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HOUSING SEGREGATION, NEGRO EMPLOYMENT, AND METROPOLITAN DECENTRALIZATION *

JOHN F. KAIN

I. Negro residential segregation, 176. — II. Segregation in Detroit and Chicago, 178. — III. The distribution of negro employment, 179. — IV. Negro employment by occupation and industry, 183. — V. The level of nonwhite employment, 189. — VI. Suburbanization and negro employment, 191. — VII. Post-war dispersal of employment and population in Chicago, 192. — VIII. Conclusions, 196.

This paper investigates the relationship between metropolitan housing market segregation and the distribution and level of non-white employment.¹ Numerous researchers have evaluated the effects of racial discrimination in the housing market.² Others have in-

* Part of the statistical analyses in Section III, "The Distribution of Negro Employment," and Section V, "The Level of Nonwhite Employment," appeared in a substantially modified form in an earlier paper, "The Effect of the Ghetto on the Distribution and Level of Nonwhite Employment in Urban Areas," *American Statistical Association, Proceedings of the Social Statistics Section* (1964), pp. 260-72.

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1. The terms Negro and nonwhite are used interchangeably in this paper. Since Negroes are 99 per cent of all Chicago nonwhites in 1960 and 97 per cent of all Detroit nonwhites in 1960, the distinction has little practical significance.

2. Davis McEntire, *Residence and Race: Final and Comprehensive Report to the Commission on Race and Housing* (Berkeley: University of California Press, 1960); Eunice and George Grier, *Privately Developed Interracial Housing: An Analysis of Experience* (Berkeley: University of California

vestigated discrimination in employment and have attempted to determine the extent to which the higher unemployment rates among Negroes are attributable to causes other than racial discrimination, such as lower levels of educational attainment.³ However, possible interactions between housing segregation and nonwhite employment and unemployment have been all but ignored. To the author's knowledge, the research reported here is the first to link discrimination in the housing market to the distribution and level of nonwhite employment in urban areas. Hypotheses evaluated in this paper are that racial segregation in the housing markets (1) affects the distribution of Negro employment and (2) reduces Negro job opportunities, and that (3) postwar suburbanization of employment has seriously aggravated the problem. These hypotheses are tested empirically using data on place of work and place of residence obtained from the home interview surveys of the Detroit Area Traffic Study in 1952 and the Chicago Area Traffic Study in 1956.⁴

I. NEGRO RESIDENTIAL SEGREGATION

To understand how housing segregation affects the distribution and level of Negro employment, it is necessary to comprehend the location and growth of Negro ghettos in metropolitan areas. The means by which racial segregation in housing has been maintained are amply documented.⁵ They are both legal and extra-legal; for

Press, 1960); Nathan Glazer and Davis McEntire, *Studies in Housing and Minority Groups* (Berkeley: University of California Press, 1960); Luigi Laurenti, *Property Values and Race: Studies in Seven Cities* (Berkeley: University of California Press, 1960); Chester Rapkin and W. C. Grigsby, *The Demand for Housing in Racially Mixed Areas: A Study of the Nature of Neighborhood Change* (Berkeley: University of California Press, 1960); O. D. Duncan and Beverly Duncan, *The Negro Population of Chicago* (Chicago: University of Chicago Press, 1957); Morton Grodzins, *The Metropolitan Areas as a Racial Problem* (Pittsburgh: University of Pittsburgh Press, 1958); Beverly Duncan and P. M. Hauser, *Housing a Metropolis — Chicago* (Glencoe, Illinois: The Free Press, 1960); J. F. Kain, "Commuting and the Residential Decisions of Central Business District Workers," National Bureau of Economic Research, Special Conference Series, 17, *Transportation Economics* (New York: Columbia University Press, 1965); J. R. Meyer, J. F. Kain, and Martin Wohl, *The Urban Transportation Problem* (Cambridge, Mass.: Harvard University Press, 1965).

3. Harry J. Gilman, "Economic Discrimination and Unemployment," *American Economic Review*, LV (Dec. 1965); R. H. Turner, "Foci of Discrimination in the Employment of Nonwhites," *American Journal of Sociology*, LVIII (Nov. 1952), 247-56.

4. Detroit Area Traffic Study, *Report on the Detroit Metropolitan Area Traffic Study: Part 1 — Data Summary of Interpretation* (Lansing, Michigan, July 1955); *Chicago Area Transportation Study*, Vol. 1 (Chicago, 1959).

5. G. S. Becker, *The Economics of Discrimination* (Chicago: University of Chicago Press, 1957); Robert Weaver, *The Negro Ghetto* (New York: Harcourt, Brace, 1948); Glazer and McEntire, *op. cit.*; Grodzins, *op. cit.*; McEntire, *op. cit.*; T. J. Woofter, Jr., *Negro Problems in Cities* (Garden City,

example: racial covenants; racial zoning; violence or threats of violence; preemptive purchase; various petty harassments; implicit or explicit collusion by realtors, banks, mortgage lenders, and other lending agencies; and, in the not-so-distant past, the Federal Housing Administration (FHA) and other Federal agencies.

The existence, extent, and persistence of residential segregation in American cities is even better documented. Negro residential segregation indexes have been calculated by Karl and Alma Taeuber from block statistics for 207 cities in 1960 and 109 cities in 1940 and 1950.⁶ These segregation indexes assume values between zero and 100. A value of zero indicates that every block has the same proportion of Negroes. A value of 100 indicates segregated distribution wherein each block contains only whites or Negroes, but not both. Values for the 207 cities in 1960 range from 60.4 to 98.1 with only a few cities having values in the lower range of observed scores — only eight cities have values below 70. Similar results were obtained for the twelve metropolitan areas completely tracted in both 1950 and 1960. If block indexes had been computed for entire metropolitan areas the measured degree of Negro segregation would have been even higher since virtually all urban Negroes reside in the larger cities for which block statistics are available. By contrast, the remaining portions of metropolitan areas are virtually all white.⁷ Moreover, urban Negroes are highly segregated in all regions of the country and the patterns of Negro segregation show very great stability, having existed for at least thirty-five years.⁸ The experience of Negroes has been remarkably different from that of other ethnic and racial groups in this respect. Stanley Lieberson has shown that Negroes are far more segregated than any other ethnic or racial group in American cities and that while segregation of immigrants and other groups has generally declined, the segregation of Negroes has increased over time.⁹

N.Y.: Doubleday, Doran and Company, 1928); Rapkin and Grigsby, *op. cit.*; Laurenti, *op. cit.*

6. Karl E. and Alma F. Taeuber, *Negroes in Cities* (Chicago: Aldine Publishing Co., 1965). Similar results were obtained by Donald Cowgill for 109 cities in 1940 and 1950 using a slightly different segregation index. D. O. Cowgill, "Trends in Residential Segregation of Nonwhites in American Cities, 1940-50," *American Sociological Review*, Vol. 21 (Feb. 1956), pp. 43-47.

7. Central city and metropolitan area indexes are not directly comparable, since those for central cities are based upon city blocks while those for metropolitan areas are based on census tracts. For a detailed discussion of the methodological differences arising from use of census tracts and blocks as well as from alternative segregation indexes see: Taeuber and Taeuber, *op. cit.*, Appendix A. "The Measurement of Residential Segregation," pp. 195-245.

8. *Ibid.*, pp. 37-40.

9. Stanley Lieberson, *Ethnic Patterns in American Cities* (Glencoe: The Free Press, 1963), pp. 120-32.

Analyses by Karl and Alma Taeuber, Anthony Pascal, and others suggest that very little of this observed residential segregation of Negroes can be explained by economic factors.¹ Similar conclusions about the inadequacy of nonwhite/white socioeconomic differences as an explanation of residential segregation have been reached by the author. Estimates published elsewhere suggest that as many as 40,000 nonwhite workers might move from Detroit's central ghetto to outlying residence areas, and that as many as 112,000 nonwhite workers might move away from Chicago's South Side, if racial barriers to nonwhite housing choices were removed.²

II. SEGREGATION IN DETROIT AND CHICAGO

Chicago and Detroit nonwhites are highly segregated. The central city (block) segregation index for Chicago exceeds 92.0 in all three decades and the metropolitan area (tract) indexes are only marginally lower. Segregation scores indicate Detroit Negroes are slightly less segregated in every year; but they are still highly segregated.³

Nonwhite ghettos in Detroit and Chicago, as in most other U.S. metropolitan areas, lie mostly within the central city near the Central Business District (CBD). Small secondary ghettos are sometimes found in the central parts of older suburbs and in previously rural areas. Both kinds of outlying Negro residential areas

1. Pascal, using multiple regression techniques, is able to explain a maximum of 46 per cent of the variation in the proportion of all households headed by Negroes among 100 residence areas in metropolitan Chicago. The proportion of explained variance for 100 Detroit residential areas is even smaller, 33 per cent. Anthony H. Pascal, "Summary: The Economics of Housing Segregation," paper presented at the RAND Conference on Urban Economics, The RAND Corporation (Santa Monica, California, August 24-25, 1964), pp. 6-7. Karl and Alma Taeuber make several estimates of the proportion of residential segregation by census tracts that can be explained by economic factors in several cities. The most satisfactory of these, for fifteen cities in 1940, 1950, and 1960 (including Detroit but not Chicago), are also obtained from multiple regression models. Using census tract variations in tenure, median value, and contract rent of occupied dwelling units as explanatory variables, the Taeubers are able to explain less than 5 per cent of the variation in the nonwhite percentage among Detroit census tracts in all three years. The largest amount of variation that can be attributed to these three variables in any of the fifteen cities and in any of the three years is less than one-third. Moreover, the amount of residential segregation explained by these three socioeconomic variables is generally lower in more recent years. Taeuber and Taeuber, *op. cit.*, pp. 23 and 24.

2. Meyer, Kain, and Wohl, *op. cit.*, pp. 163-66.

3. Chicago city (block) segregation indexes are: 1940, 95.0; 1950, 92.1; and 1960, 92.6. The metropolitan (tract) indexes are 1950, 88.1 and 1960, 89.7. Detroit city segregation indexes (block) are 89.9 in 1940, 88.8 in 1950, and 84.5 in 1960, and the metropolitan area indexes (tract) are 83.3 in 1950 and 86.7 in 1960.

may importantly affect the distribution of nonwhite employment and the job loss that may result from housing segregation.

Detroit's principal ghetto, which houses approximately 93 per cent of Detroit's nonwhite work force, but only about 29 per cent of its whites, lies within the central city and has a slight sectoral pattern. Nearly all of the remaining 7 per cent of nonwhites live in one of three small outlying nonwhite residence areas.⁴

Most Chicago Negroes live in the notorious South Side, although fingers of the ghetto extend due west and due north from the Loop. Chicago's principal ghetto houses a larger percentage of its nonwhite work force than does Detroit's: 96 per cent of Chicago's nonwhite workers reside there, but only 20 per cent of its white workers. The only other significant nonwhite settlement in the Chicago area straddles the suburbs of Evanston and Skokie to the north of the Loop and houses about 1,900 nonwhite workers, or just under 1 per cent of the nonwhite labor force.⁵

III. THE DISTRIBUTION OF NEGRO EMPLOYMENT

There are several reasons why housing market segregation may affect the distribution and level of Negro employment. The most obvious are:⁶(1) The distance to and difficulty of reaching certain jobs from Negro residence areas may impose costs on Negroes high enough to discourage them from seeking employment there. (2) Negroes may have less information about and less opportunity to learn about jobs distant from their place of residence or those of their friends.⁶ (3) Employers located outside the ghetto may dis-

4. By comparison with other U.S. metropolitan areas, Detroit and Chicago have a large number of relatively large outlying Negro residential areas. Detroit possesses three and Chicago possesses two of the thirty suburban communities with 1,000 or more nonwhite households. Only the metropolitan areas of New York and San Francisco-Oakland have a larger number. Moreover, nonwhites are highly segregated within these suburbs; the 1960 indexes for Chicago are: Evanston, 87.2 and Joliet, 90.2. Those for Detroit suburbs are: Highland Park, 7.4; Inkster, 95.0; Pontiac, 90.5. Taeuber and Taeuber, *op. cit.*, p. 59.

5. Otis and Beverly Duncan conclude that the spatial outline of the Negro community in Chicago had been established by 1920, if not by 1910; that further expansion of the Negro community occurred within areas which already had been accommodating a nucleus of Negro residents in 1920; and that what expansion there has been of the Negro residential areas has consisted of adding areas contiguous to existing Negro concentrations. Duncan and Duncan, *op. cit.*, pp 87-107.

6. Labor mobility studies show that few jobs are located from newspaper advertisements, employment offices, and the like. Workers most frequently learn of jobs from friends, by passing the place of work and seeing help wanted signs, and by other casual associations. Since nonwhites have few associations with white areas distant from the ghetto and since few of their friends and

criminate against Negroes out of real or imagined fears of retaliation from white customers for "bringing Negroes into all-white residential areas," or they may feel little pressure not to discriminate. (4) Similarly, employers in or near the ghetto may discriminate in favor of Negroes.

To test the hypothesis that the central location of the Chicago and Detroit ghettos and limitations on Negro residence outside these areas affect the location of Negro employment, a series of multiple regression models have been fitted for Chicago and Detroit using the Negro percentage of total employment in each of 98 workplace areas as the dependent variable and a series of proxy variables representing the factors causing Negroes to be underrepresented in distant workplaces as explanatory variables.

The Negro percentage of population residing in each of the 98 workplace zones is a proxy for the employers propensity to discriminate in favor or against nonwhite workers because of real or imagined attitudes of the resident population toward the employment of Negroes. Businesses located in the ghetto, and particularly those selling predominately to ghetto residents, would be expected to hire disproportionate numbers of Negroes. Similarly, retailers and others located in all white suburbs and having few or no Negro customers may feel some reluctance to employ Negroes in sales and other contact jobs. The Negro percentage of population residing in each workplace zone is unavailable. Therefore, the Negro percentage of employed residents of the workplace zone, hereafter referred to as the residence ratio, is used to measure the impact, if any, of neighborhood racial composition on the employment of Negroes in each workplace zone.

Transportation costs from the workplace area to the ghetto and the effect of distance on knowledge of job opportunities are proxied by two variables: the airline distance from the workplace to the nearest Negro residence area (the nearest zone having more than 2 per cent Negro residents), and the airline distance from the workplace to the nearest point in the major ghetto. (The residence zones used in the analysis have the same boundaries as the workplace zones.)

Distance from Negro residence areas to outlying workplaces may seriously understate transportation costs between the ghetto and many workplaces because of the indirectness or complete absence of public transit services from ghetto residential areas to

neighbors are employed there or make frequent trips there, the chances of their learning of distant job opportunities may be significantly lessened.

outlying or suburban workplaces. Public transit systems invariably focus on the central business district and are usually badly oriented for making trips from the ghetto to outlying workplaces. Historically the principal function of these systems was to transport workers from outlying residential areas to centrally located high density workplaces, and their specialization in this regard has increased as the automobile has become increasingly competitive for off-peak and nonradial travel. As car ownership among ghetto Negroes is relatively low, the difficulty or impossibility of using public transit systems to reach outlying workplaces may severely restrict their ability to seek or accept employment there. Because of housing segregation, low skilled Negroes are unable to move close to suburban workplaces or perhaps even to live near a direct transit line serving current or potential workplaces as do most low skilled whites.⁷

Frequently ghetto Negroes may be forced to choose between buying a private automobile and thus spending a disproportionate share of their low incomes on transportation, making a very long and circuitous trip by public transit (if any service is available at all), or foregoing the job altogether. Where the job in question is a marginal one, their choice may frequently be the latter. More often they will not even seek out the job in the first instance because of the difficulties of reaching it from possible residence locations.

Three equations are fitted for each city. The residence ratio (R) is included in all three. In addition, the first equation for each city, (1) and (4), includes distance from the nearest ghetto, d^n ; equations (2) and (5) include distance from the major ghetto, d^m ; and equations (3) and (6) include both distance variables, d^n and d^m . Since distance from the major ghetto and distance from the nearest ghetto are highly intercorrelated, including both in the regression equation does not add much to the explained variance and greatly reduces the statistical significance of their coefficients.⁸ This is especially true for the Chicago models. When only one distance proxy is used, the coefficients of all variables are highly significant.

		Equations	R^2
Chicago			R^2
(1)	$W = 9.18 + 0.458R - 0.521 d^n$		0.78
	(10.7) (15.6) (4.3)	(t ratios in parentheses)	

7. Meyer, Kain, and Wohl, *op. cit.*, Chap. 7; John F. Kain, "The 'Big Cities' Big Problem," *Challenge*, Vol. 15 (Sept./Oct. 1966), pp. 5-8.

8. The simple correlation coefficients between distance from the major ghetto and distance from the nearest ghetto are $R = 0.91$ for Chicago and $R = 0.75$ for Detroit.

$$(2) \quad W = 9.28 + 0.456R - 0.409 d^m \quad 0.782$$

(10.5) (15.4) (4.2)

$$(3) \quad W = 9.36 + 0.455R - 0.324 d^n - 0.176 d^m \quad 0.785$$

(10.6) (15.4) (1.2) (0.8)

Detroit R^2

$$(4) \quad W = 12.78 + 0.091R - 1.141 d^n \quad 0.359$$

(2.9) (4.4)

$$(5) \quad W = 12.64 + 0.100R - 0.758 d^m \quad 0.382$$

(2.9) (4.7)

$$(6) \quad W = 13.45 + 0.082R - 0.563 d^n - 0.52 d^m \quad 0.400$$

(2.3) (1.7) (2.5)

W = Employment ratio, per cent of zone i 's workers who are Negroes =

$$\frac{\text{Negro workers employed in } i}{\text{Total workers employed in } i} \times 100.$$

R = Residence ratio, per cent of zone i 's resident workers who are Negroes =

$$\frac{\text{Negro workers residing in } i}{\text{Total workers residing in } i} \times 100.$$

d^n = Distance from the nearest ghetto, airline distance in miles to nearest boundary point of a Negro residence area.

d^m = Distance from the major ghetto, airline distance in miles to nearest boundary point of the major ghetto.

The most obvious difference between the Detroit and Chicago models is the proportion of total variance explained. All three Chicago regressions explain more than seven-tenths of the variance in the dependent variable, while the Detroit regressions explain only about four-tenths. This difference is attributed to Chicago's greater racial segregation.⁹ Detroit's major ghetto is larger and more dispersed than Chicago's, and Detroit also has more and better located outlying Negro residential areas. Thus, it is reasonable that the model explains less about the spatial distribution of nonwhite employment in Detroit, where Negro residences are not so concentrated geographically.¹ These differences are indicated by the mean distance to the ghetto in Chicago and Detroit. Mean distance from the 98 Chicago workplace areas to the major ghetto is 5.4 miles

9. It should be noted that the variance of the dependent variable is considerably smaller in Detroit.

1. This is not to deny the possible importance of other differences between the two cities, such as the nondiscriminatory behavior of the United Auto Workers in Detroit and the importance of the auto industry there.

while the mean distance for Detroit is only 4.3 miles. Similar relationships hold for distance to the nearest ghetto.

The regression coefficients also differ considerably for the two cities. Coefficients of the residence ratio in the Chicago equations are much larger than those for the Detroit equations. A 1 per cent increase in the number of Negro workers living in a Chicago residence area is associated with nearly a .5 per cent increase in Negro employment. By contrast, a 1 per cent increase in the residence ratio is associated with only a .1 per cent increase in employment in Detroit. However, the distance coefficients are much larger in the Detroit models. In Detroit the percentage of Negroes employed in a workplace area declines by .8 per cent with each one mile increase in distance from the major ghetto. The decline is only .4 per cent in Chicago (equations (2) and (5)). There is a similar correspondence for the distance from the nearest ghetto coefficients in equations (1) and (4), and when both distance variables are included in equations (3) and (6).

If the previously discussed evidence of severe restriction of Negro residential choice is accepted, these findings would seem to suggest that housing market segregation does strongly affect the location of Negro employment. However, if this evidence on housing market discrimination is not accepted, these findings could be construed as demonstrating the opposite causal hypothesis; that the location of Negro jobs strongly affects the distribution of Negro residences.² Some further tests of these alternative causal hypotheses are presented below.

IV. NEGRO EMPLOYMENT BY OCCUPATION AND INDUSTRY

Since Negroes typically have less skill and less education than whites, an unequal spatial distribution of skill requirements might lead to results like those obtained for Detroit and Chicago, if the average skill level requirement of jobs increased with distance from the ghetto. Such a distribution of skill requirements could occur by chance or for historical reasons. Similarly, firms demanding many low skilled workers might locate near the ghetto because of the plentiful supply of low skilled workers available there. No direct

2. Findings published elsewhere indicate that the location of Negro employment does affect the location of Negro residences within the constraints imposed by housing market segregation. However, the location decisions of Negroes appear irrational and inconsistent, if the hypothesis of significant restriction on their choice of residences is not accepted. Meyer, Kain, and Wohl, *op. cit.*, pp. 144-77.

evidence on the education or skill requirements of the labor force by distance from the ghetto, which would permit direct evaluation of this hypothesis, is available. However, data are available on white and Negro employment in each Chicago workplace zone by one-digit occupation and industry classifications and these permit some indirect tests. Relationships, like those given in equations (1)–(6) are estimated for each occupation and industry group for Chicago. Insofar as these industry and occupation groups have different education and skill requirements, the estimates thereby obtained will reflect differences in labor force racial composition attributable at least in part to these differences.

Equations (7)–(22) are regression equations obtained for eight one-digit occupational and eight one-digit industry groups. The overall consistency and goodness of fit of these sixteen equations is rather remarkable given the small number of nonwhites employed in some of these occupation and industry groups and the very large sampling errors that must exist.³ The proportion of explained variance ranges from a low of 53 per cent for wholesaling to a high of 80 per cent for retailing.⁴

Occupation	Equations	
Professional, Technical, and Kindred Workers	(7) $W = 0.83 + 0.392 R$ (1.3) (14.1)	$R^2 = 0.68$
Managers, Officials, and Proprietors	(8) $W = 0.04 + 0.416 R$ (-0.06) (16.0)	$R^2 = 0.73$
Clerical and Kindred Workers	(9) $W = 1.25 + 0.526 R$ (1.8) (17.2)	$R^2 = 0.76$
Sales Workers	(10) $W = 0.48 + 0.469 R$ (0.65) (14.6)	$R^2 = 0.69$
Craftsmen, Foremen, and Kindred Workers	(11) $W = 5.68 + 0.330 R - 0.256d^m$ (7.6) (13.1) (-3.1)	$R^2 = 0.72$

3. These data are based upon a one and thirty sampling rate. Thus, for some occupations and industries with either relatively few workers or relatively low nonwhite proportions the number of nonwhite workers is very small. The sample included only 241 nonwhites employed in wholesale trade; 671 employed in finance, insurance, and real estate; and only 740 employed in public administration. Even fewer nonwhites were sampled within several occupation groups. There were only 170 nonwhite sales workers; 316 nonwhite private household workers; 287 nonwhite managers, officials, and proprietors; and 370 nonwhite professional, technical, and kindred workers.

4. A much poorer fit was obtained for private household workers. That equation (not reported above) explains only 15 per cent of the total variance. The poor statistical fit obtained for domestics is hardly surprising. Private household workers include an especially small number of workers and thus the sampling variability is especially great. Moreover, because of "living in" their behavior would be expected to be much different than hypothesized by the above model.

Occupation	Equations		
Operatives and Kindred Workers	(12) $W = 15.5 + 0.479 R - 0.820d^m$ (11.0) (10.1) (-5.3)		$R^2 = 0.67$
Service Workers Except in Private Houses	(13) $W = 15.4 + 0.680 R - 0.803d^n$ (8.8) (11.3) (-3.2)		$R^2 = 0.66$
Laborers and Farm Workers	(14) $W = 34.9 + 0.421 R - 1.87d^m$ (16.7) (6.02) (-8.13)		$R^2 = 0.62$
Industry			
Manufacturing Durable Goods	(15) $W = 10.8 + 0.291 R - 0.54d^m$ (9.2) (7.4) (-4.2)		$R^2 = 0.53$
Manufacturing Nondurable Goods	(16) $W = 9.7 + 0.367 R - 0.62d^m$ (8.7) (9.8) (-5.0)		$R^2 = 0.64$
Transportation, Communication and Other	(17) $W = 5.8 + 0.317 R - 0.36d^m$ (6.3) (10.2) (-3.5)		$R^2 = 0.63$
Retail Trade	(18) $W = 4.07 + 0.645 R - 0.264d^n$ (3.8) (17.8) (-1.8)		$R^2 = 0.80$
Finance, Insurance, Real Estate, Professional, Services, etc.	(19) $W = 2.73 + 0.552 R$ (3.2) (14.9)		$R^2 = 0.70$
Wholesale Trade	(20) $W = 4.86 + 0.341 R - 0.256d^m$ (4.2) (8.8) (-2.0)		$R^2 = 0.53$
Business, Repair, Personal, Services, etc.	(21) $W = 18.2 + 0.582 R - 0.805d^n$ (9.5) (8.9) (-3.0)		$R^2 = 0.55$
Public Administration	(22) $W = 10.5 + 0.562 R - 0.581d^m$ (7.3) (11.6) (-3.6)		$R^2 = 0.68$

The regression coefficients generally have high statistical significance (as indicated by the *t* ratios given in parentheses) and have the correct sign. Regression coefficients for the distance from ghetto variables, d^n or d^m , are negative and those for the residence ratios *R*, are positive in all sixteen equations. The problem of multicollinearity between the two distance variables remains and only the most significant relationship is presented here. Neither distance variable differs significantly from zero at the 5 per cent level in equations (7)–(10) (the first four occupational groups — professional, managerial, clerical and sales) and both are omitted. Significantly these four occupation groups are those for which prejudice in favor of or against employment of Negroes on the basis of the racial composition of the residential area would be expected to be greatest.

Virtually no Negroes hold jobs in these four occupational groups outside of nonwhite residence areas, and within the ghetto their

representation is disproportionately large. Nonwhites were an estimated 4.6 per cent of all Chicago clerical workers in 1956. Yet they were 78 per cent of all clerical workers employed in ghetto workplace zone 24 and 77 per cent of these employed in zone 13 (Table I); Negroes were an estimated 98 per cent of all Chicago workers

TABLE I
GEOGRAPHIC DISTRIBUTION OF NONWHITE EMPLOYMENT BY
OCCUPATION AND INDUSTRY: CHICAGO

	Per cent Nonwhite								
	Mean ^a of 98 Work- place Zones	Entire ^b Area	Selected					Zones ^c 24	Number of ^d Areas With no Nonwhites
			3	4	12	13	24		
Professional, Technical Managers, Officials, and Proprietors	4.4	6.0	12.2	8.1	45.3	35.3	69.1	50	
Clerical	3.7	4.2	4.6	4.6	37.0	59.9	60.1	55	
Sales	6.0	9.6	26.7	14.5	35.0	76.9	78.4	41	
Craftsmen	3.7	4.6	5.2	4.5	28.0	70.0	70.6	69	
Operatives	7.3	9.3	10.4	15.4	28.6	45.9	54.4	20	
Service Workers	15.4	21.6	23.8	32.1	46.0	80.7	58.1	24	
Laborers	18.3	30.2	41.2	39.4	79.1	95.8	95.5	25	
Durable Manufacturing	28.6	41.5	44.4	56.3	67.5	81.7	79.9	21	
Nondurable Manufacturing	10.4	12.9	16.0	23.3	32.5	42.1	49.8	24	
Transportation	9.8	18.5	20.9	24.7	40.5	56.8	43.2	40	
Retailing	6.7	11.0	13.1	19.1	26.0	38.1	41.4	45	
Finance, Insurance, Real Estate	8.8	13.5	21.0	31.3	56.9	76.6	90.5	33	
Wholesaling	7.7	10.1	27.0	18.7	48.4	51.6	84.3	47	
Business Services	6.5	10.1	10.0	19.7	41.1	48.4	50.0	58	
Public Administration	20.2	26.7	23.6	30.8	71.6	94.4	92.3	23	
All Workers	12.4	24.8	47.1	22.3	48.4	87.8	74.0	40	
Employed Residents	11.2	14.6	21.2	23.1	45.8	64.4	71.5	11	
	9.0	14.6	32.9	29.0	87.1	96.3	98.1	35	

a. Unweighted mean of the per cent of nonwhites for the 98 Chicago analysis zones used in the analysis.

b. Per cent nonwhite for the entire area = number of Chicago nonwhites employed in industry or occupation group *K* divided by total Chicago employment in group *K*.

c. Per cent nonwhite for selected individual analysis zones.

d. Number of the 98 analysis zones used in the analysis having no sampled nonwhite workers.

residing in zone 24 in 1956 and 96 per cent of those residing in zone 13. As the data in Table I indicate, this very large overrepresentation of nonwhite employees in ghetto workplace zones is characteristic of all occupation and industry groups. By contrast, 41 of the 98 workplace zones used in the analysis have no nonwhite clerical

workers.⁵ The number of zones with no reported Negro workers is even greater for the professional, technical and kindred; the manager, official, and proprietor; and sales groups. The Negro proportion of all craftsmen in ghetto areas is generally lower than the Negro proportion in the more visible occupations, even though Negroes are a larger proportion of all Chicago area craftsmen. Negro craftsmen were employed in all but twenty workplace zones and Negro laborers in all but twenty-one.

Differentiation by industry group is less great. This finding might be expected, since all industries have some jobs, such as janitors and laborers, in which Negro employment is traditionally accepted. Even so, the data in Table I indicate that nonwhites are most overrepresented in those ghetto industries having the greatest amount of customer contact — retailing; finance, insurance and real estate; business services; and public administration. They are least overrepresented in those ghetto industries having the least customer contact — durable and nondurable manufacturing, wholesaling, and transportation. The converse seems to hold for Negro employment in all white areas.

Table II, which gives the elasticities at the sample means for (1) d^m , distance from the major ghetto, and (2) R , the residence ratio for each industry and occupation group, provides additional information about the relative impact of the racial residential composition of a workplace area and its distance from the ghetto. Also included in Table II are elasticities calculated from regression equations in which air line distance from the ghetto centroid (d^c) is used as the distance measure. Distance from the ghetto centroid (d^c) is included because of the suspicion that the size of the workplace and residence zones used in the analysis may cause distance from the ghetto boundaries to some workplace zones to be understated. Insofar as distance proxies labor-market information loss and similar concepts, these may be more closely related to the centroid of the distribution of the nonwhite population than to the ghetto's boundaries, particularly when the boundaries are as grossly measured as those used in this analysis.

Elasticities of the residence ratio variable are generally larger

5. In interpreting the data in Table II on the number of analysis areas or workplace zones having no nonwhite workers, it should be remembered that these data are based on a one and thirty sample. Thus, the number of analysis zones having no nonwhite workers in a given industry or occupation group will generally be smaller than the number of areas having no sampled workers in a given occupation or industry group. Moreover, eleven analysis areas have no sampled nonwhite workers whatsoever and this thereby is a lower bound for any given occupation or industry group.

TABLE II
 COEFFICIENTS OF DETERMINATION AND ELASTICITIES FOR DISTANCE TO
 MAJOR AND DISTANCE TO GHETTO CENTROID MODELS BY OCCUPATION
 AND INDUSTRY GROUP

	R	d^m	R^2	R	d^c	R^2
Occupation						
Professional	0.8	0.0 ^a	0.68	0.8	-0.2 ^a	0.68
Managerial	1.0	0.1 ^a	0.73	1.0	-0.0 ^a	0.72
Clerical	0.8	0.0 ^a	0.76	0.8	-0.2 ^a	0.76
Sales	1.2	0.2 ^a	0.69	1.1	-0.1 ^a	0.69
Craftsmen	0.4	-0.2	0.72	0.4	-0.4	0.75
Operatives	0.3	-0.3	0.67	0.3	-0.4	0.69
Service	0.3	-0.2	0.65	0.3	-0.4	0.70
Laborers	0.1	-0.4	0.63	0.1	0.5	0.64
Industry						
Durable Manufacturing	0.2	-0.3	0.53	0.3	0.4	0.72
Nondurable Manufacturing	0.3	-0.3	0.64	0.3	-0.5	0.65
Transportation	0.4	-0.3	0.63	0.4	-0.4	0.64
Retailing	0.7	-0.1	0.80	0.7	-0.2	0.80
Finance, Insurance, Real Estate	0.6	-0.1	0.70	0.6	-0.2	0.71
Wholesaling	0.5	-0.2	0.53	0.5	-0.5	0.56
Business Services	0.3	-0.1	0.52	0.3	-0.3	0.59
Public Administration	0.4	-0.3	0.68	0.4	-0.4	0.70
All	0.4	-0.2	0.78	0.4	-0.4	0.82

a. Not significantly different from zero at the 5 per cent level.

in those occupations and industries with frequent customer contact. Among occupations the largest residence ratio elasticity is obtained for sales (1.2) and the smallest is obtained for laborers (0.1). Similarly, among industry groups, retailing and finance, insurance, and real estate have the largest residence ratio elasticities, 0.7 and 0.6, and durable manufacturing and business services have the smallest, 0.2 and 0.3.

In addition to increasing slightly the proportion of total variance explained for most occupation and industry groups, substitution of the distance from the ghetto centroid (d^c) for distance from the major ghetto (d^m) generally increases the distance elasticities and reduces slightly the residence ratio (R) elasticities. Of the nine occupation groups the residence ratio elasticity is larger in the distance from the ghetto centroid model only for laborers; of the eight industry groups, it is larger only for durable manufacturing, although the elasticities are the same for three other industry groups. Similarly, the distance elasticities are larger using distance from

the ghetto centroid for all industry and occupation groups and the differences are generally larger than for the residence ratio. The regression coefficients for distance from the ghetto centroid differ significantly from zero at the 5 per cent level or better for professional, managerial, clerical, and sales occupation groups. It will be recalled that for these four residential serving occupation groups the distance coefficients did not pass the test of statistical significance using either distance from the major or nearest ghetto.

V. THE LEVEL OF NONWHITE EMPLOYMENT

This section investigates the second of the paper's three hypotheses — that racial discrimination in housing markets reduces Negro employment opportunities. Estimates of Negro job loss caused by housing segregation are obtained by assuming the proportion of Negro workers living in every residence zone is the same. This assumption is computationally convenient and provides a smaller estimate of Negro job loss than would most other plausible assumptions. For example, it provides a lower estimate than if Negro workers were allocated to the 98 residence zones according to their income or occupational characteristics and those of the residence zones.

Solving equations (1)–(6) (assuming the residence ratio is identical for each zone) provides three estimates each for Chicago and Detroit of what the area wide Negro percentage of employment might be, assuming that there were no racial segregation. Since all zones under these assumptions have identical racial characteristics, and distance from the major and nearest ghettos would be zero, the expected proportion of nonwhite employment is the same for every workplace zone. The expected nonwhite proportion of workplace employment is shown in Table III. Once these percentages are obtained, alternative estimates of "expected" Negro employment are derived by multiplying them by the total labor force in each metropolitan area. The loss of Negro jobs is then the difference between the actual and "expected" numbers of Negro jobs. For Chicago, the estimated losses range from 22,157 to 24,622.⁶ The estimated losses in Detroit are much smaller, ranging from a low of 3,863 to a high of 9,113. Actual total employment, actual Negro employment, "expected" Negro employment, and the estimated job loss for equations

6. These estimates for Chicago are lower than those reported in an earlier paper by the author (see fn. *, p. 175). These differences are due to a data correction that affected the estimates obtained in equations (1)–(3).

(1)–(6) are shown in Table III. Part of the differences undoubtedly are due simply to the fact that Chicago's labor force is nearly twice as large as Detroit's. In addition, the much smaller estimated losses

TABLE III
ESTIMATES OF NONWHITE JOB LOSSES FOR CHICAGO AND DETROIT
ASSUMING A UNIFORM RESIDENTIAL DISTRIBUTION OF NONWHITES

Equation	Variables	Metropolitan Area Employment					
		Actual			Estimate		
		Total Number	No. Non-white	Per cent Non-white	Per cent Non-white ^a	No. Non-white ^b	Non-white Job Loss ^c
Chicago							
1	R, d^n	1,760,148	257,178	14.61	15.87	279,335	22,157
2	R, d^m	1,760,148	257,178	14.61	15.94	280,568	23,390
3	R, d^n, d^m	1,760,148	257,178	14.61	16.01	281,800	24,622
Detroit							
4	R, d^n	937,555	127,395	13.59	14.01	131,351	3,956
5	R, d^m	937,555	127,395	13.59	14.00	131,258	3,863
6	R, d^n, d^m	937,555	127,395	13.59	14.56	136,508	9,113

a. Obtained by solving equations (1)–(6) assuming R equals either 14.61 (Chicago) or 13.59 (Detroit) and d^m or d^n equals zero.

b. Obtained by multiplying estimated per cent nonwhite times total number employed in Chicago (1,760,148) or Detroit (937,555).

c. Obtained by subtracting estimated nonwhite employment from actual.

for Detroit, like the smaller explanatory power of the Detroit models, are consistent with the lesser degree of racial segregation there. Since Detroit's ghetto is larger and more extensive and there are more and better-located secondary ghettos, housing constrains Negro job choices less than in Chicago. Thus, the larger estimates of non-white job losses obtained for Chicago are entirely reasonable.

While these estimates must be considered highly tentative, they do suggest that housing market segregation and discrimination may significantly affect the level of Negro employment in metropolitan areas. If this is true, it has grave welfare implications since the costs that housing segregation impose on Negroes may be even larger than is generally believed. The constraint placed upon job opportunities by housing market discrimination may also partly explain the much higher unemployment rates of Negroes. Part of what is usually charged to employment discrimination may be an indirect effect of housing discrimination. This illustrates how pervasive various types of discrimination may be and how the indirect costs of discrimination may greatly exceed the direct costs.

VI. SUBURBANIZATION AND NEGRO EMPLOYMENT

Suburbanization of employment and population has been one of the most discussed facets of postwar metropolitan development. Between 1950 and 1960 population declines occurred in over half of the central cities (based on 1950 boundaries) of the forty largest metropolitan areas.⁷ Moreover, census tract data indicate that these declines were greatest in the central parts of these central cities.

Employment dispersal is less well documented because of the unavailability of time series data on the location of employment within metropolitan areas. Even so, the fragmentary evidence strongly suggests a rapid dispersal of employment.⁸ This employment dispersal is significant to this paper for two reasons. Jobs traditionally held by Negroes appear to be suburbanizing at an equal, and very possibly at an above-average rate, while there is only token suburbanization of Negro households.

Between 1940 and 1960 the total population of U.S. metropolitan areas increased by forty million persons. Eighty-four per cent of the Negro increase occurred in the central cities and 80 per cent of the white increase, in the suburbs. Suburbanization of whites accelerated between 1950 and 1960; nearly 90 per cent of their metropolitan increase occurred in the suburbs. An even sharper contrast appears in the twenty-four metropolitan areas with populations of over one million in 1960. In the two decades between 1940 and 1960 almost 100 per cent of the increase in their white populations was absorbed by the suburbs. Between 1950 and 1960 their central cities lost nearly one and a half million white residents and gained more than two million Negroes.⁹ Moreover, these data understate the differences in the rate of suburbanization of whites and Negroes.

7. U.S. Bureau of Census, *1960 Census of Population, Vol. I, Characteristics of the Population, Part I, U.S. Summary* (Washington, D.C.: U.S. Government Printing Office).

8. The central cities of twenty-four of the forty largest metropolitan areas lost manufacturing employment in the 1947-58 period using constant 1950 boundaries. Retailing employment declined in thirty and wholesaling employment in thirteen of these central cities during the 1947-58 decade. If anything these trends appear to have accelerated during the period 1958-63. John F. Kain, "The Distribution and Movement of Jobs and Industry," paper prepared for the Task Force on Economic Growth and Opportunity of the United States Chamber of Commerce. Also available as Discussion Paper No. 8, Harvard Program on Regional and Urban Economics, November, 1966.

9. U.S. Commission on Civil Rights, *Racial Isolation in the Public Schools*, Vol. 1 (Washington, D.C.: U.S. Government Printing Office), p. 11.

Negro ghettos are typically located in the most central part of central cities and expand only at their peripheries.¹

VII. POSTWAR DISPERSAL OF EMPLOYMENT AND POPULATION IN CHICAGO

Postwar patterns of metropolitan development in Chicago conform closely to those described for U.S. metropolitan areas. Chicago metropolitan area population increased by 1,043,000 or by 20 per cent in the 1950-60 decade; at the same time, its central city population declined by 71,000. This 71,000 decrease in central city population was the result of a 399,000 decline in the white population and a 328,000 increase in the nonwhite population. The latter is nearly ten times as large as the 34,000 increase in the nonwhite ring population. By contrast the white population of the suburban ring increased by more than one million. As a result of these changes nonwhites were 23 per cent of Chicago's central city and only 3 per cent of its ring population in 1960.²

Postwar suburbanization of employment in the Chicago metropolitan area mirrored these developments elsewhere. Between 1947 and 1963 manufacturing employment in the Chicago metropolitan area increased by roughly 2,000 jobs. During the same period the central city lost approximately 180,000 manufacturing jobs. Similarly, between 1948 and 1963 wholesaling employment in the metropolitan area increased by 27,000 while it declined by 17,000 in the city. Central city retail employment declined by nearly 40,000 while that for the metropolitan area remained about constant.³

If the equations obtained in previous sections relating the locations of nonwhite workplaces and residences are valid and hold generally over time, the implications of this dispersal for Negro employment opportunities would appear serious. Several observers have commented on the problem recently.⁴ For example, Raymond

1. In addition, significant annexations to central cities have occurred in every decade. These annexed populations invariably have been white.

2. U.S. Bureau of the Census, *Census of Population, 1960. Standard Metropolitan Areas*, PC (3) - 1D.

3. Kain, "The Distribution and Movement of Jobs and Industry," *op. cit.*

4. This problem may be less visible in cities other than Chicago, but it may be potentially as serious in metropolitan areas having large and growing ghettoized Negro populations. Suburbanization of federal offices apparently has caused problems for Negroes employed in or seeking federal jobs. *The New York Times* reported a speech by President Johnson concerning the housing problems of Negroes holding or seeking federal jobs. The article quoted informed sources as stating that "sometimes Negroes were unable to find adequate housing near federal installations and did not want to commute long distances to work. Therefore, they turn down federal jobs at those in-

Hilliard, Cook County (Chicago) Public Aid Director, was quoted in a *Chicago's American* series on the Cook County public welfare as saying, "if we never have another migrant, the Negro population here will still increase 25,000 a year. And the real problem is jobs, not people . . . There are thousands of jobs now going begging in the suburbs, but the Negro can't get there."⁵ James Ridgeway also referred to the problem in a recent article and noted the additional problems created by low levels of automobile ownership among nonwhites.

In the past, the Negro ghettos provided Chicago's industries with a pool of cheap labor. The labor still is cheap—there is no minimum wage in Illinois—but there is less and less work to be had since many industries either are automating or moving to the suburbs. The rapid transit system doesn't run near the new centers of industry, and most Negroes don't have automobiles, thus they are increasingly cut off from work. Unemployment rates among men run to 40 percent in Negro districts.⁶

Sufficient data exist for Chicago to make rough quantitative estimates of the effects of postwar populations and employment shifts on nonwhite employment. Good estimates of white and nonwhite resident populations by small areas are available for census years and some data, although much less, are available on intrametropolitan employment locations. The cumulative distribution of manufacturing employment in 1950 and 1960, arrayed by distance from the ghetto centroid, is presented in Figure I.⁷ These 1950 and 1960 employment distributions were obtained by aggregating employment data for 54 postal zones within the city of Chicago and 87 suburban communities and their surrounding unincorporated areas outside. While the precision of these estimates can be questioned,

stallations." The article adds that the problem, according to officials, "is becoming increasingly acute as more federal offices move from central cities into outlying areas." John D. Pomfret, "Johnson Asks Aid on Negro Housing," *The New York Times*, Mar. 18, 1966.

5. Quoted in a feature article by William Schaub, "County 'Miracle' Makes Workers of Relievers," *Chicago's American*, Feb. 11, 1965.

6. James Ridgeway, "Poor Chicago, Down and Out with Mayor Daley," *The New Republic*, May 15, 1965.

7. The manufacturing employment estimates were obtained by interpolation and extrapolation of employment data contained in: Northeast Illinois Planning Commission, *Metropolitan Planning Guidelines, Phase One: Background Documents* (Chicago: The Commission, 1965); Center for Urban Studies, *Mid-Chicago Economic Development Study, Volume III: Technical Supplement, Economic Development of Mid-Chicago* (Chicago: University of Chicago, 1966); Illinois State Employment Service, *Employed Workers Covered by the Illinois Unemployment Compensation Act, 1955-1964* (Chicago: Illinois State Employment Service, 1965); and U.S. Bureau of Census, *Census of Manufactures*, Vol. III, *Area Statistics*, 1954, 1958, 1963. A detailed discussion of the way in which these estimates were prepared is available on request from the author.

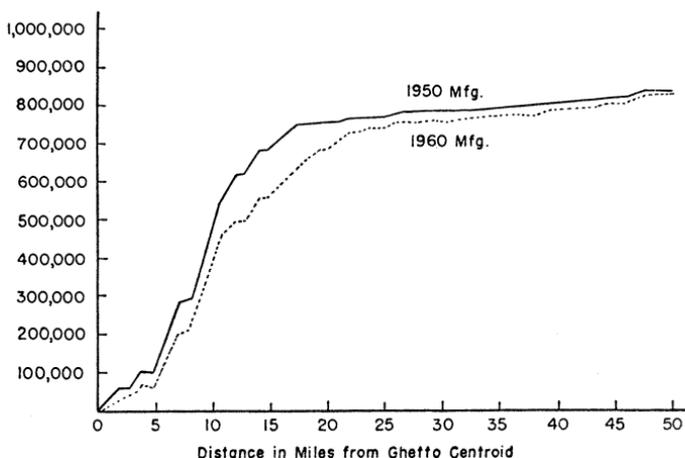
Cumulative Manufacturing
Employment, 1950 and 1960Cumulative Manufacturing Employment by Distance
from the Ghetto Centroid, 1950 and 1960.

FIGURE I

their general dimensions cannot. From Figure I it is apparent that Chicago Negroes were competing for an approximately constant number of jobs in 1950 and 1960, but that in 1960 the jobs were on the average located further from the ghetto. The effect of these job shifts on Negro manufacturing employment would appear very serious at first glance. But there was an offsetting trend. Despite rapid employment dispersal in the postwar period, a disproportionate number of jobs remain located at central parts of the city. With the expansion of the ghetto between 1950 and 1960 many whites moved further away from these centrally located jobs. Thus, total population within fifteen miles of the ghetto centroid remained approximately constant between 1950 and 1960, but its composition changed markedly. During the decade the Negro population within fifteen miles of the ghetto centroid increased by 319,000, while the white population declined by 261,000. These outward shifts of the white resident population would be expected to improve the labor market position of Negroes relative to whites at central locations.

To provide a crude indication of how these offsetting trends net out, regression equations were obtained for total manufacturing employment and were solved using 1950 and 1960 values of the residence ratio for the 141 geographic areas (54 postal zones and 87

suburban communities). Equations 30 and 31 are the estimates for all manufacturing.

$$(30) \quad W = 12.3 + 0.30R - 0.29d^c \quad R^2 = 0.65$$

(11.1) (9.3) (5.9)

$$(31) \quad W = 11.0 + 0.30R - 0.61d^m \quad R^2 = 0.64$$

(11.3) (9.0) (5.6)

These estimated manufacturing employment ratios (*W*'s) were then multiplied by total manufacturing employment in each of the 141 areas to obtain two estimates of Negro manufacturing employment, one for each distance variable in each year. Both the units of aggregation and the sources of data used in estimating 1950 and 1960 Negro manufacturing employment are different from those used in estimating equations 30 and 31; and not all of these differences can be reconciled. Still the resulting estimates are suggestive of the impact of these population and employment shifts on Negro employment opportunities.

Estimates of Negro manufacturing employment in 1950 and 1960 obtained from equations 30 and 31 are presented in Table IV.

TABLE IV
TOTAL ACTUAL AND ESTIMATED NEGRO MANUFACTURING
EMPLOYMENT IN THE CHICAGO METROPOLITAN AREA: 1950 AND 1960.

	Distance from the					
	Ghetto Centroid			Major Ghetto		
	1950	1960	50-60	1950	1960	50-60
Total Actual (thousands)	838	835	-3	838	835	-3
Estimated Negro (thousands)	93	89	-4	86	79	-7
Per cent Estimated Negro	11.1	10.6	-5	10.3	9.5	-8

As these data indicate, total manufacturing employment declined by about 3,000 between 1950 and 1960. Negro employment declined even more: an estimated 4,000 using equation 30 and an estimated 7,000 using equation 31. As a result the ratio of Negro to all manufacturing employment declined during the ten year period.

As a check, the results summarized in Table IV were compared with data from the 1950 and 1960 *Census of Population*. Census statistics of Negro manufacturing employment are 86,000 in 1950 and 84,000 in 1960, showing a decline similar to that obtained from equations 30 and 31. Given the differences in data used, the check is not exact. Moreover, close examination of the Census statistics indicates that the similarity is not quite so great as these comparisons

of Negro employment levels suggest. Census manufacturing employment statistics are for a wider geographic area, are larger in both years, and show a greater decline. Despite these difficulties, the similarity between the estimate of Negro manufacturing employment and the 1950 and 1960 Census statistics of Negro manufacturing employment provides considerable support for the validity of the models presented in this paper.

The situation of Negroes is even more adverse when the relative growth of the Negro and white labor forces is taken into account. Between 1950 and 1960, the nonwhite civilian labor force in the Chicago metropolitan area grew by 31.3 per cent. During the same period the white civilian labor force grew by only 3.4 per cent. Thus, even if Negroes had retained the same number of manufacturing jobs their position relative to whites would have deteriorated seriously. The decline in their employment indicates a worsening situation.

VIII. CONCLUSIONS

This paper has examined the relationship between housing market segregation and the distribution and level of Negro employment. The investigation was prompted by concern that racial segregation in metropolitan housing markets may further reduce the employment opportunities of Negroes who are already handicapped by employer discrimination and low levels of education. In addition, it seems possible that the extensive growth of metropolitan areas and the rapid postwar dispersal of employment, accompanied by no reduction and perhaps even an increase in housing market segregation, may have placed the Negro job seeker in an even more precarious position.

Support for the paper's hypotheses is obtained from analyses of data for the Chicago and Detroit metropolitan areas. Housing market segregation clearly affects the distribution of Negro employment. Its effect on the level of Negro employment and unemployment is a more complex question and, consequently, the answer is less certain. While the estimates presented in this paper of Negro job loss due to housing market segregation are highly tentative, they nonetheless suggest that housing market segregation may reduce the level of Negro employment and thereby contribute to the high unemployment rates of metropolitan Negroes.

For the Chicago area it is possible to obtain an empirical estimate of the impact of employment dispersal on Negro job oppor-

tunities during the 1950–60 decade. This is an even more complex issue than that discussed above, and the conclusions therefore must be even more guarded. Even so the empirical findings do suggest that postwar suburbanization of metropolitan employment may be further undermining the position of the Negro, and that the continued high levels of Negro unemployment in a full employment economy may be partially attributable to the rapid and adverse (for the Negro) shifts in the location of jobs.

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