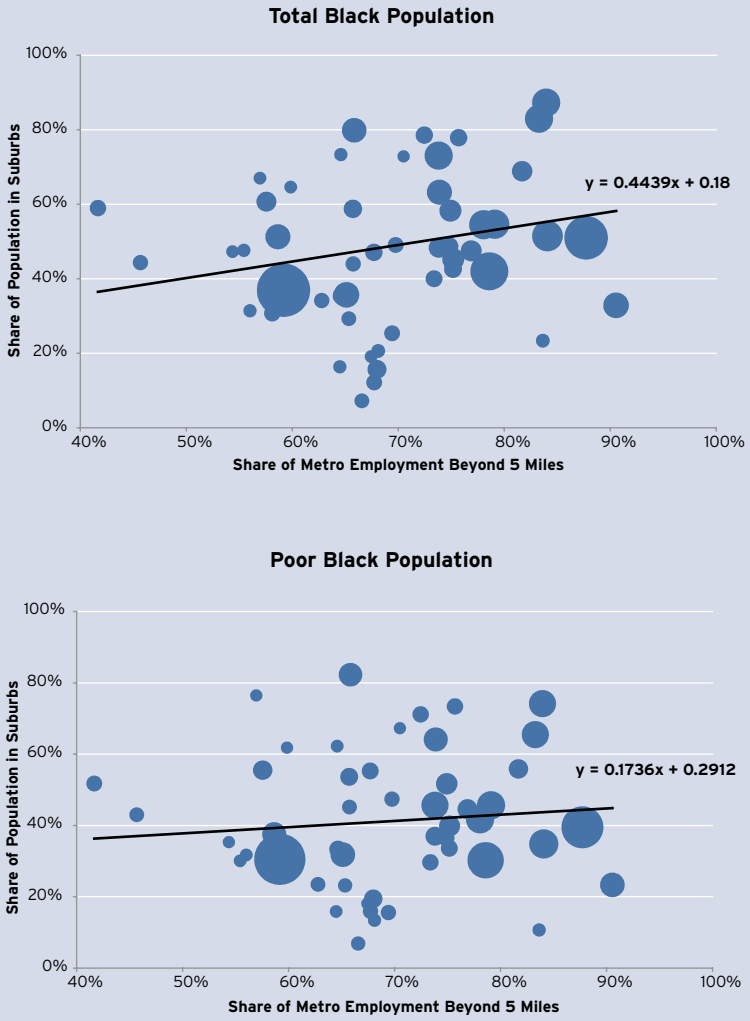
To answer these questions, we begin by separating metropolitan areas into two groups: those with high and low degrees of employment decentralization.[24] We define "high" and "low" as having a job sprawl index above or below (respectively) the population-weighted average decentralization measure for all metropolitan areas. Table 2 presents these comparisons for all residents, all poor residents, and by race-ethnicity and poverty levels.

For each group, the proportion of individuals residing in suburbs is higher in metro areas with greater job sprawl. Although poor residents are markedly less likely to reside in the suburbs, the difference in the decentralization measure between high- and low-decentralization areas is similar for all residents (76 percent versus 64 percent, a difference of 12 percentage points) and poor residents (60 percent versus 50 percent, a difference of 10 percentage points).

For whites and Latinos, the influence of job sprawl on poverty suburbanization appears similar. Latinos overall are 16 percentage points more likely to live in the suburbs in highly decentralized metro areas than in minimally decentralized areas, and the Latino poor are 14 percentage points more likely to do so. For white residents, the difference is slightly higher for poor whites (13 percentage points) than for whites overall (11 percentage points). This similarity may reflect the already high rate of white suburbanization and with it less room for adjusting to further employment decentralization.

A distinctive pattern, however, emerges for blacks. Within each metro category, blacks are less likely to live in the suburbs than other groups. Moreover, the suburbanization of poor blacks appears to be only weakly related to the overall degree of metropolitan employment decentralization. The difference is a mere 7 percentage points in the proportion of the black poor in high- and low-decentralization metro areas, the lowest for any group. This contrasts with a difference of 14 percentage points for all blacks.

Figure 2. Employment Decentraliation and Suburbanization of Blacks, 50 Largest Metro Areas, 2006



Source: Authors' tabulations from the 2006 and 2007 American Community Surveys and the 2006 U.S. Department of Commerce ZIP Code business patterns file

The evidence indicates that this relationship is systematic and not driven by outlier metropolitan areas. To establish this, Figures 2, 3, and 4 plot the proportion of population residing in the suburbs against the share of jobs located more than five miles from the CBD. A fitted trend line summarizes the overall relationship.[25] In each figure, panel A presents the scatterplot for the entire subpopulation and panel B presents the scatterplot for the poor. The size of each metropolitan area is indicated by the size of the bubble surrounding each data point.

We find a statistically significant, positive relationship between employment decentralization and the proportion of all blacks residing in the suburbs (Figure 2). In contrast, there is no apparent relationship between employment decentralization and the suburbanization of the black poor across metropolitan areas. In addition to being statistically insignificant, the slope coefficient of the trend-line in Figure 2B is small (0.173), and is only 39 percent of the slope coefficient observed in Figure 2A. These plots do not reveal any notable outlier metropolitan areas that may be exerting undue influence on the tabulations.

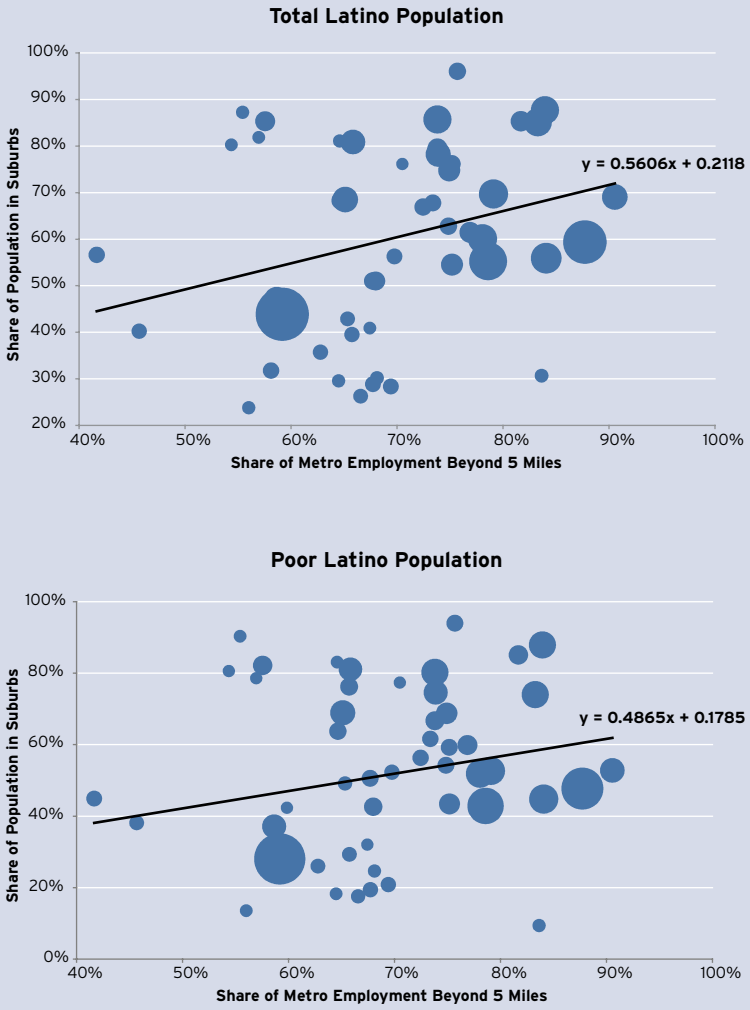
Figure 3. Employment Decentraliation and Suburbanization of Whites, 50 Largest Metro Areas, 2006

Source: Authors' tabulations from the 2006 and 2007 American Community Surveys and the 2006 U.S. Department of Commerce ZIP Code business patterns file

The scatterplots for whites and Latinos largely confirm the relationships between job decentralization and poverty suburbanization in Table 2. Figure 3 shows statistically significant, positive relationships between employment and population decentralization for both all whites and poor whites. The relationship is slightly stronger for the white poor, indicated by the steeper underlying trend line in panel B. Figure 4 shows that the relationship between employment and population decentralization is similar for both Latinos overall and the Latino poor. Again, there is little evidence that outlier metropolitan areas are driving these relationships.

Other factors beyond race-ethnicity and poverty could also influence the relationship between employment and population decentralization. Metropolitan characteristics, for instance, may matter. The poor in high-poverty metro areas may be less able to suburbanize in response to employment shifts owing to a proportionately large poor population and a dearth of low-cost housing in the suburbs.[26] Alternatively, metropolitan areas with proportionally large black populations may have entrenched housing-segregation patterns, making it difficult for blacks, and in particular poor blacks,

Figure 4. Employment Decentraliation and Suburbanization of Latinos, 50 Largest Metro Areas, 2006



Source: Authors' tabulations of data from the 2006 and 2007 American Community Surveys and the 2006 U.S. Department of Commerce ZIP Code business patterns file

to move in response to jobs.[27] On the other hand, blacks may face fewer such barriers in metropolitan areas with smaller proportions of black population and in areas without such segregation histories.

Higher overall levels of metropolitan poverty do seem to reduce the suburbanization of the poor in response to job decentralization. Tables 3 replicates Table 2, with the difference that metro areas are further stratified (between Panels A and B) by whether they have a below- or above-average poverty rates.[28] Across the board, differences in suburbanization rates are lower between high- and low-decentralized metro areas in those areas where poverty is higher. For all residents, the difference in the proportion suburbanized (between high- and low-decentralized metro areas) is 15 percentage points in low-poverty areas versus 8 percentage points in high-poverty areas. The comparable figures for all poor residents are 11 and 9 percentage points, respectively.

Metropolitan poverty seems to exert the greatest influence on the suburbanization of blacks in response to job sprawl. For low-poverty metropolitan areas, the suburbanization rate difference for blacks between high- and low-decentralized areas is 21 percentage points for all blacks and 13

Table 3. Share of Population Living in Suburbs by Poverty Status and Race/Ethnicity, High Job Sprawl versus Low Job Sprawl Metro Areas, by Metro Area Poverty Rate, 2006–2007

	Share of Population Living in Suburbs (%)		
	Low Job Sprawl	High Job Sprawl	Difference (High – Low)
Panel A. Metro Areas with Below-Average Poverty Rates (Under 8.7%)			
All Residents	64	79	15
All Poor Residents	53	64	11
Black Residents	38	59	21
Black Poor	35	48	13
White Residents	68	83	15
White Poor	62	77	15
Latino Residents	53	73	20
Latino Poor	49	65	16
Panel B. Metro Areas with Above-Average Poverty Rates (Over 8.7%)			
All Residents	65	73	8
All Poor Residents	47	56	9
Black Residents	46	54	8
Black Poor	40	41	1
White Residents	73	79	6
White Poor	60	71	11
Latino Residents	52	64	12
Latino Poor	42	52	10

Source: Authors' analysis of data from 2006 and 2007 American Community Survey and 2006 ZIP Business Patterns

percentage points for poor blacks. The comparable figures for high-poverty metro areas are 8 percentage points and 1 percentage point, respectively. These patterns suggest that poor blacks are much more able to suburbanize when they reside in metropolitan areas with relatively low poverty rates.

Having a large proportion of blacks in the metropolitan area, on the other hand, seems to facilitate black suburbanization in response to job decentralization. Table 4 presents a comparable set of tabulations in which metropolitan areas are stratified by the proportion of residents that are black (below average in panel A and above average in panel B). Here, blacks (both poor and overall) are much more likely to live in the suburbs in metro areas with high job decentralization (vs. low job decentralization) if their metro area has an above-average proportion of blacks. One possible explanation for this pattern is that in metropolitan areas with large black populations, it is easier for poor black households to find housing in traditionally black suburbs. Nevertheless, it is notable that less than one-half of the black poor live in suburbs in metro areas with high job decentralization, regardless of the overall population share of blacks in the metro area. This suggests that limits to mobility affect this group in both types of areas.

C. Metropolitan areas where jobs decentralized more over time experienced greater suburbanization overall, but not among the poor.

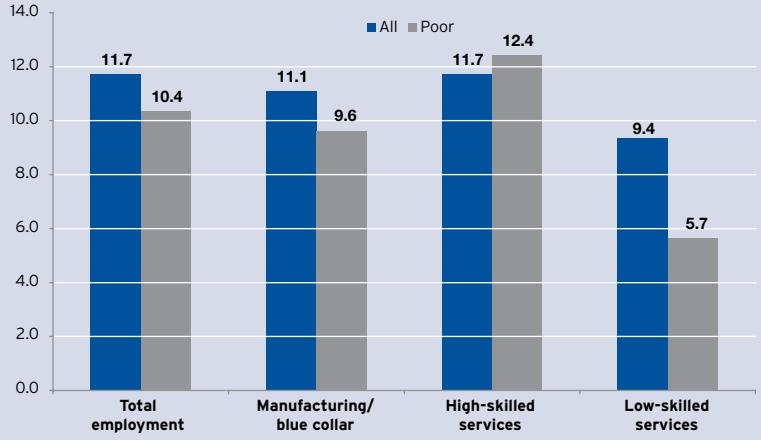
The analysis above demonstrates a strong correlation between the decentralization of both employment and populations, although with notable differences by subgroups and types of metro areas. However, it may be the case that these relationships reflect instead fixed, unobservable differences that

Table 4. Share of Population Living in Suburbs by Poverty Status and Race/Ethnicity, High Job Sprawl versus Low Job Sprawl Metro Areas, by Black Population Share, 2006-2007

	Share of Population Living in Suburbs (%)		
	Low Job Sprawl	High Job Sprawl	Difference (High - Low)
Panel A. Metro Areas with Below-Average Black Population Share (Under 10.5%)			
All Residents	68	71	3
All Poor Residents	57	59	2
Black Residents	45	53	8
Black Poor	42	45	3
White Residents	72	75	3
White Poor	65	68	3
Latino Residents	57	65	8
Latino Poor	52	56	4
Panel B. Metro Areas with Above-Average Black Population Share (Over 10.5%)			
All Residents	60	79	19
All Poor Residents	42	61	9
Black Residents	39	58	19
Black Poor	33	44	11
White Residents	69	85	16
White Poor	57	78	21
Latino Residents	47	70	23
Latino Poor	38	60	22

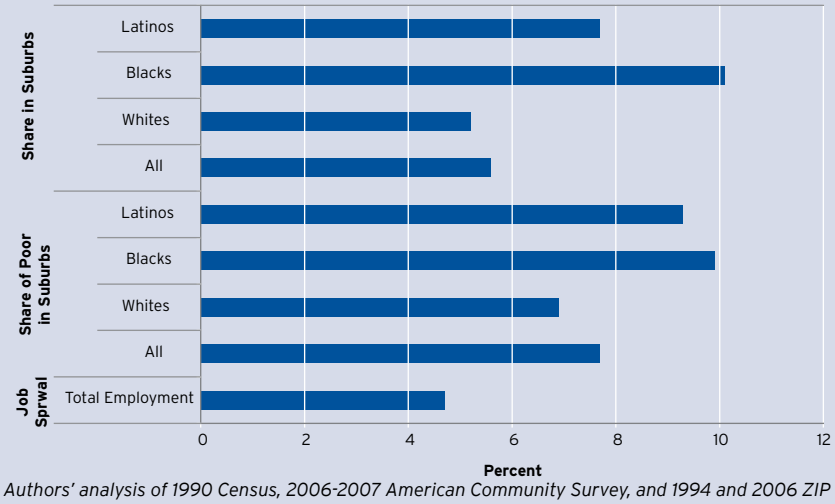
Source: Authors' analysis of data from 2006 and 2007 American Community Survey and 2006 ZIP Business Patterns

Figure 5. Difference in Share of Residents in Suburbs by Poverty Status and Industry Group, High versus Low Job Sprawl Metro Areas, 2006-2007



Source: Authors' analysis of 2006-2007 American Community Survey and 2006 ZIP Business Patterns data

Figure 6. Change in Suburbanization by Poverty Status, and Job Sprawl Index, 1990 to 2006-2007



Source: Authors' analysis of 1990 Census, 2006-2007 American Community Survey, and 1994 and 2006 ZIP Business Patterns data

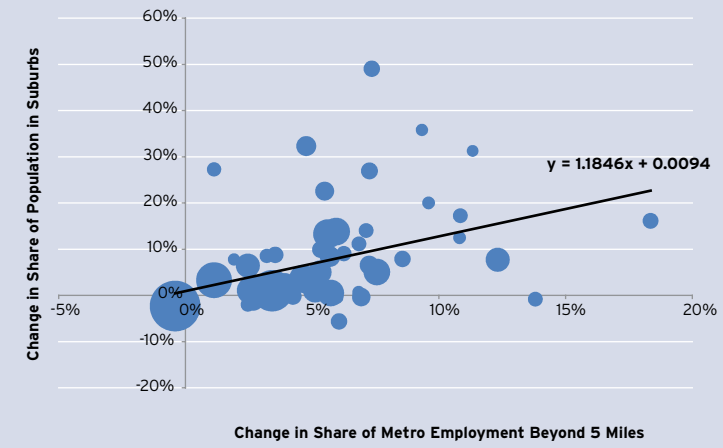
First, all groups have continued to suburbanize. Figure 6 presents the average changes in suburbanization trends (weighted by metro area population) for all 46 metropolitan areas and for the total employment decentralization measure. The largest increases in suburbanization occur among blacks, with a 10.1 percentage point increase between 1990 and 2006–2007 (and 9.9 percentage points for poor blacks). Increases in Latino suburbanization rate a close second. The higher changes for blacks and Latinos likely reflect the lower base values for these groups and the relatively high degree of suburbanization for whites at the outset. Figure 6 also reveals an increase in the share of jobs located beyond the central core of metropolitan areas (by 4.7 percentage points).

Second, greater job decentralization in metro areas appears related to increases in suburbanization among the overall population, but not among the poor. Similar to the approach in Figures 2 through 4, Figure 7 shows scatterplots of changes in these variables for each metro area between 1990 and 2006–2007. The top panel shows a strong, statistically significant, and positive relationship between population and employment decentralization. The magnitude of the depicted relationship suggests that a 1.0 percentage point increase in the share of metro jobs more than five miles from the CBD is associated with a 1.2 percentage point increase in the share of people living in the suburbs. (There are no obvious outlier metropolitan areas, and the result is insensitive to whether the trend line is weighted by population.) The bottom panel, by contrast, displays a much weaker relationship between employment decentralization and the decentralization of the poor. Thus, these changes are roughly consistent with what we observe in the above point-in-time analysis, although here we find even less evidence of a recent relationship between employment decentralization and suburbanization among the poor.

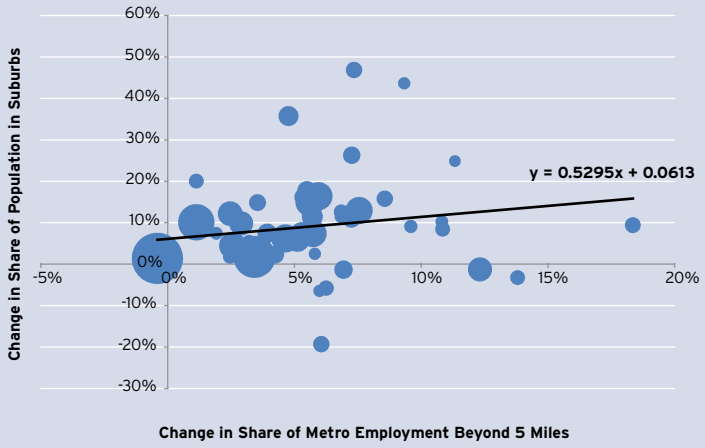
Third, the relatively weak relationship between recent changes in job sprawl and poverty suburbanization appears to pertain more to some demographic subgroups than others. Table 5 presents average changes in population suburbanization for blacks, whites, and Latinos separately for metropolitan areas with below- and above-median changes in employment decentralization between 1994 and 2006–2007.[31] The results largely parallel a finding from Figure 7: Among all three groups, the relationship between changes in employment decentralization and population suburbanization is weaker among the poor. Interestingly, suburbanization among Latinos seems less responsive to increases in employment decentralization than among blacks or whites. Increases in the share of poor Latinos living in the suburbs were the same in metro areas experiencing large increases in employment decentralization as they were in metro areas experiencing small increases. This may indicate that factors other than job sprawl, such as the availability of affordable housing or the presence of social networks, help account for the recent rise in the suburbanization of poor Latinos.

Figure 7. Change in Employment Decentralization versus Change in Population Suburbanization, 48 Large Metro Areas, 1990-2006

Total Population



Poor Population



Source: Authors' tabulations from the 2006 and 2007 American Community Surveys; 1990, 5 percent PUMS file of the U.S. Census; and 1994 and 2006 U.S. Department of Commerce ZIP code business patterns file

D. Within suburbs, the poor generally live in communities that have somewhat below-average numbers of jobs.

Moving to the suburbs is a good thing if the poor gain greater access to employment opportunities. However, if they are not relocating to the suburbs where jobs are shifting, the trend could exacerbate access problems if, for instance, their new suburban residential locations lack transportation connections to suburban job centers.

To investigate these proximity questions we tabulate the ratio of jobs-to-people for each metropolitan area as a whole and for each U.S. Census-defined Public Use Microdata Areas (PUMA) within metropolitan areas. Jobs-rich suburbs are those with a jobs-to-people ratio greater than the metropolitan area as a whole. Jobs-poor suburbs are those with a ratio below this average.[32] The measure thus characterizes job density in suburban areas of roughly 100,000 people, which are much larger than neighborhoods, but much smaller than the entire metropolitan labor market.

Table 5. Change in Share of Population Living in Suburbs by Poverty Status and Race/Ethnicity, Metro Areas with High versus Low Growth in Job Sprawl, 1990 to 2006-2007

	Low Growth in Job Sprawl	High Growth in Job Sprawl	Difference (High – Low)
Black Residents	9.1	15.3	6.2
Black Poor	9.6	13.1	3.5
White Residents	3.6	11.4	7.8
White Poor	6.7	10.5	3.8
Latino Residents	7.9	10.9	3.0
Latino Poor	10.4	10.7	0.3

Source: Authors' analysis of data from 1990 Census, 2006 and 2007 American Community Survey, and 2006 ZIP Business Patterns
Low growth metro areas had changes in job sprawl index below the median for 46 included metro areas; high growth metro areas had changes above the median

Table 6. Proportion of Population in Jobs-Rich Suburbs by Race/Ethnicity and Poverty Status, 2006-2007

	All Residents	Poor Residents
All Residents	68	62
White Residents	72	70
Black Residents	63	59
Latino Residents	54	55

Source: Authors' analysis of data from 2006 and 2007 American Community Survey
Jobs-rich suburbs are Public Use Microdata Areas (PUMAs) with employment/population ratios exceeding average for suburbs in specified metro area

Overall, 68 percent of the suburban population, and 62 percent of the suburban poor, lives in jobs-rich suburbs (Table 6). These high shares reflect the fact that there are more jobs-rich PUMAs in suburbs than central cities. Large racial disparities are also evident in the likelihood of living in a jobs-rich PUMA among suburban residents. While 72 percent of white suburbanites reside in jobs-rich areas, only 63 percent of blacks do and only 54 percent of Latinos do. Racial disparities among the poor follow similar patterns.

Second, although the poor are somewhat less likely to live in jobs-rich areas (6 percentage points overall), the differences within racial-ethnic groups are more modest. The proportion of white poor residing in jobs-rich areas is only 2 percentage points below the average for all suburban whites. The comparable figure for the black poor is 4 percentage points. Among Latinos, the proportion of the poor residing in jobs-rich areas exceeds the overall Latino average. Still, the white poor are more likely to reside in jobs-rich areas of suburbs than are all blacks or Latinos.

Third, poor black suburban residents are more likely to reside in jobs-rich areas than are poor Latino suburbanites. This is indeed surprising, as Latinos are generally more suburbanized than blacks. However, the higher overall proportion of Latinos in the suburbs (see Figure 1) translates into a lower overall degree of spatial mismatch between Latinos and jobs than between blacks and jobs.[33] One possible explanation of the black-Latino differential is that the suburban black poor may be a particularly select group, given the higher racial barriers to housing mobility for blacks than Latinos.

Fourth, bigger metropolitan areas appear to improve access to jobs-rich residential locations for

Table 7. Share of Poor Suburban Residents in Jobs-Rich Suburbs by Race/Ethnicity and Selected Metropolitan Characteristics, 2006-2007

	White Poor	Black Poor	Latino Poor
Metropolitan Area Population			
Below 2 million	69	59	55
Above 2 million	73	66	50
Metropolitan Area Poverty (Average = 8.7%)			
Above Average	69	52	52
Below Average	75	70	69
Back Share of Population (Average = 10.5%)			
Above Average	72	59	57
Below Average	71	61	53

Source: Authors' analysis of data from 2006 and 2007 American Community Survey and 2006 ZIP Business Patterns

29 metro areas in low job sprawl category have indices below 50-metro average; 21 metro areas in high job sprawl category have indices above 50-metro average

some groups of the suburban poor. Table 7 presents tabulations of the proportion of suburbanites in jobs-rich communities for the poor, stratifying the 50 metropolitan areas separately by size, poverty rate, and overall proportion that is black. With regard to population, white and black suburban poor are more likely to reside in jobs-rich suburbs in larger metropolitan areas than in smaller metropolitan areas. The disparity is particularly large among the black suburban poor (7 percentage points). Among poor Latinos, however, smaller metro areas are associated with greater access to jobs-rich communities for the suburban poor.

Fifth, poor suburban minorities in lower-poverty metro areas are much more likely to live in jobs-rich locations than their counterparts in higher-poverty metro areas. While the metropolitan poverty rate is associated with a modest difference in the proportion of white suburban poor who live in jobs-rich areas (roughly 5 percentage points higher in the low-poverty areas), poor black suburbanites are fully 18 percentage points more likely to live in jobs-rich communities in metro areas with below-average poverty overall. The comparable difference for poor Latino suburbanites is 17 percentage points. This pattern could be interpreted in more than one way. For instance, a relative abundance of employment may contribute to lower poverty rates in some metropolitan areas, with favorable employment conditions distributed relatively evenly throughout the suburbs. Alternatively, higher metropolitan poverty levels may force many poor to seek housing in areas with less favorable employment conditions, as low-income suburban housing tends to be in short supply.

Thus, it appears that across metropolitan areas, the poor are gaining access to communities with decent local job concentrations, although not to the same degree as their non-poor counterparts. However, racial differences on this count are evident among the suburban poor, as are meaningful differences across metro areas, particularly by size and overall poverty rate.

Conclusion

Several results stand out. First, population and employment decentralization go hand-in-hand. At the metropolitan level, the degree of employment decentralization is strongly associated with the degree of suburbanization, although this relationship varies by demographic and economic group. Second, minorities and the poor are the least suburbanized, with poor blacks the least likely to reside in the suburbs. They also demonstrate the weakest association between suburbanization and employment decentralization. Third, changes in employment decentralization over time associate strongly with changes in suburbanization patterns. However, the poor appear consider-

ably less likely to suburbanize in response to continued decentralization of employment (although the relationship is still positive). Finally, the poor are somewhat less likely to reside in jobs-rich suburbs, although the magnitude of this difference depends greatly on race and ethnicity and metro area characteristics.

Together, these findings strongly suggest that employment decentralization is helping to drive the suburbanization of poverty. However, the responsiveness of the poor to job sprawl is not as strong as it is for the population as a whole. Furthermore, when the poor reach the suburbs, they are more likely to live in jobs-poor areas that are frequently lower income and more disadvantaged—and potentially indistinguishable from disadvantaged central city areas. These patterns are sharpest for the black and Latino poor, and they are consistent with prior research documenting that racial and ethnic minorities have driven population growth in lower-income suburban areas characterized by weaker employment growth and lower access to good-paying jobs.[34]

The demographic and economic disparities in the relationship between poverty suburbanization and job decentralization further suggest that frictions in housing markets limit the ability of the poor to follow jobs. These frictions may include the limited availability of affordable housing in jobs-rich, higher-income suburbs. This in turn may reflect zoning laws favoring single-family housing, the effect of development impact fees on affordable housing, and disproportionate location of low-income housing projects in central city or poor areas.[35] At the same time, racial segregation in housing markets, including racial discrimination by banks in lending, by landlords or rental agents, or even resulting from racial preferences of residents, may drive these patterns as well. Moreover, zoning laws and development impact fees that limit low-income housing in suburban areas may themselves partly reflect racial preferences. Policies designed to minimize these frictions, such as providing more incentives for multifamily housing, reevaluating existing zoning laws and development impact fees, facilitating the use of housing vouchers in new suburban locations, and enforcing fair housing laws in suburban areas could go a long way toward easing mobility for the poor.

These findings raise a question, however. Are the poor hurt by their inability to readily follow jobs? Research would suggest yes, at least as measured by earnings and employment. These problems are compounded by low car ownership rates and limited information about distant job opportunities. Weaker informal networks, through which most lower-income workers seek jobs, limit their access to jobs outside their neighborhoods. For the poor in suburban areas, their access to homes in jobs-rich suburbs might be constrained by some combination of high housing costs, limited familiarity, and few social contacts in these areas. Moreover, the potentially higher commuting costs could be a disincentive to obtaining jobs in these areas. These costs are further compounded for those dependent on public transit because of sparse coverage of transit systems there.

These findings thus strongly suggest that housing and labor market policies should seek to maximize access to job opportunities for the poor, and low-income workers more broadly, throughout metropolitan areas, regardless of where the workers and the jobs are located.

Appendix. Job Sprawl and Suburbanization Indicators for 50 Largest Metro Areas

Metro Area*	Job Sprawl 2006	Suburbanization 2006	Surbubanization of Poor 2006	Change in Job Sprawl 1994 to 2006	Change in Suburbanization 1990 to 2006-07	Change in Surburbanization of Poor 1990 to 2006-07
Atlanta, GA	84.0	87.1	81.3	5.7	0.5	7.3
Austin, TX	62.8	42.9	31.8	13.8	-0.8	-3.2
Baltimore, MD	73.8	80.1	56.6	7.2	6.6	11.1
Birmingham, AL	54.4	80.0	54.5	6.0	-0.5	-6.5
Boston, MA-NH	65.1	82.1	68.7	5.1	1.1	5.9
Buffalo, NY	67.4	70.4	45.1	5.8	1.6	2.5
Charlotte, NC-SC	69.8	70.1	65.4	10.9	17.2	8.4
Chicago, IL	78.6	71.6	47.9	1.1	3.3	10.1
Cincinnati, OH-KY-IN	75.2	83.7	65.5	5.3	9.9	16.2
Cleveland, OH	74.8	84.2	60.6	3.5	8.7	14.9
Columbus, OH	69.4	49.8	32.0	6.3	9.0	-5.8
Dallas, TX	84.1	72.3	52.6	5.6	13.3	15.0
Denver, CO	68.0	63.1	47.3	6.9	-0.4	-1.3
Detroit, MI	90.5	81.0	57.6	2.5	6.4	12.2
Hartford, CT	64.5	47.9	32.2	1.9	7.7	7.4
Houston, TX	78.1	70.4	55.8	5.9	13.8	16.4
Indianapolis, IN	67.7	54.7	39.2	7.1	14.0	12.4
Jacksonville, FL	68.1	40.5	29.9	14.7		
Kansas City, MO-KS	73.4	77.0	59.3	6.1	-5.6	-19.3
Las Vegas, NV	41.7	61.8	53.9	18.4	16.1	9.4
Los Angeles, CA	87.7	65.6	51.9	3.4	1.0	1.7
Louisville, KY-IN	55.4	76.1	59.4	6.8	0.7	11.5
Memphis, TN-AR-MS	83.6	49.2	20.2	9.6	20.0	9.1
Miami, FL	83.3	84.6	72.7	2.6	1.1	4.5
Milwaukee, WI	66.6	60.9	27.0	2.5	-2.0	1.8
Minneapolis, MN	75.2	80.1	59.4	5.7	8.4	11.5
Nashville, TN	65.3	61.1	47.8	3.2	8.5	5.3
New Orleans, LA	59.8	57.1	62.0	9.3	35.8	43.7
New York, NY-NJ-PA	59.2	58.5	35.1	-0.4	-2.3	1.4
Virginia Beach, VA	45.7	44.9	44.0	6.8	11.1	12.6
Oklahoma City, OK	56.0	43.8	37.5	10.8	12.5	10.3
Orlando, FL	75.7	93.4	89.1	8.6	7.9	15.8
Philadelphia, PA-NJ-DE-MD	79.1	83.3	60.7	4.6	3.5	6.2
Phoenix, AZ	58.6	61.1	45.9	12.3	7.7	-1.3
Pittsburgh, PA	65.7	85.1	76.8	4.2	-0.2	2.3
Portland, OR-WA	64.7	66.2	59.6	7.3	26.9	26.3
Providence, RI-MA	65.7	63.8	47.5	1.1	27.3	20.0
Raleigh, NC	70.5	78.4	73.8	11.3	31.3	24.9
Richmond, VA	64.6	85.6	73.1	5.8	9.1	15.6
Riverside, CA	65.8	84.9	83.7	5.3	5.0	7.3
Sacramento, CA	67.7	60.2	54.6	7.3		
St. Louis, MO-IL	81.7	89.5	75.4	3.9	2.7	7.4
Salt Lake City, UT	57.0	88.1	77.6	11.5		
San Antonio, TX	72.5	74.9	63.1	7.4	49.0	46.9
San Diego, CA	76.9	59.5	61.5	4.8	32.3	35.7

Appendix. Job Sprawl and Suburbanization Indicators for 50 Largest Metro Areas (continued)

Metro Area*	Job Sprawl 2006	Suburbanization 2006	Surbubanization of Poor 2006	Change in Job Sprawl 1994 to 2006	Change in Suburbanization 1990 to 2006-07	Change in Surburbanization of Poor 1990 to 2006-07
San Francisco, CA	73.9	73.7	69.1	2.9	1.8	9.8
San Jose, CA	58.1	39.9	32.3	1.9		
Seattle, WA	74.9	73.5	65.0	2.7	-1.0	4.3
Tampa, FL	57.6	85.5	78.2	5.5	22.6	17.7
Washington, DC-VA-MD-WV	73.8	82.5	65.7	7.6	5.1	12.9

** Metro area names are abbreviated*

Source: Authors' analysis of data from 2006 and 2007 American Community Surveys; 1990 5-percent PUMS file of the U.S. Census; and 1994 and 2006 U.S. Department of Commerce ZIP Code Business Patterns

Endnotes

1. The authors owe a huge debt of gratitude to Elizabeth Kneebone of the Brookings Institution, who graciously provided the 2006 job sprawl data and helped create the 1994 job sprawl measure.

2. Edward L. Glaeser and Matthew E. Kahn, "Decentralized Employment and the Transformation of the American City." Brookings-Wharton Papers on Urban Affairs 2 (2001): 1-63.

3. Elizabeth Kneebone, "Job Sprawl Revisited: The Changing Geography of Metropolitan Employment" (Washington: Brookings Institution, 2009).

4. See, e.g., Robert Lang, Edgeless Cities: Exploring the Elusive Metropolis (Washington: Brookings Press, 2003); Alan Berube and others, "Finding Exurbia: America's Fast-Growing Communities at the Metropolitan Fringe" (Washington: Brookings Institution, 2006).

5. Kenya Covington, "Spatial Mismatch of the Poor: An Explanation of Recent Declines in Job Isolation," *Journal of Urban Affairs* 31(5) (2009): 559-587; see, e.g., Steven Raphael and Michael A. Stoll, "Modest Progress: The Narrowing Spatial Mismatch Between Blacks and Jobs in the 1990s" (Washington: Brookings Institution, 2002); Michael A. Stoll, "Job Sprawl and the Spatial Mismatch Between Blacks and Jobs" (Washington: Brookings Institution, 2005).

6. Alan Berube and Elizabeth Kneebone, "Two Steps Back: City and Suburban Poverty Trends, 1999-2005" (Washington: Brookings Institution, 2006).

7. Elizabeth Kneebone and Emily Garr, "The Changing Geography of Metropolitan Poverty: City and Suburban Poverty Trends, 2000 to 2008" (Washington: Brookings Institution, 2010).

8. For evidence of these in turn, see Harry J. Holzer and Michael A. Stoll, "Where Workers Go, Do Jobs Follow? Metropolitan Labor Markets in the U.S., 1990-2000" (Washington: Brookings Institution, 2007); Michael A. Stoll, Harry J. Holzer, and Keith R. Ihlanfeldt, "Within Cities and Suburbs: Racial Residential Concentration and the Distribution of Employment Opportunities Across Sub-Metropolitan Areas," *Journal of Policy Analysis and Management* 19(2)(2000): 207-231; Scott Allard, "Access to Social Services: The Changing Urban Geography of Poverty and Service Provision" (Washington: Brookings Institution, 2004); Scott Allard, "Place, Race, and Access to the Safety Net." In Ann Chih Lin and David Harris, eds., *Colors of Poverty* (New York: Russell Sage Foundation, 2008).

9. Michael A. Stoll, "Race, Place and Poverty Revisited," in Ann Chih Lin and David Harris, eds., *Colors of Poverty* (New York: Russell Sage Foundation, 2008).

10. We identify central cities using MABLE/Geocorr2K available from the Missouri Census Data Center. Using this program, we identify PUMAs that make up all or part of the main central city of a metropolitan area. Geocorr provides a population based allocation factor for each PUMA in relation to the central city boundaries. We defined central city PUMAs as those with an allocation factor of greater than 50 percent. The central cities we target are the same as those containing the CBD used in the Kneebone job sprawl index.

11. The poor are defined as individuals living in families with incomes below the applicable federal poverty threshold.

12. Steven Ruggles and others, "Integrated Public Use Microdata Series: Version 4.0 [Machine-readable database]" (Minneapolis: Minnesota Population Center, 2009).

13. A potential problem in using PUMAs is that their boundaries do not always perfectly overlap with the external boundaries of metropolitan areas, thus potentially leading to discrepancies between the true population of a metropolitan area and the population of the PUMA-equivalent in that area. A careful examination of PUMAs on the external boundaries of a variety of metropolitan areas leads us to believe that this is not a significant problem in our analysis.

14. This entails using GIS to physically overlay the 1990 to the 2007 PUMA boundaries. For those boundaries that changed over this period, we used the population-based proportional split method to align the 1990 to the 2007 boundaries. Thus, while the boundaries that changed over the 1990s are not aligned perfectly in the geographic sense, they are proportionately matched based on population density. Of course, when using this method we must make the strong assumption that population characteristics like race and poverty are evenly distributed within these PUMAs. More information on these allocation decisions is available from Michael Stoll.

15. Kneebone, "Job Sprawl Revisited."

16. Previous analyses show that the three-mile ring captures much if not all of the jobs in the central business district, while the ten-mile ring includes these plus many jobs in inner-ring suburbs. Glaeser and Kahn, "Decentralized Employment;" Kneebone, "Job Sprawl Revisited." The five-mile ring is best suited for this analysis given that we are interested in the relationship between job sprawl and the suburbanization of poverty, irrespective of whether this suburbanization occurs in inner or outer suburbs. For ease of presentation, it is also clearly easier for the reader to comprehend results using one measure of job sprawl. However, we did analyze the data using the three-mile and ten-mile rings for job sprawl. Although estimates differed, and in some cases differed widely, the basic qualitative findings shown here were the same. This basic conclusion is also consistent with earlier work by Stoll, who uses the five-mile job sprawl index and finds similar qualitative results in a study of the association between job sprawl and the spatial mismatch between blacks and jobs. See Stoll, "Job Sprawl and the Spatial Mismatch Between Blacks and Jobs."

17. An obvious concern is the choice of measures used for job sprawl and suburbanization of poverty. One is based on political boundaries while the other is more economic in nature. We choose them for reasons of precedence and practicality. The job sprawl measure has been consistently used across a variety of studies, and is thus easily identifiable and has an ease of interpretation. This is also true of the suburbanization of poverty measure. Also, the job sprawl measure is based on ZIP-code-level data, which makes it impractical to sort across municipal boundaries. However, we choose the five-mile radius job sprawl measure, as opposed to the three- or ten-mile radius measures, because we find it to most closely match the central city boundaries in the few metropolitan areas we examined.

18. ZIP Code Business Patterns data are extracted from the Standard Statistical Establishments List, a file maintained and updated by the Census Bureau on the location of all known single- and multi-establishment companies. See Glaeser and Kahn, "Decentralized Employment," and Chenghuan Chu, Employment Decentralization (Harvard University Department of Economics, 2000).

19. Job sprawl levels are higher in metropolitan areas with populations larger than one million than in smaller ones. Kneebone, "Job Sprawl Revisited."

20. As indicated, these average sprawl values are weighted by metropolitan area population, thus placing more emphasis on more populous metropolitan areas. For example, New York, Los Angeles, and Philadelphia all receive relatively large weights, given their large populations. The weighting permits us to interpret the patterns in Figure 1 as the average degree of job sprawl experienced by the typical metropolitan resident in large metropolitan areas.

21. Broad industrial categories are defined in the following manner. For the 1990 and 2006–2007 data, we use the uniform 1950 SIC industry codes provided by the Integrated Public Use Micro Data Samples (IPUMS). Employment indices are first calculated by two-digit SIC industry codes. These industrial categories are then collapsed into three categories: high-skilled services, low-skilled services, and manufacturing/transportation/wholesale trade/etc. industries. High-skilled services include business, health, and professional service jobs such as finance, insurance, and real estate. Low-skilled services include personal, entertainment, and food service jobs. The final category includes manufacturing, construction, transportation, telecommunications, and wholesale trade jobs.

22. This expectation follows from the equation: ((15/50) * (15/50))*50 = .09 x 50 = 4.5. Thus, in a random selection of metropolitan areas, we would expect about 4.5 of these

15 to overlap in their degree of job sprawl and poverty suburbanization.

23. Metropolitan specific values for job sprawl, suburbanization, and suburbanization of the poor are provided in the appendix.

24. We also examined this relationship using alternative measures of poverty status, such as 150 or 200 percent of the federal poverty threshold. As expected, the results indicate a slightly stronger relationship between employment decentralization and suburbanization of the poor the more liberal the definition of poverty. However, the qualitative results mirror those presented using the conventional poverty thresholds, and thus we present only the latter results. Small sample sizes prevented analysis of regional differences in these relationships.

25. The fitted line is generated from a linear regression of the population decentralization measure on the employment decentralization measure. For reference, each plot includes the slope coefficient and accompanying standard error from the underlying regression. The underlying trend line takes into account variation across metropolitan areas in population size. We produced a similar set of unweighted scatterplots, with qualitatively similar results to those presented in Figures 2–4.

26. An analysis of how land-use policy in suburban cities affects housing supply growth and the cost of housing finds that, generally, more regulated areas have less housing, more expensive housing, and a housing supply that is less sensitive to price increases. John Quigley and Steven Raphael, "Regulation and the High Cost of Housing in California," *American Economic Review* 95(2)(2005): 323–328. Pendall documents the use of exclusionary land-use planning regulations across a large sample of cities and finds that several of these practices reduce the proportion of local residents from racial and ethnic minority groups. Rolf Pendall, "Local Land Use Regulation and the Chain of Exclusion," Journal of the American Planning Association 66(2)(2000): 125–142.

27. This might be the case in, for example, Chicago, a metro area with a large black population that is segregated. By contrast, Atlanta, a historically black metropolitan area, exhibits relatively modest racial segregation.

28. Above- and below-average poverty is defined relative to the population-weighted average of all 50 metropolitan areas.

29. Baum-Snow shows that highways facilitated population decentralization in U.S. metropolitan areas between 1950 and 1990. Nathaniel Baum-Snow, "Did Highways Cause Suburbanization?" *Quarterly Journal of Economics* 122(2)(2007): 775–805. The importance of the availability of fringe land is tautologically true, as population and jobs in naturally constrained metropolitan areas (e.g., due to topographical features) cannot expand outward.

30. In this section, we drop four metropolitan areas from the sample. Two are dropped because in 1990, the entire metropolitan area was measured by one PUMA. The other two are dropped owing to unusually large declines in the proportion of the population residing in the suburbs. A careful evaluation of the coding scheme failed to reveal the sources of these declines. To ensure that the results are not skewed by these unusual metropolitan areas, we dropped them from the sample.

31. We use the median rather than the mean to stratify the sample in this comparison owing to the very skewed distribution of the changes in employment decentralization variable.

32. As indicated, we use data from the 2006-2007 ACS to classify suburbs as jobs-rich or jobs-poor on the basis of whether the jobs:people ratio of the suburban PUMA is greater than that of the respective metropolitan area mean. The classification is not sensitive to our decision to use means as opposed to medians to define our allocation decision.

33. See Raphael and Stoll, "Modest Progress."

34. See, e.g., Holzer and Stoll, "Where Workers Go, Do Jobs Follow?"

35. See, e.g., Stoll, "Race, Place and Poverty Revisited."

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