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LABOR MARKET ACCESS AND THE LABOR MARKET OUTCOMES FOR URBAN YOUTH

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ABSTRACT

This paper examines the importance of job access in explaining labor market outcomes for youth. The work sets forth a broader definition of "access" which emphasizes the information links provided by social networks. Empirical analysis, based upon micro data from the public use sample and upon metropolitan wide aggregates, indicates that employment probabilities for black youth are significantly related to these measures of labor market access.

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I. INTRODUCTION

Since 1970, there has been a large increase in the spatial concentration of American poverty. This increase in concentration of the poor has been largest among the black poor, who are almost four times as likely as the white poor to live in census tracts of extreme poverty. During this same time period, black unemployment has increased, and the ratio of black to white unemployment has also increased.

These facts have focussed attention on the so-called urban "underclass." To economists, the distinguishing feature of this discussion is the alleged importance of concentration effects. Areas of concentrated poverty -- which are often characterized by high levels of unemployment, crime, drug use, etc. -- may provide an environment which is itself detrimental to residents' future prospects.

Empirical evidence on the importance of concentrated deprivation **per se** in affecting social outcomes is quite inconclusive indeed. A detailed examination of this literature, completed in 1987 and recently published by Mayer and Jencks (1989), assesses more than a hundred studies by sociologists and social psychologists, as well as economists, about the effects of "neighborhood" on behavior. This evidence does not permit the authors to conclude with any

confidence that neighborhood composition affects educational attainment, cognitive skills, criminality, labor market outcomes, or a variety of other measures of achievement or satisfaction.

This paper provides additional empirical evidence on the role of neighborhood factors in affecting labor market outcomes. The premise underlying the empirical analysis is familiar to economists: namely that **access** affects the employment opportunities and the employment probabilities of members of the workforce. In most of the analysis which follows, however, we interpret access somewhat more broadly than in the traditional labor and urban economics literature.

We base the analysis upon data from individuals residing in 47 of the 50 largest MSA's in 1980 and upon aggregate data from the 50 largest MSA's in 1980.

Section II below provides a selective review of the economics literature on the relationship between the access of low income workers to employment opportunities and their labor market outcomes; this section also motivates our interpretation of accessibility in this context. Section III presents empirical information from the Public Use Sample of the 1980 Census indicating the importance of access on outcomes at the individual level. This analysis concentrates upon youth. Section IV presents metropolitan aggregate information which examines levels of youth unemployment across

metropolitan areas and various measures of access. Conclusions are presented in Section V.

II. THE ROLE OF ACCESS

Much of the debate among economists and planners on the importance of differential access in affecting the labor market outcomes of black and white urban workers was framed by John Kain's analysis of metropolitan housing market segregation and the level and distribution of non-white employment.

Kain argued that jobs have been moving to the suburbs since before World War II, and that exclusionary housing practices have prevented blacks, but not whites, from following. As a result, blacks live further from most jobs, and especially from skilled manual jobs, than whites do. Distance, it was argued, puts blacks at a competitive disadvantage in finding jobs. This also means that blacks have lower net earnings than whites in comparable jobs, since blacks face higher commuting costs. The difficulty of finding jobs and the lower net earnings from employment contribute to the higher unemployment rate observed for black men than for white men.

Kain's paper was published in 1968, but the empirical support for his conclusions was derived from aggregate data which had been gathered in 1952 and in 1956. During the

twenty year period beginning in 1968, a number of scholars have evaluated, questioned, and extended, these findings -- using different empirical tests and different bodies of data.

Offner and Saks (1971) demonstrated the sensitivity of the empirical tests to a particular specification. Mooney (1969) used aggregate census data to demonstrate the importance of macroeconomic conditions for black unemployment. Masters (1974) focused on black and white income differentials and failed to find any impact due to housing segregation. Thus began a series of studies on the "spatial mismatch hypothesis."

The results of the debate are still not conclusive. Some studies relying on aggregate data found that living in the suburbs provided blacks with better economic opportunities (Vrooman and Greenfield, 1980; Straszheim, 1980b). Other studies found no effect at all (Harrison, 1972; Price and Mills, 1985). Several studies using individual level data supported the general hypothesis: housing market segmentation affects the spatial distribution of employment. (Straszheim [1980a], Leonard [1987], Ihanfeldt and Sjoquist [1989].)

Perhaps the most thorough empirical work on this question was conducted recently by David Ellwood (1986, 1988). Using data from the 1970 census and from the Chicago Area Transportation Study, Ellwood used a variety of methodologies

to test for the importance of space, and concluded that the problem was one of "race, not space."

Mayer and Jencks summarize their interpretation of this literature: "the 'spatial mismatch' hypothesis seems a classic example of a plausible theory that simply failed to match the evidence."

A problem common to all empirical research on this question is the difficulty of measuring access. Some studies rely upon linear distance to jobs, others rely upon commute time, still others utilize employment centroids. Each of these measures focuses on the geographic distance of the individual to the job. This appears to be a very narrow definition of "access."[1]

A more plausible interpretation of "access" may be in terms of the cost of information rather than the cost of transportation. Descriptions of neighborhoods dominated by the "underclass" invariably emphasize the isolation of the population. Wilson (1987), for example, decries the absence of job networks in inner-city areas -- neighborhoods where young people simply don't know employed people who could help them find employment. These areas of concentrated poverty are

1 To be sure, in the original work, Kain noted that blacks "may have less information about and less opportunity to learn about jobs distant from their places of resident or those of their friends." Yet until recently spatial aspects of the role of information have been almost completely ignored by economists.

socially isolated, and this social isolation deprives residents of membership in information networks which would improve their chances for employment. Thus central city blacks lack access to jobs due to their social, rather than geographic, distance.

From this perspective, access to job market information varies spatially and is an externality to each individual. This mechanism insures that living in an area of concentrated poverty affects an individual's access to jobs.

Several recent papers have formalized this notion and have developed models of urban labor markets in which information networks play a key role in the job search process. (See, for example, Montgomery [1988] and O'Regan [1990] for different models of this process.) These models have the following common features. The chance that an individual finds employment depends, in part, on whether that person is in a network which is rich in information about jobs. Networks which involve more employed people contain more job information. The information content of networks varies by neighborhood and thus by the residential location of potential workers.

Two implications of the information access model are apparent. Both concern the effect of the distribution of unemployment across networks. First, the probability that an individual is unemployed increases with the unemployment rate

of those in his or her network. Second, and less obviously, the loss of employment of those in high unemployment networks will likely be larger than any gains experienced by those in networks with below average unemployment rates. This asymmetry leads to an increase in aggregate unemployment.

In the following section we illustrate the importance of these networks by investigating the employment behavior of youth living at home in terms of the employment of their parents and siblings, indisputably the strongest information link available to those young workers.

III. EVIDENCE FROM INDIVIDUAL DATA

A. Access to Information

As indicated in Section II, networks of informal contacts provide the most important source of job market information. Arguably, the outcomes for young people just entering the labor market are most affected by the information provided by others, and arguably the most important source of information for these individuals is other family members. Consequently, we concentrate on youth, aged 16-19, living with at least one parent. The empirical analysis is based on all black and white (non-hispanic) youth in these circumstances reported in the 1980 Census Public Use Sample residing in 47 of the 50 largest MSA's.[2]

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2 Of the 50 largest MSA's, one was eliminated because it does not contain a central city (Nassau-Suffolk) and two were removed because they crossed state boundaries and their

The Public Use Sample of 16-19 year olds in these MSA's includes 57,864 individuals. The living-at-home sample includes 49,956 individuals.

The characteristics of the two samples are quite similar. At-home youth are slightly younger and are more likely to be in school (77 percent in school compared to 71 percent) than youth not living with a parent. They are slightly less likely to be in the labor force (51 percent compared to 52 percent) but the unemployment rates for the two groups are almost identical. Appendix Table A1 provides a more detailed comparison of the two samples. It also contains summary statistics on the place-of-work sample which we use to analyze commuting patterns.[3] For the at-home group, information is reported about other family members. We compare the employment circumstances of youth living at home with those of their parents and siblings.

If access to information is important in determining unemployment probabilities, then young people in better networks will be more successful in the labor market than those in worse networks. Table 1 indicates the probability of employment for youth, conditional on the employment status of

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small size made retrieval of a representative sample quite difficult.

3 As part of the Census sampling process, half of all respondent households are asked a series of questions about place of work and pattern of commuting.

APPENDIX TABLE A1

Summary Data on All Youth and At-Home Youth in 47 Large MSA's

	All Youth		At-Home Youth	
	White	Black	White	Black
A. Public Use Sample				
Number of Observations	46,548	11,316	40,289	9,667
Percentage:				
Residence				
Central City	25.3	73.2	27.3	75.9
Suburbs	74.7	26.8	72.7	24.1
Percent Unemployed In Labor Force	11.7	28.9	11.7	28.8
Labor Status				
Employed	50.1	24.1	48.8	23.2
Unemployed	6.6	9.8	6.5	9.4
Armed Forces	0.2	0.1	0.1	0.1
Not in Labor Force	43.2	66.9	44.6	67.4
School				
Not Enrolled	28.7	28.8	22.6	25.4
Public	61.8	67.0	67.1	70.2
Private	9.5	4.3	10.3	4.4
Number of Parents in Home				
0	13.5	14.6		
1	15.2	44.0	17.6	51.4
2	71.3	41.5	82.4	48.6
Number of Working Parents in Home				
0	19.8	37.7	7.3	27.1
1	43.0	40.9	49.7	47.9
2	37.2	21.4	43.0	25.1
B. Place of Work Sample				
Number of Observations	11,437	1,351	9,593	1,112
Means to Work				
Private Vehicle	80.6	51.2	80.8	51.8
Public Transport	7.2	36.3	6.9	35.2
Other	10.9	11.4	11.1	12.0
Average Number of Vehicles Available	2.4	1.2	2.5	1.5

TABLE 1

Probability of Youth Employment Conditional Upon Employment Status of Parent

	Employment Status of Parent		Ratio of Conditional Probabilities*	
	Employed	Not Employed	Simple Average	Controlling For MSA
A. All Black and White Youth (49,289 observations)				
Probability that youth is:				
Employed	0.461	0.265	1.74	1.74
Not employed	0.539	0.735	1.36	1.33
Unemployed	0.067	0.096	1.42	1.42
B. Black youth (9,667 observations)				
Probability that youth is:				
Employed	0.261	0.156	1.68	1.88
Not employed	0.739	0.844	1.14	1.13
Unemployed	0.093	0.097	1.05	1.05
C. White youth (40,289 observations)				
Probability that youth is:				
Employed	0.498	0.364	1.37	1.41
Not employed	0.502	0.636	1.27	1.25
Unemployed	0.063	0.094	1.51	1.54

* Column entry is the ratio of probabilities reported in first two columns. It indicates the increase in the likelihood of each outcome for a young worker if the parent has achieved that outcome.

Source: 1980 Census of Population, Public Use Micro Sample B, for all black and white (non-hispanic) youth aged 16-19 residing in the 47 largest MSA's and living with a parent.

the parent. The first column indicates the probability of the various possible outcomes for youth who live with one or more employed parents. The second column gives similar probabilities for youth in households where no employed parent is present. (This category includes unemployed workers as well as those not in the labor force.) Column three presents the ratio of these probabilities, where the comparison is between those youth whose parents have the same employment status and those youth whose parents do not have the same status. These ratios indicate the increased likelihood that a youth has a particular employment status if his or her parent has the same status.

These ratios all exceed one -- a youth is more likely to be employed if the parent is also employed and, conversely, a youth is less likely to be employed if the parent is not employed. Youth are 74 percent more likely to be employed if they live in a home with an employed parent, and 36 percent more likely to not be employed if no parent is employed.

Sections B and C of the table present results for black and white youth separately. The probability of employment for black youth is much smaller than for white youth, even within the same parental status category. The household access effect for black youth is strongest, however, on the probability of being employed; there is almost no effect on the probability of being unemployed. This means that there is

a large labor force participation rate effect on black youth. The labor market experiences of white youth are affected more evenly across categories.

This apparent household effect could arise merely from the fact that youth and parents reside in the same metropolitan area and thus face similar employment prospects. To control for this, these probabilities and ratios have all been calculated separately for each MSA and aggregated using the youth population within MSA's as weights. The results, presented in the last column of Table 1, are basically the same in magnitude. The correlation between employment outcomes exists even after controlling for MSA of residence.

This household effect is also present if the employment status of siblings is considered, rather than that of parents. Table 2 presents the employment probability of youth conditional on the employment status of their siblings for all youth living with at least one sibling 16 years or older. The results are quite similar to Table 1.

The racial differentials found in Table 1 may arise in part from differences in residential location within metropolitan areas. Approximately 75 percent of black youth live in central cities, where unemployment is high. Only 25 percent of white youth live in central cities. Table 3 presents similar calculations where the residence location of

TABLE 2

Probability of Youth Employment Conditional Upon Sibling Employment

	Employment Status of Siblings		
	No Working Siblings	One or More More Working Siblings	Ratio of Conditional Probabilities*
A. All Black and White Youth (28,607 observations)			
Probability that youth is:			
Employed	0.322	0.521	1.62
Not employed	0.678	0.479	1.42
Unemployed	0.078	0.070	1.12
B. Black youth (6,500 observations)			
Probability that youth is:			
Employed	0.173	0.316	1.83
Not employed	0.827	0.684	1.21
Unemployed	0.092	0.101	0.91
C. White youth (22,107 observations)			
Probability that youth is:			
Employed	0.395	0.562	1.42
Not employed	0.605	0.438	1.38
Unemployed	0.071	0.063	1.12

* Column entry is the ratio of probabilities reported in first two columns. It indicates the increase in the likelihood of each outcome for a young worker if the sibling has achieved that outcome.

Source: 1980 Census of Population, Public Use Micro Sample B, for all black and white (non-hispanic) youth aged 16-19 residing in the 47 largest MSA's and living with at least one sibling aged 16 or older.

TABLE 3

Probability of Youth Employment Conditional Upon Employment Status of Parent and Residential Location

	CENTRAL CITY			NON-CENTRAL CITY		
	Employment Status of Parent			Employment Status of Parent		
	Employed	Not Employed	Ratio*	Employed	Not Employed	Ratio*
A. Black Youth	(7,032 observations)			(2,635 observations)		
Probability that youth is:						
Employed	0.247	0.154	1.60	0.293	0.164	1.79
Not employed	0.753	0.846	1.12	0.707	0.836	1.18
Unemployed	0.096	0.097	1.02	0.086	0.095	1.11
B. White Youth	(9,694 observations)			(30,595 observations)		
Probability that youth is:						
Employed	0.487	0.350	1.39	0.502	0.371	1.35
Not employed	0.513	0.650	1.27	0.498	0.629	1.26
Unemployed	0.065	0.100	1.55	0.062	0.091	1.48

* Column entry is the ratio of probabilities reported in first two columns. It indicates the increase in the likelihood of each outcome for a young worker if the parent has achieved that outcome.

Source: 1980 Census of Population, Public Use Micro Sample B, for all black and white youth aged 16-19 residing in the 47 largest MSA's and living with a parent.

youth is also considered, for black and white youth separately. The results do not change.[4]

If the networks in which youth operate do provide access to job information, then we should also expect to find an association between the types of jobs held by youth and by their parents. Table 4 presents comparison of the industry chosen by the youth and the (self-identified) head parent.[5]

The first two columns indicate the probability that young black and white workers are employed in a particular industry. The next two columns give the ratio of conditional probabilities for youth by race. Again, this ratio compares the probability that a youth is employed in an industry if the head parent is also employed in the industry with the probability that a youth is employed in that industry when the head parent is not employed in that industry. This ratio indicates the increased likelihood that a youth is employed in an industry when the parent is also employed in that industry. These calculations have been performed separately for each MSA, and aggregated by youth population across metropolitan areas.

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4 Again, when these ratios are calculated controlling for MSA, the effects are indistinguishable.

5 Industry affiliation is that reported for the current or most recently held job.

TABLE 4

Unconditional and Conditional Probabilities of Youth Employment in Selected Industries

Industry	Unconditional probability of youth employment by industry		Ratio of conditional probabilities*		Probability of parental employment by industry	
	White	Black	White	Black	White	Black
Farming	0.027	0.007	13.77	23.17	.010	.004
Mining	0.002	0.001	11.52	0.00	.005	.001
Construction	0.044	0.020	4.71	4.40	.092	.048
Manufacturing:						
Nondurable	0.044	0.045	2.58	1.46	.084	.007
Durable	0.062	0.044	2.15	2.49	.200	.159
Transportation	0.022	0.027	2.88	2.51	.109	.121
Trade	0.529	0.379	1.18	1.05	.172	.122
FIRE	0.037	0.045	2.51	2.12	.061	.033
Services:						
Personal	0.125	0.122	1.86	1.37	.069	.103
Professional	0.093	0.198	1.75	0.88	.132	.239
Public	0.017	0.106	1.80	0.82	.066	.084
Weighted Average			2.43	1.68		

* Ratio of the probability of a youth working in an industry if the parent also works in the industry to the probability of a youth working in that industry if the parent does not work in that industry.

With few exceptions, these ratios are always greater than one. The bottom of the table presents weighted average ratios for black and white youth.[6] On average, white youth are two and a half times more likely to be employed in a given industry if the parent is also employed in that industry. Black youth are 68 percent more likely to work in the same industry as their parent than to work in a different industry.

Some of the racial differential can be explained by referring to the distribution of adult employment, noted in columns 5 and 6. A larger fraction of white parents are affiliated with industries in which the parental affiliation appears to have a sizable effect (and may confer a sizable benefit), such as construction and manufacturing. The industry with the largest share of black parents is an industry in which black youth gain no benefits from parental affiliation, namely professional and business services.

An additional expectation of the network-access model is that youth will be more likely to work near the workplace of the parent. Table 5 presents the conditional probabilities for the general work location of working youth.[7] Probabilities are calculated separately for youth residing in central cities and for those outside central cities; work

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6 The ratios are weighted by the actual industrial affiliation of parents.

7 Data reported in Tables 5, 6, 7, and 8 are for youth surveyed in the place-of-work sample.

TABLE 5

Probability of Youth Working at a Given Location Conditional on Work Location of Parent for All Employed Youth

	CENTRAL CITY			NON-CENTRAL CITY		
	Work location of Parent			Work location of Parent		
	C.C.	Non C.C.	Ratio*	C.C.	Non C.C.	Ratio*
A. All Black and White Youth	(2,263 observations)			(6,411 observations)		
Probability of youth working in:						
Central City	0.852	0.693	1.23	0.265	0.088	3.01
Non C.C.	0.148	0.307	2.08	0.735	0.911	1.24
B. Black Youth	(457 observations)			(244 observations)		
Probability of youth working in:						
Central City	0.861	0.738	1.17	0.305	0.143	2.13
Non C.C.	0.139	0.262	1.89	0.695	0.857	1.23
C. White Youth	(1,806 observations)			(6,167 observations)		
Probability of youth working in:						
Central City	0.850	0.684	1.24	0.264	0.086	3.06
Non C.C.	0.150	0.316	2.10	0.736	0.914	1.24

* Column entry is the ratio of probabilities reported in first two columns. It indicates the increase in the likelihood of each outcome for a young worker if the parent has achieved that outcome.

Source: 1980 Census of Population, Public Use Micro Sample B, for all employed black and white youth aged 16-19 residing in the 47 largest MSA's, living with a parent and included in the place-of-work sample.

location is reported by central city and non-central city worksites.

Working youth are more likely to be employed in a given location if their parent also works in that location. For central city youth, they are 23 percent more likely to work in the central city if the parent does; they are more that twice as likely to work outside the central city if their parent works outside the central city. The comparisons are similar when calculated separately for each MSA and aggregated. When black and white youth are analyzed separately, the location effect is slightly larger for white youth.[8]

B. Information and Spatial Access

The labor market linkages between parents and youth reflect many factors beyond access to information networks. Parents commute to work and may provide youth with direct physical access to jobs. In addition, the availability of public and private transportation for young workers is highly correlated with the transport access of their parents.

Table 6 summarizes the journey-to-work transport patterns for black and white youth travelling to work during the survey response week. Black youth rely on public transportation much

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8 Similar results are also found (but not reported here) for all youth, not merely for those employed. The effect of the work location of the apparent on the probability of youth employment is small; there is no difference for black youth.

TABLE 6

Transit Usage and Commuting Times for Employed Youth by Race and Residential Location

	Percent using public transit	Average commute time (minutes one way) All	Public transit	Private auto
All Youth				
Black Youth	36.2	27.5	39.1	23.0
White Youth	7.0	16.5	31.8	15.9
Central City Youth				
Black Youth	45.0	30.2	40.9	25.1
White Youth	17.9	19.3	32.7	17.0
Non Central City Youth				
Black Youth	17.3	21.7	29.9	21.1
White Youth	3.6	15.6	30.2	15.7

Source: 1980 Census of Population, Public Use Micro Sample B, for all employed black and white youth aged 16-19 residing in the 47 largest MSA's, living with a parent and included in the place-of-work sample.

more heavily than white youth.[9] They are five times as likely to take public transportation to work as white youth. The difference by race is quite large even among central city residents; black central city youth are more than twice as likely as white central city youth to use public transit. The average commute time is also longer for black youth, 27.5 minutes each way compared to 16.5 minutes for white youth. These differences are large even for those taking the same mode of transit. Black central city youth using public transit have a 42 percent longer commute than white central city youth also using public transit, and their average commuting time using private transit is 39 percent longer. These ratios have all been calculated at the MSA level and aggregated, so differences are not driven by MSA differences.

Some of these differences can be explained by parental commuting pattern. Table 7 indicates the access linkage between parents and young workers. It presents the probabilities of travel by private and public transit for youth, conditioned on the transportation mode of the parent. Central city youth are more than two and a half times as likely to use private transportation to commute to work if their parent also commutes by private transportation. They are three times as likely to use public transportation if

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9 Private transportation includes cars, trucks, and motorcycles. Public transportation includes buses, trains, and taxis.

TABLE 7

Probability of Various Modes of Transit for Youth Conditional on Mode of Transit for Parent

Probability of travel by:	Mode of Parent: Private	Public	Ratio*	Mode of Parent: Private	Public	Ratio*
	ALL RESIDENCES Black Youth (2,191 observations)			ALL RESIDENCES White Youth (19,302 observations)		
Private	0.612	0.214	2.87	0.838	0.543	1.54
Public	0.281	0.617	2.19	0.053	0.265	4.98
	CENTRAL CITY RESIDENCE All Black and White Youth (6000 observations)			NON-CENTRAL CITY RESIDENCES All Black and White Youth (15,493 observations)		
Private	0.696	0.263	2.65	0.860	0.692	1.24
Public	0.175	0.540	3.08	0.037	0.135	3.60
	Black Youth (1,497 observations)			Black Youth (694 observations)		
Private	0.527	0.193	2.74	0.742	0.326	2.28
Public	0.364	0.651	1.79	0.154	0.435	2.83
	White Youth (4,503 observations)			White Youth (14,799 observations)		
Private	0.736	0.306	2.41	0.865	0.723	1.20
Public	0.130	0.472	3.62	0.033	0.109	3.35

* Column entry is the ratio of probabilities reported in first two columns. It indicates the increase in the likelihood of each outcome for a young worker if the parent has achieved that outcome.

Source: 1980 Census of Population, Public Use Micro Sample B, for all black and white youth in the place-of-work sample and travelling to work, aged 16-19 residing in the 47 largest MSA's and living with a parent.

their parent also uses public transportation. When comparisons are made across race, large differences are found. Despite the strong association with parental mode, white youth are much more likely to use private transportation than are black youth.

When residential location and race are both controlled for, differences in use of public and private transportation persist. Black youth are more likely to rely on public transit than white youth. But regardless of race, all youth are more likely to use a particular mode of transit if their parent uses that mode.

Choice of mode of transit will depend in part on where a person works. Table 8 presents the modal choice probabilities for youth by race and work location, conditional on the work location and mode choice of parents. Youth are generally more likely to use the same transportation mode as the parent.

A comparison across the rows in Table 8 indicates the sensitivity of these probabilities to different parental work-site and commuting patterns. The top row shows the probabilities of central city youth working in the central city and commuting by private vehicle. Central city youth are most likely to follow this pattern if the parent also works in the central city and commutes by private vehicle. This is true for almost all outcome probabilities throughout the table. Young workers are most likely to use a particular mode

TABLE 8

Probability of Employment Location and Transit Mode for Employed Youth by Race and Residential Location

	Work Location and Mode of Transit of Parent			
	Employed in Central City		Employed Outside Central City	
	Private	Public	Private	Public
A. Central City Youth				
Employed in Central City:				
Private	0.510	0.138	0.393	0.208
Public	0.166	0.450	0.099	0.333
Outside Central City:				
Private	0.115	0.067	0.257	0.083
Public	0.016	0.034	0.020	0.083
B. Non Central City Youth				
Employed in Central City:				
Private	0.225	0.064	0.069	0.034
Public	0.022	0.054	0.010	0.000
Outside Central City:				
Private	0.548	0.650	0.721	0.542
Public	0.022	0.049	0.023	0.085
C. Central City Black Youth				
Employed in Central City:				
Private	0.354	0.065	0.253	0.100
Public	0.302	0.546	0.264	0.300
Outside Central City:				
Private	0.076	0.046	0.149	0.100
Public	0.042	0.056	0.069	0.100
D. Central City White Youth				
Employed in Central City:				
Private	0.550	0.179	0.422	0.286
Public	0.131	0.395	0.064	0.357
Outside Central City:				
Private	0.124	0.079	0.279	0.071
Public	0.009	0.021	0.010	0.071

to a particular location if the parent uses the same transportation mode to commute to the same general location.[10]

IV. EVIDENCE FROM METROPOLITAN AGGREGATES: COMPARING MEASURES OF ACCESS

The analysis of individual data on youth employment supports the basic premise: Access affects employment. This section compares the relative influence of various measures of access on the employment of black youth, using aggregate MSA data from the 1980 Census. We present regressions relating the aggregate MSA unemployment rate for black youth to several measures of physical or informational access. In each of these regressions, we include the unemployment rate for white youth to control for market-wide supply and demand influences affecting youth unemployment, which surely vary by MSA. Additional MSA controls include the percent of the population which is black and the percent of employment in the manufacturing sector.

Two of these access measures have been considered frequently in empirical work, the location of jobs in central cities and the distance to work. Job concentration is measured as the ratio of central city employment to non-

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10 Similar results are also found (but not reported here) for all youth in the place-of-work sample, whether employed or not. The pattern for commuting is the same for workers; in addition, youth whose parents travel by public transit are less likely to have a job than youth whose parents commute using private transit.

central city employment, for each MSA. The commute distance to work is proxied by the average one-way commute time as reported in the place-of-work portion of the census.

Social access has not been explicitly considered in previous studies. We use two versions of the Isolation Index, one of several measures of neighborhood segregation (See Miller and Quigley [1990] for a discussion.) The Isolation Index is the probability, for the average member of a group, that a randomly selected person in the same census tract is also a member of that group. This index of isolation is calculated on the basis of both poverty and race, creating a measure of the isolation of black poor. (See Massey and Eggers [1989].)

We use a General Isolation Index of black poverty and a Within-Race Isolation Index. The former measures the probability that a black poor person comes into contact with other poor people, of any race. This measure implicitly assumes that networks of contacts are racially integrated; it is calculated as the percent of the census tract population which is poor, weighted by the percent of MSA black poor in the tract. The latter measure of black poor isolation presumes that information networks are segregated by race. It estimates the probability of contact between a black poor person and other black poor, where the set of contacts is

limited to all black people.[11] It is calculated as the percent of the census tract black population which is poor, weighted by the percent of MSA black poor in the tract.

We also defined an alternative measure of network access, based upon our analysis of the micro data. The ratios of conditional employment probabilities (for example, in Table 1) are calculated first by MSA and then aggregated. The MSA ratio gives the increased likelihood of a youth being employed (not employed) if a parent is employed (not employed). These ratios may capture intermetropolitan differences in the effectiveness of networks. Unfortunately, for a number of the MSAs, the sample size underlying the ratios are quite small, implying sizeable measurement error. None of the ratios had an effect on the various dependent variables used in the regressions, so the results are not reported.

Finally, we consider the availability of public transportation. Forty five percent of central city black youth in our sample rely on public transportation for their work trip. For each of the 49 MSA's we assembled data from the U.S. Department of Transportation and the American Transit Association, including system-wide information on vehicle miles travelled, vehicle hours, total number of paying

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11 Massey and Eggers (1989) calculated a similar measure of contact among black poor, but report it as a proportion of all possible contacts with people of all races. We have adjusted this measure to account for racial segregation in all contacts, poor and nonpoor.

passengers, number of vehicles, revenues and costs. None of the access measures created from these data affected employment probabilities in any of the regressions, so the results are not reported here.

If access is a factor in the employment prospects of youth, then the aggregate unemployment rate for black youth should be lower in MSAs with more access. Table 9 presents logarithmic regressions relating black youth unemployment rates to white youth unemployment rates (as a control for local job market prospects), and the three types of access: employment concentration, commute time, and social isolation. Employment concentration is expected to have a negative coefficient, while travel time and isolation are expected to have positive coefficients. In equations which include two other controls, only the measures of isolation have the expected sign and are significant.

An additional implication of the access argument is that central city and non-central city youth will be affected differentially. Concentrations of employment in central cities increases access for youth residing in the central city, not for youth living in the suburbs. Long commute times reflect more decentralized employment, which decreases access for central city youth but not necessarily for non-central city youth. While the measures of isolation are metropolitan-wide, in fact high levels of isolation are indicative

TABLE 9

Regression Analysis of Black Youth Unemployment for 49 Large MSA's
All Variables in Logarithms
(t ratios in parentheses)

Coefficient	I	II	III	IV	V	VI	VII	VIII
Access								
Employment Concentration (CC jobs/MSA jobs)	-0.04 (0.59)	-0.04 (0.68)						
Isolation Index for Black Poverty			0.41 (4.72)	0.22 (2.45)				
Isolation Index for Within Race					0.44 (2.64)	0.29 (2.20)		
Average One Way Commute time (minutes)							0.52 (1.75)	0.20 (1.09)
Other								
MSA Percent Black		0.13 (5.83)		0.10 (3.82)		0.12 (5.57)		0.12 (4.55)
MSA Percent Manufacturing		0.13 (2.35)		0.10 (2.42)		0.12 (2.43)		0.12 (2.30)
Unemployment Rate for White Youth	0.95 (8.13)	0.95 (10.60)	0.90 (9.35)	0.91 (10.83)	0.90 (.80)	0.90 (10.48)	1.04 (6.15)	0.98 (10.57)
Constant	0.90	0.25	1.54	0.70	1.51	0.68	0.92	0.40
R^2	0.592	0.780	0.723	0.804	0.643	0.618	0.660	0.787

of isolated central city blacks who are much more isolated than non-central city black youth.

Regressions which consider central city black youth unemployment separately from non-central city youth are reported in Table 10. When the additional controls are included, both measures of isolation are significantly positive in the equations for central city black youth and insignificant for non-central city black youth. Employment concentration becomes significantly negative, but only for non-central city youth, the group less likely to benefit.[12] Average commute time remains insignificant.

Finally, Table 11 considers simultaneously the relative influences of these various aspects of access. In the equations which include additional controls, only measures of isolation are significant in explaining overall black youth unemployment. Both employment concentration and the isolation indices are significant in explaining the unemployment of central city black youth. Neither measure of isolation is significant for suburban black youth. Employment concentration remains significant for suburban youth, a group whom we would not expect to be affected. Commute time is

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12 Employment concentration may be capturing some of the industry mix effect. The large presence of jobs in the central city may indicate service sector employment opportunities for youth.

TABLE 10

Regression Analysis of City Black Youth Unemployment for 49 Large MSA's
All Variables in Logarithms
(t ratios in parentheses)

Coefficient	I	II	III	IV	V	VI	VII	VIII
Access								
Employment Concentration (CC jobs/MSA jobs)	-0.86 (1.33)	-0.78 (1.21)						
Isolation Index for Black Poverty			0.32 (3.26)	0.18 (2.00)				
Isolation Index for Within Race					0.38 (3.86)	0.26 (1.60)		
Average One Way Commute time (minutes)							0.49 (2.34)	0.30 (1.09)
Other								
MSA Percent Black		0.10 (3.77)		0.07 (2.82)		0.09 (3.39)		0.08 (2.54)
MSA Percent Manufacturing		0.11 (1.80)		0.12 (2.41)		0.12 (1.95)		0.13 (1.97)
Unemployment Rate for White Youth	0.92 (9.11)	0.74 (9.00)	0.92 (8.44)	0.92 (10.98)	0.91 (8.32)	0.91 (8.64)	1.05 (8.74)	1.00 (8.91)
Constant	0.90	0.36	1.44	0.74	1.46	0.76	-0.80	-0.63
R2	0.592	0.703	0.658	0.710	0.618	0.710	0.635	0.704

TABLE 10 (continued)

Regression Analysis of Suburban Black Youth Unemployment for 49 Large MSA's
All Variables in Logarithms
(t ratios in parentheses)

Coefficient	I	II	III	IV	V	VI	VII	VIII
Access								
Employment Concentration (CC jobs/MSA jobs)	-1.40 (1.32)	-0.08 (1.21)						
Isolation Index for Black Poverty			0.31 (2.03)	-0.11 (0.74)				
Isolation Index for Within Race					0.19 (0.70)	-0.03 (0.13)		
Average One Way Commute time (minutes)							0.88 (2.95)	0.29 (1.04)
Other								
MSA Percent Black		0.21 (6.23)		0.22 (5.28)		0.21 (5.71)		0.18 (4.58)
MSA Percent Manufacturing		0.03 (0.37)		0.02 (0.18)		0.01 (0.12)		0.02 (0.25)
Unemployment Rate for White Youth	1.09 (6.28)	0.94 (9.00)	1.06 (6.24)	1.14 (8.27)	1.07 (5.98)	1.13 (8.07)	1.21 (7.15)	1.14 (7.96)
Constant	0.24	-0.28	0.79	-0.47	0.57	-0.29	-0.27	0.21
R_2	0.476	0.725	0.501	0.696	0.462	0.692	0.541	0.694

TABLE 11

Regression of Unemployment Rate for Black Youth for 49 Large MSA's All Variables in Logarithms (t ratios in parentheses)

Coefficient	I	II	III	IV
Access				
Employment Concentration (CC jobs/MSA jobs)	-0.07 (1.37)	-0.05 (1.05)	-0.08 (1.30)	-0.07 (1.30)
Isolation Index for Black Poverty	0.39 (4.76)	0.25 (2.81)		
Isolation Index for Within Race			0.52 (3.30)	0.37 (2.71)
Average One Way Commute time (minutes)	0.40 (2.43)	0.25 (1.42)	0.57 (3.15)	0.26 (1.50)
Other				
MSA Percent Black		0.08 (2.61)		0.10 (4.18)
MSA Percent Manufacturing		0.10 (1.92)		0.10 (1.87)
Unemployment Rate for White Youth	0.97 (10.31)	0.95 (10.94)	0.98 (9.39)	0.94 (8.90)
Constant	0.04	-0.05	-0.48	-0.09
R^2	0.780	0.824	0.731	0.821

TABLE 11 (continued)

Regression of Unemployment Rate for Suburban Black Youth for 49 Large MSA's All Variables in Logarithms (t ratios in parentheses)

Coefficient	I	II	III	IV
Access				
Employment Concentration (CC jobs/MSA jobs)	-0.15 (1.54)	-0.16 (1.94)	-0.14 (1.42)	-0.18 (2.06)
Isolation Index for Black Poverty	0.30 (2.10)	-0.03 (0.17)		
Isolation Index for Within Race			0.32 (1.24)	0.11 (0.50)
Average One Way Commute time (minutes)	0.77 (2.65)	0.20 (0.71)	0.89 (2.99)	0.23 (0.82)
Other				
MSA Percent Black		0.20 (4.20)		0.19 (4.67)
MSA Percent Manufacturing		-0.02 (0.19)		-0.02 (0.28)
Unemployment Rate for White Youth	1.15 (6.96)	1.13 (8.03)	1.17 (6.83)	1.12 (7.93)
Constant	-1.92	-0.94	-2.40	-0.83
R^2	0.597	0.722	0.570	0.723

TABLE 11 (continued)

Regression of Unemployment Rate for Central City Black Youth for 49 Large MSA's
All Variables in Logarithms
(t ratios in parentheses)

Coefficient	I	II	III	IV
Access				
Employment Concentration (CC jobs/MSA jobs)	-0.11 (1.75)	-0.09 (1.39)	-0.12 (1.84)	-0.11 (1.65)
Isolation Index for Black Poverty	0.31 (3.30)	0.23 (2.06)		
Isolation Index for Within Race			0.49 (2.87)	0.38 (2.28)
Average One Way Commute time (minutes)	0.39 (2.01)	0.32 (1.49)	0.53 (2.71)	0.35 (1.61)
Other				
MSA Percent Black		0.04 (1.19)		0.07 (2.21)
MSA Percent Manufacturing		0.10 (1.50)		0.09 (1.45)
Unemployment Rate for White Youth	0.99 (9.01)	0.97 (8.95)	0.99 (8.75)	0.96 (8.90)
Constant	-0.01	-0.24	-0.37	-0.25
R^2	0.717	0.740	0.702	0.745

significant in those equations which control for manufacturing and racial composition.

V. CONCLUSION

This paper examines the importance of job access in explaining employment outcomes for youth. The work sets forth a broader interpretation of job "access," one which emphasizes the information link provided by personal networks as well as spatial distance.

The empirical work using micro data supports the hypothesis of information linkages through networks which affect employment outcomes. Youth with an employed parent are more likely to work than youth without an employed parent. Living with an employed sibling also increases the likelihood that youth are employed. Youth are more likely: to work in a particular industry if a parent works in that industry; to work in a general location if a parent works in that area; and to follow a particular commute pattern if a parent uses that commute mode. Each of these findings suggests that social networks provide youth with access to jobs.

In our analysis using aggregate data, we compare this broad interpretation of access to more commonly employed measures of physical access. Both measures of social isolation or access significantly affect black youth unemployment. Employment concentration and average commute time, measures of geographic access, are less important

factors.

We do not interpret these results as strong empirical evidence against the importance of spatial access. Rather, these findings suggest that access is quite important for determining employment outcomes. The focus on a narrow definition of access can simply conceal this relationship. Access to jobs is gained through networks and is influenced by spatial developments other than distance to work. By expanding the definition of "access," its importance to labor market outcomes is emphasized.

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