

# **Spatial Mismatch: A Third Generation Survey**

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## **Introduction**

As William Julius Wilson notes, "For the first time in the twentieth century most adults in any inner city ghetto neighborhood are not working in a typical week." (Wilson, 1996, xiii). There are a number of competing hypotheses to explain the persistence of urban labor market problems for minority workers. These hypotheses can generally be classified into demand side and supply side explanations. Demand side explanations include discrimination, the decline in demand for unskilled workers, and the lack of jobs for inner city workers. Job unavailability is generally attributed to deindustrialization, occupational bifurcation (skills mismatch), and employment deconcentration (spatial mismatch). This survey examines the recent literature on the spatial mismatch hypothesis, a research agenda that has generated a considerable level of empirical work for explaining the persistent problems of black workers.

The core proposition of the spatial mismatch argument hypothesizes that racial discrimination in the housing market, in tandem with the suburbanization of low skilled jobs, has contributed significantly to the high unemployment and/or low wages of inner city minority workers.

The spatial mismatch hypothesis has been the theoretical and empirical underpinning of a number of policy initiatives addressing

inner city poverty, in particular the federal empowerment zone initiatives, the state enterprise zone programs, the U.S. Housing and Urban Development (HUD) Moving to Opportunity programs, and the Gautreaux initiative in Chicago, among others.

Research into spatial mismatch has ebbed and flowed. The seminal paper in the area is Kain's article in the *Quarterly Journal of Economics* (1968). Kain's argument was that housing segregation negatively affected the distribution of black employment. Kain's research rested on data from a 1952 Detroit traffic study and a 1956 Chicago traffic study. These were metropolitan areas that were, and are, characterized by high levels of segregation. He found that black employment shares were a positive function of black residential shares and a negative function of commuting distance.

But Kain's work generated a considerable amount of counter evidence. Offner and Saks (1971) found that Kain's result depended critically on the functional form employed. On the positive side, Mooney (1969) found that non-white employment rates in different SMSA were

correlated with employment in the central city and the extent of reverse commuting. Bennett Harrison (1974) argued that white flight left blacks in a stronger position to compete for the remaining center city jobs.<sup>1</sup>

One turning point in the research was a paper by David Ellwood (1986), of Harvard's Kennedy School of Government, that constituted significant counter evidence to the mismatch hypothesis. Ellwood focused on teenagers in the Chicago area. The analysis of teenagers (subsequently pursued by Ihlanfeldt and Sjoquist) is valuable because it avoids the simultaneity of jobs and residential location — teenagers don't choose their locations. Ellwood found that (1) the employment experience of black and white teenagers in the same neighborhood was the same as that of those not in the same neighborhood; (2) white youth have better employment rates in border areas; and (3) black employment rates in areas in the west side of Chicago with many employers was the same as the employment rates in the south side of Chicago with few employers. More-

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<sup>1</sup> Moreover, Harrison found that blacks living outside the central city had the same income as blacks living inside the central city. However, oddly enough, Harrison only looked at non-poor blacks in making the comparison.

over, no measure of accessibility improved the predictions of Ellwood's employment equation. He concluded, famously, that the problem was "race, not space."

While Ellwood's work cast doubt on the mismatch hypothesis among economists, sociologists sustained interest in the hypothesis; particularly Kasarda (1989) and William Julius Wilson in *The Truly Disadvantaged* (1987). Wilson examined the complex conditions that led to the expansion of Chicago's black ghetto. One principal component of these complex conditions was structural economic change brought about by job flight from ghetto areas.

Among economists the work of Ihlanfeldt and Sjoquist (1990, 1991) also helped to revive the hypothesis. Ihlanfeldt and Sjoquist found a significant impact of commuting distance on youth unemployment. They found that between one-third and one-half of the employment gap between black and white youth could be explained by job access. They also found that employer proximity to black residences and public transit increased the likelihood of hiring blacks.

Three major surveys, by Holzer (1991), Jencks and Mayer (1990), and Kain (1992) summarized the literature at the end of the 1980s. Holzer and Kain were more favorable in their assessment of the accumulated evidence. In his survey, Holzer concluded that (1) decentralization of population and employment had continued, (2) residential segregation had declined, but much more slowly for blacks than for Hispanics and Asians, (3) blacks in the central cities have less access to employment than blacks and whites in the suburbs, and (4) unlike other groups, blacks face higher wages in suburbs than in the central cities. None of this meant, however, that the spatial mismatch hypothesis explained lower employment for blacks.

Kain's survey did criticize the literature for using residential segregation as a measure of the mismatch. He argued that segregation measures, such as indices of dissimilarity, do not measure the distance of the ghetto from jobs. Jencks and Mayer were less sanguine; they concluded that the empirical evidences does not support the conclusion that residential segregation affects the aggregate demand for black labor.

There are several reasons for revisiting this literature. First, most of this research was performed on data that are now thirty to forty years old. As Jencks and Mayers observed, while discrimination may

have declined, spatial mismatch may have worsened since 1970. Moreover, the patterns of segregation may have changed. Second, the spatial mismatch thesis has rested on weak conceptual and theoretical foundations which have in part been addressed since 1990. Third, the earlier surveys called for an analysis of longitudinal data, which has since been undertaken. Fourth, the early literature generally covered only blacks and did not address women and Hispanics.

This paper provides a survey of the most recent spatial mismatch literature and a brief discussion of policy alternatives. The focus is also on areas ignored in previous surveys, in particular theory and policy, females and immigrants.

### **Are There Jobs Missing in the Ghetto?**

The threshold question remains "are there jobs missing in the ghetto?" Jaworsky (1997) reports data to the effect that in six of the eight largest metropolitan areas almost all of the job growth took place in the suburbs during the 1980s. But Harrison's insight of population moving faster than jobs was subsequently confirmed in data provided by Kasarda (1989), who showed that Boston, Chicago, Cleveland, Detroit, New York, and Philadelphia lost 500,000 jobs from 1970 to 1980, but lost 2 million people. This is also part of Mead's (1992) argument that there is an abundance of jobs for low skilled workers, but a reluctance on the workers' part to look for and accept those jobs.

There are 3.4 million non-working black poor, but no one estimates that nearly that many inner city jobs have been lost due to spatial mismatch. At a more particular level, Bendick and Egan (1988) found that in metropolitan Washington, D.C., 33 percent of the jobs were in the inner city and an additional 45 percent of the jobs were in the inner ring of the suburbs around the central city. Facts such as these suggest that at best the spatial mismatch argument is a partial explanation of the problems facing inner city workers.

### **Conceptual and Theoretical Issues**

The theoretical work of Bruckner and Martin (1997), Martin (1997), and Arnott (1998) has raised several theoretical/conceptual problems with the spatial mismatch literature. Bruckner and Martin developed an island-city model to examine the welfare implications of restricted locational choices facing black workers. The effect of

restricted locational choices shows up primarily as longer commute times and higher housing prices. The Bruckner-Martin model is market clearing so no unemployment results.

Martin (1997) shows that job decentralization improves welfare. On the one hand, theory would predict that manufacturing would leave the central cities for the suburbs, as it has. Manufacturing has higher land-to-capital ratios, and those should migrate to areas where land is cheaper, assuming that transportation facilities are adequate. The big investment in highways that began in the 1950s facilitated the exodus of manufacturing from the central cities. On the other hand, housing discrimination with its attendant impact on commuting time reduces the welfare for blacks. But Martin notes that commutes can be compensated for through wages, housing prices, commute times, and neighborhood amenities. Thus, in the empirical literature there is a need to show that blacks are not compensated for longer commutes in the form of lower housing prices.

Arnott (1998) used a general equilibrium model to raise several other conceptual theoretical issues with the literature. First, he noted that spatial mismatch treats the suburbanization of jobs as exogenous, when in fact job movement may be a "flight from blight."<sup>2</sup> Second, there is no longer a black central city core surrounded by a suburban fringe. Third, why should not job decentralization result in a fall in the downtown wage rather than a loss of jobs? Fourth, what is the impact of job decentralization on educated black workers?

### Simultaneity of Location and Jobs

The biggest conceptual problem has been the simultaneity problem — simultaneity of location and job status. Simply put, good workers move to good jobs, or, more particularly, there has been a selective migration of more employable blacks to the suburbs. Simultaneity was a problem, for example, with the Price and Mills (1985) study. Using the 1978 CPS files, they found that central city residence explained 6 percent of the 34 percent difference in wages between blacks and whites; 15 percent was due to employment discrimination. But their study did not control for differences between those blacks who moved to the suburbs and those blacks who stayed in the central city. Spatial mismatch can result from either supply or demand fac-

<sup>2</sup>Lemann (1991), at 81-83, 242-43. See also Benabou (1996).

tors. Jencks and Mayers (1990) concluded that the failure to study the simultaneity problem has been the central failure of the spatial mismatch literature.

The use of micro data focusing on youth to solve the simultaneity problem was a strength of Ihlanfeldt (1992). But establishing a spatial mismatch for youth does not establish spatial mismatch as the over-arching determinant for the state of urban Black America.

Another approach to solving the simultaneity problem has been through use of evidence from policy evaluation studies, the Gautreaux program in particular. The Gautreaux program grew out of litigation with the Chicago Housing Authority (CHA) in which the plaintiffs won a court ruling that the CHA had intentionally segregated blacks. As part of the settlement, the CHA was required to disperse some of its tenants. In the Gautreaux program some tenants were placed in the suburbs. Thus, residential choice was exogenous. Rosenbau and Popkin (1995) found significant employment effects from the Gautreaux program, even after controlling for personal differences. Those relocated to the suburbs were 13 percent more likely to find employment.

### Longitudinal Research

Another approach to addressing this simultaneity is through longitudinal data sets. Holzer called for longitudinal research in his 1990 survey, and Kain (1992) suggested looking at personnel records.

Zax and Kain (1991), in a study of payroll records in Detroit, found that whites with longer commutes were more likely to quit their jobs than whites with shorter commutes, but the length of the commute made little difference to black quits.

The movement of a firm may also address the simultaneity problem, because then the firm is exogenous. Zax and Kain (1996) found that black workers were more likely to quit following plant relocation to the suburbs. Zax did not interview workers and treated the firm move as exogenous, when in fact the firm may have been moving away from black workers.

Fernandez (1994) did interview workers in his investigation of the relocation of a Milwaukee food processing plant. The plant moved from a central city location to a suburban location. Fernandez estimated the size of the disruption and cost. He found that there was a

spatial mismatch and that the impact was most severe for minorities. Fernandez had good evidence that the firm was not moving in order to change its work force.

Ross (1988) addressed the simultaneity problem by using longitudinal data in the Panel Study on Income Dynamics. He jointly tested whether race and job access had independent effect on the joint probability of changes in employment and residential location. He found that job access did have an independent effect on employment but race did not. The direct effect of race only occurs due to racial differences in residential location. He felt that this could be due to discrimination or differential information.

### Tests for Mismatch: Wage Gradients

One long-standing approach to testing for mismatch has been to examine wage gradients. A positive wage gradient, that is, lower wages in central city, as taken as evidence of spatial mismatch. Or, more precisely, the suburbs should have a higher expected wage, where the expected wage equals the wage times the probability of employment. The textbook urban model posits employers locating in the center city, workers in the center city and suburbs, and those workers with a taste for larger houses living in the suburbs. If the income elasticity of demand for housing is greater than 1, then high income individuals live in the suburbs.

In the early literature, Danziger and Weinstein (1976) found little evidence of a wage gradient between ghetto and non-ghetto jobs. Straszheim (1980) did find a positive wage gradient for black workers, but not for white workers.

More recently, McMillan (1993), using 1980 PUMS data for Detroit, found that blacks required a premium to work in the suburbs. The problem in the previous literature is that, with the exception of Ihlanfeldt (1988), all the wage gradient studies viewed location as exogenous. McMillan avoided this problem by using maximum likelihood techniques. As a result, he found, unlike Ihlanfeldt (1988), strong evidence of selection bias in the estimated earnings functions. He found that while blacks commanded a premium for suburban employment, whites accepted a discount for working in the suburbs.

In a subsequent study, Ihlanfeldt and Young (1996) found that wages were lower in the city than the suburbs for the Atlanta fast

food industry. They found that access to public transportation and distance from the central city explained 69 percent of the variation in black employment in the fast food industry in metro Atlanta. Nevertheless, African Americans were more likely to seek employment in the central city.

In a recent study, Zhang (1998) failed to find a positive wage gradient in Cleveland. Zhang applied a two-sample t-test procedure to data from the Ohio Economic Development Database. Zhang found no statistically significant mean wage differences in 14 or 18 industries studied between central city and suburban firms.

### Search

If blacks live farther from work, they may compensate for the greater distance by looking more for work. Holzer et al. (1994) did not find significant racial differences in the single farthest distance looking for work, but did find that unemployment spells were affected by job decentralization.

Rogers (1997) studied unemployment duration by estimating the probability of ending employment of a certain duration. She only studied men receiving unemployment insurance. She found that access to employment was associated with the duration of unemployment. However, the effect of access to employment on unemployment duration was sensitive to the definition of employment access.

### Segregation and Restriction on Black Mobility

A key element in the spatial mismatch literature is that blacks are limited in their ability to move to where job opportunities are located. Suburban residential segregation has been taken as exogenously given. That is, discrimination and exclusionary zoning prevent black entry into the suburbs. Consequently, in the older literature one approach to studying the question was to examine the relationship between segregation indices and black employment. In the early literature, Master (1974) found that segregation indices did not predict unemployment rates for blacks. In contrast, Leonard (1987), in a study of Los Angeles and Chicago, found that distance from the ghetto was one of the strongest determinants of the racial composition of the labor force. Kain later replied that the spatial mismatch test was a test of the impact of segregation and job movement, not just segregation.



In all of this discussion restrictions on black movement to the suburbs is taken for granted. Yet there has been a massive move of blacks to the suburbs. The black population in the suburbs grew from 2.2 million in 1950 to 10.6 million in 1995, 31.9 percent of the total black population, the biggest migration of Blacks in history.<sup>3</sup> Can spatial mismatch be that bad if minority suburbanization has proceeded at such a rapid pace?

Kain (1993), while noting the sharp drop in all white census tracts, argues that segregation has not changed much. Kain's view has some support in the work of Nancy Denton who argues that phenomena identified as hyper-segregation in the analysis of the 1980 residential segregation data has not abated during the last ten years.<sup>4</sup>

As for black suburbanization, Kain had argued that blacks simply moved to suburban ghetto. Scheidnen and Phelan (1993) did find that the growth of black suburbs was in low income areas close to the central city. There was more rapid growth where blacks already in the suburbs.

But the literature does seem to ignore the audit evidence, in Atlanta and elsewhere, which often suggests that Hispanics face more housing segregation than blacks. But Hispanics face less spatial mismatch and less residential concentration.

### Transportation and Travel Time

Another way of testing spatial mismatch is to determine whether or not it takes blacks longer to get to work. The early literature was not supportive of the mismatch hypothesis in this area. Meyer and Gomez-Ibanez (1981) found from review of transportation demonstration projects that there was little evidence that workers found new jobs with new bus service. They found that low-income workers used cars for 74 percent of their trips. Gordewn, Kumar and Richardson (1988) found that in the National Personal Transportation Studies from 1977-84 neither minorities nor low-income workers had longer commutes. More recently, Jaworsky (1997) found modest differences in travel time from high poverty areas versus low poverty areas using census data.

Recent work using the American Housing Survey provided evidence of longer minority commutes. Taylor and Ong (1995), in

<sup>3</sup>Thernstrom and Thernstrom (1998), at 211.

<sup>4</sup>Denton (1994), at 63.

using data from the 1977-78 and 1987 American Housing Survey, found that commuting patterns between white and minority workers, including unskilled workers, have been converging. They also found that, using a longitudinal analysis, the average commute time for minority workers living in minority areas (those who did not move) actually decreased. Minority commuters had longer commutes due to their reliance on public transportation. Gabriel and Rosenthal (1996), in a study based on the 1985 and 1989 American Housing Survey, found that holding neighborhood characteristics, wage and housing prices constant, blacks face longer commute time than whites. They did find that one-third of the commute was offset by neighborhood amenities.

The Ihlanfeldt/Sjoquist work also found evidence that commuting times, controlling for mode of transportation, are higher for Blacks.<sup>5</sup> Holzer, Ihlanfeldt and Sjoquist (1994) found that access to cars raises the distance searched for work, wages and the probability of securing employment.

### Hispanics and Minority Females

Hispanic youth, particularly Puerto Ricans, also have low employment relative to white youth. Ihlanfeldt (1993), using travel time as the measure of job access and the 1980 PUMS for his data, found that between 20 and 30 percent of the racial differences in employment rates between white and Hispanic youth could be explained by job access.

Interestingly, there has been considerably less research on the impact of spatial mismatch on minority females. In principal, spatial mismatch should be more important for minority females because women generally prefer to work closer to home. Moreover, minority females have the highest poverty rates. In an earlier study Vrooman and Greenfield (1980) rejected the spatial mismatch hypothesis for women.

More recently, McLafferty and Preston (1992) in a study of women in northern New Jersey found that black and Hispanic women had poorer job access, as measured by commute times, and as indicated by reliance on public transportation. Thompson (1997) looked at spatial mismatch for black, white and Hispanic females using the

<sup>5</sup>Sjoquist and Ihlanfeldt (1991). See also Ellwood (1986) Leonard (1987).

1990 PUMS and using the same three MSAs as Ihlanfeldt and Sjoquist. He looked at working and non-working females. He found spatial mismatch had an impact on racial disparities in labor force participation rates

### Policy Implications

The policy discussion has not been as detailed as the analytical discussion of spatial mismatch. Oddly enough, after all the detailed analysis provided in *The Truly Disadvantaged*, Wilson's policy proposals were basically job training and macroeconomic stimulus.<sup>6</sup> The connection of these proposals to spatial and structural mismatch is particularly weak. There are a large number of job creation strategies for the urban poor.<sup>7</sup>

If job access is the problem, then either people can be moved to where the jobs are, or jobs can be moved to where the people are. Currently, the principal strategy of moving jobs to people has been empowerment zones and enterprises zones. Empowerment zones bring jobs to the workers and improve community life. Research on federal empowerment zones has been limited. Empowerment zones have been generally criticized for lack of effectiveness. Papke (1997) found that the cost of job creation in empowerment zones has been too high. Hughes (1991) also concluded that it is too costly to reverse the movement of jobs from the central city to the suburbs.

Empowerment zones have relied on tax incentives for employment creation, much as the Targeted Job Tax Credit has done. Burtless (1985) found that in some instance such tax credits may stigmatize low income workers. Bishop and King (1991) noted very low levels of participation in employment tax credit programs.

Recently the SBA started a program of geographical procurement preferences.<sup>8</sup> Several states are discussing parallel initiatives. These programs have the advantage that employers are given a major revenue incentive, as opposed to a tax incentive, to hire, or at

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<sup>6</sup>Although Osterman (1991) did find that strong local macroeconomic performance did have a significant effect on poverty and unemployment in Boston.

<sup>7</sup>See Blank (1994) for a discussion. Of course, job creation in and of its self does not end poverty. Low income jobs may need supplemental assistance from the Earned Income Tax Credit and similar measures.

<sup>8</sup>See [www.sba.gov/hubzone/questions.html](http://www.sba.gov/hubzone/questions.html). But note that there are no HUBzones in the metro Atlanta area.

least to locate near, workers in distressed areas. Geographical preferences do have the advantage that employers are given a larger incentive than tax incentives. It is too early to assess the impact of this initiative.

Insofar as private sector employers remain suspicious of the quality of inner city hires, public sector employment (PSE) remains an element of a job creation strategy addressing spatial mismatch. The standard criticisms of public sector employment approaches have been that (1) PSE jobs are bad, (2) PSE jobs are a substitute for private sector jobs, (3) PSE jobs are cream-skimming, and cost more than they are worth. An additional point, raised by Mincy (1994) is that public sector employment has targeted welfare mothers and not inner-city fathers.

Finally, some analysts continue to look at minority business development as a path to inner-city job creation. Michael Porter (1995) has argued that the problem with inner city job creation is that the wrong firms attempt to locate there. Bates (1994) has argued that while black firms disproportionately hire black workers, black firms should not locate in inner city neighborhoods.

To move people to where the jobs are, the moves can either be through better transportation, or people can move their residence. Transportation has been primarily through small projects such as the Moving to Opportunity Demonstration projects. But these projects met with political opposition and were canceled (Yinger 1996). Another approach to moving workers is challenging zoning restrictions. While there was important litigation challenging the racially disparate impact of zoning in the 1970s, that litigation has since quieted.

### Conclusions

The evidence for spatial mismatch remains mixed. The biggest problem with the current literature is that in its attempts to provide increasingly technical responses to the simultaneity problem, there is less focus on separating what is structural isolation and what is social isolation. More important, the literature has not addressed the larger aggregate question: are there jobs missing in the ghetto? Whatever the theory and evidence shows, the policy initiatives based on the mismatch hypothesis have been halfhearted. But

whether the problem is social isolation or spatial mismatch, jobs will have to be brought to the ghetto in a way that has not been the case so far. The geographical preferences hold the most hope as a new initiative in this troubled area.

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