ABSTRACT

Title of Dissertation: BLACK POPULATION SIZE AND THE STRUCTURE OF U.S. LABOR MARKET INEQUALITY

Philip N. Cohen, Doctor of Philosophy, 1999

Dissertation directed by: Professor Reeve D. Vanneman
Department of Sociology

This dissertation investigates the relationship between relative Black population size and the structure of labor market inequality by race-ethnicity, gender and class. There are five principal new developments here. First, Black-White inequality for women – as well as gender inequality – is integrated into the research. Second, by examining three major labor market outcomes – employment status, occupational attainment, and earnings – the project offers a more systematic view of the relationships under study. This has important implications for better understanding possible causal mechanisms of racial-ethnic composition. Third, existing threat and crowding hypotheses are tested with new models using measures of residential and occupational segregation. Fourth, tests of class interactions are offered, casting new light on continuing debates about the relative costs and benefits of Black-White inequality across class and gender lines. Finally, estimation of contextual effects in all models is improved with hierarchical modeling techniques.

Larger relative Black population size means more "race" in the local economy, and more "racial" inequality. This project asks the question: is more "race" good or bad for White and Black men and women at the individual level, whom does Black-White inequality help or hurt, and in what ways? I conclude that when the Black population is larger, Black-White inequality is more salient, and more important relative to class and gender inequality. A consistent set of models shows this pattern across labor market outcomes, and across gender and class groups – as well as across variation in individual-level characteristics besides racial-ethnicity. Thus Black-White inequality again appears not only pervasive but also structural to the system of social stratification in the United States.

BLACK POPULATION SIZE AND THE STRUCTURE OF U.S. LABOR MARKET INEQUALITY

by

Philip N. Cohen

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Advisory Committee:

Professor Reeve D. Vanneman, Chair
Professor Suzanne M. Bianchi
Professor William N. Evans
Professor William W. Falk
Professor Bartholomew L. Landry

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LIST OF ABBREVIATIONS

BM .... Black men

BW .... Black women

CMSA .... Consolidated Metropolitan Statistical Area

FTYR .... Full-time year-round

LFP .... Labor force participation

LMA .... Labor Market Area

MA .... Metropolitan Area

MSA .... Metropolitan Statistical Area

PB .... Proportion Black

PUMS .... Public-Use Microdata Sample

WM .... White men

WW .... White women

1. INTRODUCTION

For more than 50 years, sociologists have sought to understand the role of local racial-ethnic composition in contributing to variations in the level of Black-White inequality. This question is one of the oldest and most tested in the contextual effects literature. Research since the 1950s has consistently shown that there is greater Black-White inequality in labor markets that have higher proportions of Black residents. This relationship has been a sounding board for many schools of thought on racial-ethnic relations, from Blalock's (1967) *Theory of Minority-Group Relations* to contemporary discussions of White flight, deindustrialization and suburbanization, and racial attitudes. These studies began with Blalock's models of group outcomes across large metropolitan areas with few statistical controls. Subsequent research employed more intricate statistical methods and a wider range of variables to test hypotheses, and integrated individual-level data, non-metropolitan areas, and smaller contextual units of analysis.

This research explores the relationship between racial-ethnic composition of labor markets and their Black-White and gender structures of inequality. On the one hand, the project provides a broader empirical basis for examining the relationship: a complete, consistent set of models using the most recent Census data and improved statistical procedures. On the other hand, I offer tests of some specific explanations for proportion Black mechanisms in the labor market. I develop upon previous work in this area in several important ways.

To broaden our empirical understanding, the project offers four main features. First, by integrating three major labor market outcomes – employment status, occupational attainment, and earnings – the project offers a more systematic view of the relationships under study. This offers better means to subsequently evaluate possible causal mechanisms of racial-ethnic composition effects. Second, Black-White inequality for women – as well as gender inequality – is integrated into the research. Without including women as well as men and analyzing the differences between them, previous studies have inadequately modeled the workings of labor markets as a whole. Third, extensive new tests of class interactions are conducted to see if effects are observed across class lines. This will cast new light on continuing debates about the relative costs and benefits of Black-White inequality across economic classes. Finally, estimation of contextual effects in all models is improved with hierarchical modeling techniques. In these models, extensive controls at the individual level are applied separately from the labor market controls, allowing for more accurate measurement of effect and error at both levels.

At the same time, explanations of racial-ethnic composition effects are examined by testing a series of hypotheses. Existing competition or threat hypotheses are tested with new models using residential segregation. And existing crowding hypotheses are tested with new models using measures of occupational segregation. The results presented also reflect on queuing mechanisms previously offered in the literature, and on the long-term or institutional nature of the observed effects.

This project therefore expands our substantive understanding of the structures of racial-ethnic, gender and class inequality in metropolitan area labor markets. It also furthers the development of new methodologies for testing hypotheses regarding these relationships. Finally, it increases our understanding of the micro-macro linkages that have concerned sociology in the present period.

Tienda and Lii's (1987) work on minority concentration and income inequality among men provide a jumping off point for this project. They develop a case for a racial-ethnic/class interaction in the effect of labor market population composition. Their analysis left unanswered questions, however. In particular, we need to add more complexity to the interaction relationships they describe. We need gender as well. The potential three-way interaction of race, class, and gender is the subject of a large theoretical literature and some empirical research, which needs elaboration. Tienda and Lii's results suggest that one aspect of racial-ethnic inequality – the component that varies with minority-group size – benefits upper strata more than lower strata of whites. That is, a racial-ethnic/class interaction. This is itself important not only because it bears on questions of analysis of labor markets, but also because it has repercussions for the study (and practice) of social movements, and for even larger theoretical questions regarding hegemony and false consciousness. When White workers – or White women – contribute to racial-ethnic inequality, are they acting in their own interests, or on behalf of more privileged Whites?

The literature in this area is full of debates about who benefits from which sorts of inequality and oppression. On one extreme it may appear that everyone is oppressed except rich white men. At the same time, it has been argued that everyone is a member of at least one major dominant group except poor non-White women. This debate has shown a tendency to go on in the realm of theory and politics, and qualitative research, with a relative paucity of quantitative empirical research. With regard to race, for example, "whiteness" as a foundation of identity has given rise to useful qualitative studies. Frankenburg's *White Women, Race Matters* (1993) suggests that a White identity underlies the construction of gender for some women, while Roediger's *The Wages of Whiteness* (1991) argues that the historical development of the American working class was infused with racial contestation. Mills's theoretical treatise *The Racial Contract* (1997) makes the case for whiteness as a principle of not just American history but the world system itself, underlying not just gender and class, but the philosophies of democracy and justice as well. Nevertheless, the shortage of quantitative models that address specific questions of inequality and its interactions with race-ethnicity, class, and gender inhibits our understanding of the problem.

Therefore, in this project, the central problem to be addressed is how the macrosocial feature of racial-ethnic population composition is related to patterns of labor market inequality by race-ethnicity, gender, and class, across metropolitan areas of the U.S.A. Specifically, I address several questions.

- What is the nature and extent of the effects of racial-ethnic composition on labor market inequality in 1990? Improved models provide a better baseline for this question.
- By applying similar models to inequality in employment status, occupational attainment, and earnings, I offer evidence to reflect on the hypotheses that have been suggested for composition effects. By comparing effects occurring at different stages of labor market inequality, and at different levels of analysis, I help sort out these causal chains.
- I investigate how inequality related to the racial-ethnic composition of labor markets varies by gender, and its effects on gender inequality. The need for asking these gender questions in labor market inequality research is increasing with women's representation in the labor force.
- Does the inequality related to racial-ethnic composition of labor markets benefit Whites at all class levels, or only those with greater education or occupational

status? Do Black workers from the middle class suffer the consequences more or less than those in the working class? These questions have implications for the effects of racial-ethnic inequality of all kinds.

- By introducing other measures of Black-White and gender inequality – Black-White residential segregation and occupational segregation of all groups from White men – I offer evidence about competing hypotheses for racial-ethnic composition effects.
- In the models advanced to address these questions, I contribute to the methodological development of tools to better investigate macro-micro relationships. The approach here uses hierarchical linear and logistic models, with (and without) more complete controls at both individual and contextual levels than have previously been used. Part of the problem in the race-class-and-gender area is a lack of coherence in research methods, which impedes the development of "normal science" in this area. This development requires a rigorous approach to the data and methods under consideration.

2. LITERATURE REVIEW

In this chapter I will outline previous research results regarding relative Black population size and labor market inequality. A theoretical discussion of these results, with implications for the current research, follows in Chapter 3.

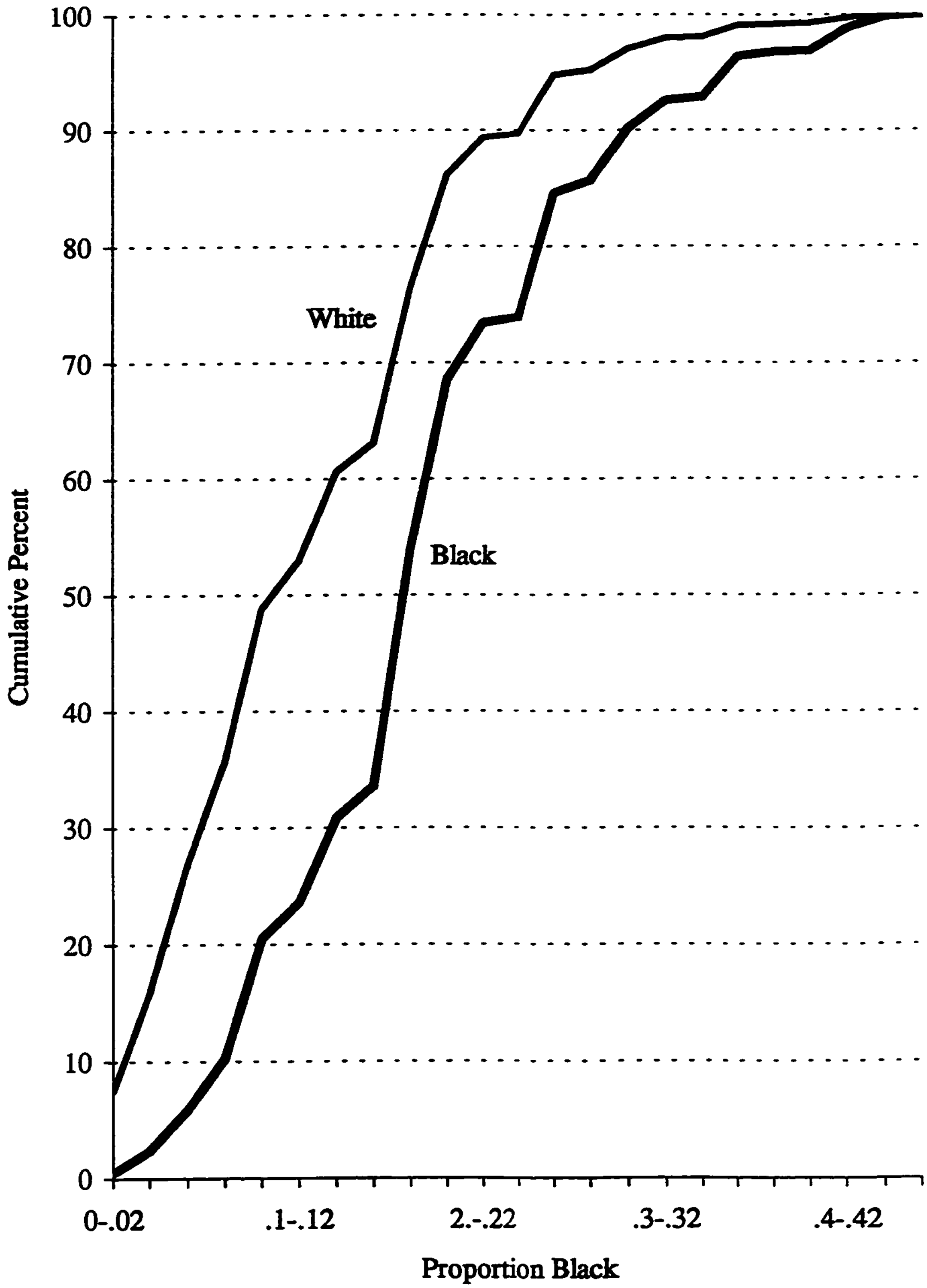
Without delving prematurely into the data or my analysis, it is important to describe the basic contours of relative Black population size for the metropolitan areas used in this study. This is partly to put into context later discussions the relevance of which depend upon the distribution at hand. In 1990, the 261 labor markets used in this study ranged from a low of .03 percent Black in Laredo, Texas, to a high of more than 45 percent in Albany, Georgia. Thirty-two of these areas have Black populations that make up less than 1 percent of the total, and six markets have Black populations greater than 40 percent. In these relatively large areas it is therefore not meaningful to examine proportion Black effects beyond .5. On more local levels, such as neighborhoods, proportion Black effects up to as high as 1.0 are relevant.

Figure 2.1 shows the distributions of proportion Black for the Black and White populations in these metro areas. The cumulative distributions show the percent of Whites or Blacks who live at or below levels of PB. This shows that 36 percent of Whites, but only 10 percent of Blacks, live in labor markets that are less than 8 percent Black. A majority (61 percent) of Whites but only 31 percent of Blacks live in areas less than 14 percent Black. Eighty-six percent of Whites and 79 percent of Blacks live in areas less than 20 percent Black. Finally, 7 percent of Blacks live in labor markets more than 30 percent Black, compared to just 2 percent of Whites. The ten largest metro areas, home to 80 million people, range from 4 percent Black in Boston to 25 percent Black in Washington-Baltimore. The salient point here is that for most people the action in this study is at Black population levels less than 25 percent, but that Black workers are much more likely to live in areas with higher proportions of Black residents. These basic characteristics of the distribution set the stage for examination of relative population size issues.

2.1. Employment status

Black population concentration studies have only rarely investigated unemployment, underemployment, or joblessness (e.g., D'Amico & Maxwell 1995; Farley 1987; McCreary, England & Farkas 1989; Tigges & Tootle 1993). That may be because Blalock (1956), in his study of 1950 metropolitan areas, found no consistent effects of racial concentration on unemployment rates, but did find income effects. However, studies of labor market inequality in general have often failed to consider joblessness. "The current preoccupation of labor market analysts with trends in wages," write Hsueh and Tienda, "ignores large disparities in joblessness among minority men in their prime working ages" (1995:41). Studies of earnings (or occupational) differentials describe one source of labor market discrimination. Measuring residual earnings differences after accounting for personal characteristics is a useful way to tap into discrimination (Cancio, Evans & Maume 1996). But these studies will not identify the unequal processes that determine not only the personal characteristics (such as education) that can be controlled for (Roscigno 1995), but also the determinants of differential employment rates (Levy 1980).

Figure 2.1. Cumulative Frequency Distributions:
Metro-area Proportion Black for White and Black Populations



D'Amico and Maxwell (1995) model Black-White male inequality in employment status across 1980 county groups. Positing an analytical opposition between "space" and "race" explanations, they interpret the existence of Black-White inequality across almost all county groups to mean that "race" dominates over "space" in the explanation of inequality. They also find that proportion Black is positively associated with inequality in unemployment, employment, and hours worked between Black and White men. Further, in their models Black men face greater inequality in employment status in county-groups where they have higher wage disadvantages. Farley (1987) also found that PB was associated with higher Black male unemployment in 1980 data for MSAs.

Tigges and Tootle (1993), in an aggregate-level study of 1980 labor market areas, predicted increases in Black-White inequality in two measures of underemployment as relative Black population increased. Inequality in unemployment rates declined until 15 percent Black, then increased rapidly in a *J*-shaped curve. They also added a control for occupational segregation between Black and White men, computed as an index of dissimilarity across seven broad occupation groups. This segregation was associated with increased inequality in underemployment measured by low wages, but decreased inequality in unemployment rates. Black and White men both had lower unemployment rates in areas with higher occupational segregation by this measure, although the declines were bigger for Black men. The authors could not explain this result, except to speculate that Black men were more likely to drop out of the labor force in such areas, resulting in lower unemployment.

McCreary, England and Farkas (1989) are interested in potential nonlinear effects, and the possibility that proportion Black offers advantages to Black workers at higher concentrations. This could be through a "customer and coworker" mechanism by which patrons and workers prefer interaction with similar people, or through an ethnic enclave process in which Black population size contributes to the success of Black-owned businesses, who have a greater incentive to hire and promote Black workers. They limit their study to central-city men ages 17-20 who are not in school, and append contextual variables to individual records for analysis. They find that increases in Black proportions up to .5 reduce the odds Black male youth employment, but the effect is in fact reversed as levels increase into Black majorities.

Although most studies of labor market inequality still focus on the attainment of those who are working, Wilson's (1987) emphasis on employment-population ratios and Jencks's (1991) analysis of joblessness have led to increased attention to joblessness and underemployment. Non-participators and the chronically jobless have represented a growing portion of the total jobless pool since the 1950s (Jencks 1991). These jobless workers, who no longer report looking for work, are not counted among the unemployed. Murphy and Topel (1997) report that since the late 1960s, a "secular increase in joblessness that is not reflected in unemployment figures" has meant that "the unemployment rate has become progressively less informative about the state of the labor market." Further, it is the full-year non-workers and the less-skilled who account for the rise in joblessness – both characteristics that disadvantage Black workers more than Whites. Finally, some of the same conditions that disadvantage employed Black workers contribute to long-term joblessness, including racism and restriction to demeaning jobs (Jaynes 1998). Therefore, as the unemployment rate has become less informative about the labor market in general, it has also become less informative about the state of Black-White inequality in employment status.

Trends in earnings and occupational inequality are theoretically simpler and perhaps less controversial to explore, because they are limited to current workers and thus avoid problems of "shiftlessness" and motivation. Unemployment by its official definition also increasingly excludes working-age people who have stopped looking for work for the same reasons that they were unemployed in the first place. The difference between people who want jobs and those who do not is impossible to discern from most large-sample data sources, but some in-depth investigations have shown that the line should not be drawn between those who are "unemployed" and those who are "not in the labor force," according to official definitions. For example, Tienda and Stier (1991) found that the "truly shiftless" – who are able but do not want to work – comprise a small proportion even of chronically jobless, inner city residents. In their sample of men and women, willingness to work was the norm, but discouragement was very high.

Black workers have consistently had about twice the unemployment rate of white workers, although there was an increase in the Black-White ratio from about 2.0 to about 2.5 from the mid-1970s to 1990 (Badgett 1997). The Black-White unemployment gap continued in the 1980s despite a long business-cycle upswing, and then in the 1990s the Black-White ratio for men aged 20 and over fell from 2.4 to 2.1, and for women from 2.3. to 2.2, using October seasonally adjusted rates (Bureau of Labor Statistics 1998). Thus in recent decades the unemployment ratio has fluctuated but remained in the 2-to1 range, growing worse in bad years but not yet better.

Almost twenty years ago, Levy observed that "being out of the labor force appears to be an increasingly permanent status for some black males" (1980:521). In this measure, Black-White inequality has increased since that time. Labor force participation (LFP) fell for men and increased for women in the 1980s, but the difference between Black and White trends was marked. The declines were substantially larger for Black men and the increases were considerably less for Black women, in each sub-group of those aged 25-54, from 1980 to 1990. For example, White women aged 25-34 increased their LFP by 10.7 percent during the 1980s, while Black women increased theirs only 3.4 percent, bringing the two groups to near-equal levels just under 74 percent. Among men, White men aged 45-54 decreased their LFP by just 0.1 percent, while Black men's dropped 2.1 percent, increasing the gap between the two groups to more than 9 percent. By 1990, Black and White women aged 25-54 had roughly equal LFP rates, while Black men lagged behind White men from 5 to 9 percent across age sub-groups (Wetzel 1995). The most serious exclusion from the labor force may also be measured by looking at people who have not worked at all in the previous year, a growing problem for men from 1959 to 1979 (Jencks 1991).

Trends in law and litigation may have made it easier for employers to discriminate in hiring than in wages (Jencks 1991; Shulman 1987). At the same time, the concentration of joblessness and its identification with other social problems has contributed to employers' motivation to discriminate. Chicago employers' practice of selective recruitment is based in part on attempts to avoid workers from high-joblessness areas, with the predictable outcome of increasing not only unemployment but also joblessness (Wilson 1996).[1]

Declines in manufacturing during this period were particularly hard on Black employment, resulting in more dislocations and longer spells of unemployment

[1] The employer interviews reported in Wilson (1996) don't measure discrimination but offer evidence for its operation. The role of direct employer discrimination, while difficult to study, has been shown in matched-applicant experiments to operate at each step of the hiring process (Bendick, Jackson & Reinoso 1994).

(Badgett 1997; Kasarda 1995; Moore 1992). Controlling for the personal characteristics, wage demands, and employment experience of displaced workers, Moore (1992) found that Blacks still have much lower reemployment rates than Whites. Again, these effects are better reflected in joblessness as a whole, because unemployment spells for Black workers are much more likely to lead to exiting the labor force (Hsueh & Tienda 1995). Finally, there is considerable evidence linking Black-White inequality in joblessness to macro-economic conditions. Moore's controls for state unemployment rate and year showed that "black reemployment rates are strongly responsive to changing economic conditions" (1992:686). Freeman (1991) similarly found that a strong local economy at the metropolitan-area level is important for increases in the employment as well as earnings of young Black men.

Joblessness and underemployment is an important outcome to study with regard to this broad set of issues, because it includes the persistently unemployed as well as the chronically thwarted, and thus taps into a more complete set of collective behaviors and structural factors in the labor market. Joblessness also has important labor market outcomes of its own, contributing significantly to subsequent earnings differences, which cannot be discerned in cross-sectional studies of current workers (Hsueh & Tienda 1995; D'Amico & Maxwell 1995).

2.2. Occupations

Fossett and Seibert's (1997) is the most in-depth recent study of PB effects on occupational inequality. They study Southern non-metropolitan labor markets with data from 1940 to 1990 Censuses, and find that proportion Black consistently contributed to increased occupational inequality, even when it increased occupational attainment for Black workers. The effect of PB seemed to diminish in 1970 and 1980, rebounding slightly in 1990. The authors speculate that, if PB-induced threat to Whites remained constant, the declining PB effect on inequality could have reflected Whites' declining ability to impose their will upon labor markets – or increasing political power of Black populations – after the Civil Rights Movement.

In metropolitan area studies, Beggs, Villemez and Arnold (1997) most recently find that PB was associated with higher occupational inequality for both men and women. Local support for equality of opportunity reduces Black-White occupational inequality, but adding this variable does not substantially reduce the effect of Black population concentration, which it would be expected to do if local attitudes were the mechanism by which PB operates on inequality. Burr, Galle, and Fossett (1991) found that PB effects on occupational inequality increased in Southern MAs from 1940-1980 (even after overall inequality decreased in the 1970s). Growing populations and high levels of White male employment were also associated with higher levels of occupational inequality, as local economic well-being apparently brought greater benefits to White men than Black men. This contradicted the hypothesis that a healthy local economy meant more to go around, and a subsequent narrowing of the Black-White gap. Similarly, Frisbie and Neidert (1977) found that PB reduced Black occupational status (and increased Hispanic status) in 40 Southwestern MAs in 1970.

Semyonov, Hoyt and Scott (1984) present a study of the 124 largest SMSAs in 1970. They find that PB is associated with reduced relative odds of Black men occupying professional and managerial positions compared to White men. PB is also associated with increased relative odds for Black men of holding lower level white collar jobs, and increased relative odds of holding lower level blue collar jobs. They conclude that competition theory applies at the highest and lowest levels, as Whites most protect high level jobs and force Black workers into the lowest jobs as PB increases. But they see some evidence of queuing effects enabling Black men to move into lower level white collar occupations at higher levels of PB.

One note of caution with regard to occupational attainment may be in order. Semyonov, Hoyt and Scott (1984) use only five occupational levels. Burr, Galle, and Fossett (1991) compute a difference index using nine categories. Even my use of the full 3-digit occupation codes from the Census masks more finely-grained inequalities at the job level. Although on average one would expect positions in higher-paid occupations would pay more than positions in lower-paid occupations, it is not necessarily the case that the bottom of higher-paid occupations is a better place to be than the top of lower-paid occupations. That will depend on the range of wages across jobs within the occupations and the opportunities for advancement within occupations, among other factors.

2.3. Earnings

Earnings inequality has much more frequently been the subject of PB studies. Blalock (1956) used 1950 data from 88 non-southern MAs to look at several measures of inequality, primarily differences in median incomes. Although he found no or only slight correlation between 1940-1950 non-White population increase and Black-White income differentials, there was a significant association between proportion non-White and income differentials. After he added 48 Southern MAs this relationship was stronger, and held up better under the introduction of control variables such as percent working in manufacturing and MA size. Frisbie and Neidert (1977) subsequently found that PB increased earnings inequality net of other factors, in 1970 aggregate measures from 40 MAs in the Southwest. Fossett (1988) combined 1970 aggregate and individual data by calculating mean earnings for male MA-race-age-education groups, and found that PB increased racial inequality.

Tienda and Lii (1987) bring these studies up to 1980, conducting an analysis of individual-level data with labor market characteristics appended to the individual records of employed men. They find that PB is associated with lower Black men's earnings and higher White men's earnings in 1980 labor market areas. They also conclude that this benefit accrues primarily to White men with more education. Grant and Parcel (1990) subsequently added a gender breakdown in an investigation of the 100 largest MSAs. In that study PB has much greater effects on earnings inequality for women than for men. In another individual-level study with 1980 data, Cassirer (1996) uses the 1% PUMS Census data for 267 MAs, and finds that PB increases earnings inequality for men in the North but not the South. PB also decreases Black men's returns to education in the South. For women, PB leads to higher earnings for both Black and White women (potential problems with this study are noted below).

Prior to my own study (initial results appear in Cohen 1998b), two studies of which I am aware have examined PB effects in 1990 labor markets. In LMAs, Beggs, Villemez and Arnold (1997) find that PB increases Black-White wage inequality for men and women, but much less for women, with the effect dropping below significance in most women's models. This study includes a test of PB effects from contiguous areas, which also has significant effects. However, without controls for region, it is possible the contiguous areas served as proxies for regional variation (especially South versus non-South).

Jacobs and Blair-Loy (1996) calculate earnings models for 50 occupations across 100 metropolitan areas, testing effects of the local race and gender composition of each occupation rather than the whole labor market. For White men and women, they find that female composition depresses earnings, while Black composition increases earnings or had no effect. In contrast, the female composition as well as the Black composition of local occupations has less effect on Black earnings for men and women. They conclude that commonly-found PB effects do not operate by devaluing local occupations in which Black workers are disproportionately represented, but instead by affecting prior selection into occupations or employment.

3. THEORY

3.1. Paradigmatic questions

Ritzer (1992, 665) writes of the social-facts paradigm: "Social factists focus on what Durkheim terms social facts, or large-scale social structures and institutions. Those who subscribe to the social-facts paradigm focus not only on these phenomena but on their effect on individual thought and action." At the most general level, this project fits within the social facts paradigm. The empirical side is modeled effects of contextual labor market characteristics on labor market outcomes for individuals and relations between groups (racial-ethnic, gender and class inequality). At a lower level of theory, however it may also be useful to consider as paradigms more narrow research streams or agendas. From that perspective, this project contributes to two major research streams.

The first is the empirical body of research going back to (Blalock 1956, 1967) and forward to Tienda and Lii (1987), Burr et al. (1991), and Beggs, Villemez and Arnold (1997) into the association between the proportion of racial-ethnic minorities in local populations and racial-ethnic labor market inequality. This research has contributed to the investigation of inequality a focus on macro structures in addition to individual determinants.

In American sociology, there has been a tension between theory and empirical research on questions of racial inequality. McKee (1993) argues that most race-relations research in American sociology has remained very limited in scope. "Neither the effort to make the American sociology of race relations a comparative study nor to formulate an abstract theory of race relations succeeded. There has, in fact, been no significant trend to alter the American sociological emphasis on more concretely empirical work oriented almost exclusively to the American system of race relations" (1993, 351).

In fact, some research has explicitly compared labor market racial inequality between societies. Model (1997), for example, compares outcomes for Black immigrants in New York and London to test queuing hypotheses related to the presence of indigenous minorities.[2] However, some attempts to reach conclusions regarding dominant-minority group relations overall have been little more than speculation that current results might apply to other cases as well. Tienda and Lii (1987), for example, demonstrate this ambition when they abstract out to "color" to explain an inequality continuum from White to Asian or Hispanic to Black – as if by identifying "color" as the issue, the findings would be generalizable to any society with "color" variation. Whether or not the result is a generalizable theory, though, the empirical results are in themselves important. Thus it is important even to replicate some aspects of previous studies with 1990 data and new methods to see how things have changed, regardless of the implications for a universal theory of dominant-minority relations.

Cognizant of the criticism of under-theorized work, I also draw on the "race, class, and gender" school of research and theory – sometimes called "intersection theory," to extend beyond the empirical results. These two names reveal the theoretical strength and weakness of this work, which has explicitly examined the interaction of these "strands" of inequality or oppression. But the potential paradigm is named after its subject matter rather than its conclusions or theoretical tools. Much of this work – evolving from a discredited class-reductionist Marxism on the one hand and White-dominated feminist theory and social movements (Cohen 1996) on the other hand – has

[2] A larger body of cross-national comparative research does exist, but it is not reviewed here.

been more successful at revealing a set of theoretical problems than it has been at addressing them. In that regard the work is pre-paradigmatic – at the stage of poking holes in current theory and research. Before the rise of intersection theory researchers did deal with these intersections, they just did so with hidden and/or faulty assumptions (much the same way that "class" was the subject of work outside of Marxism, but Marxists brought their own interpretations to that subject.)

By bringing gender in theoretically and empirically, I unite some positive elements of both the empirical inequality tradition and the developing intersections school in a way that advances both. The intersections work is much more concerned with questions of identity formation and social construction than is the macro-micro racial inequality research. The weakness of each is the strength of the other, however. While the quantitative inequality studies are left to speculate about social meanings and cultural/ideological processes (such as discrimination, often unsatisfactorily defined by default as a statistical residual), intersections work builds theory off of generalizations that are not always clearly substantiated or tested empirically. Researchers in both areas have an eye toward social movements or policy implications in their work, and their failure to learn from each other hampers the usefulness of their work in the realm of application.

3.2. Explaining proportion Black effects

D'Amico and Maxwell (1995) raise the issue of "place" versus "race" in explaining Black-White inequalities. However, these explanations should not be seen as mutually exclusive. Because inequality in employment status persists in areas with greater and lesser spatial mismatches, D'Amico and Maxwell (1995) conclude that "policy makers cannot close employment gaps between minorities and whites by simply relying on policies that eliminate spatial mismatches between minorities and employment opportunities" (982).[3] But race can and does operate in *all* places of the United States – and by examining the variation across places we can better understand how it works on inequality in general.

D'Amico and Maxwell, as well as many others, do find significant variation in Black-White inequality across labor markets, which is partly a function of relative Black population size. It is clear that there is enough variation in Black-White inequality across labor markets to rightfully draw attention – without leading to a determination of whether race or space, which are thoroughly intertwined, is more important. With a structural view of Black-White inequality, this study is not only concerned with what aspects of labor markets *other than* race are behind Black-White differences. Rather, both the pattern of Black-White inequality itself, and the influence of other variables in accounting for that pattern, are of intrinsic interest.

3.2.1. Competition and threat

Structural perspectives consider economic, political, and social characteristics of labor markets as determinants of Black-White labor market inequality (Tomaskovic-Devey & Roscigno 1996). If individual characteristics such as education or other human capital variables contribute as well, these are often understood as functions of social inequality (Fossett 1988; Roscigno 1995). Much of this research has therefore focused on local labor markets, using a range of data and methods, and most studies find that labor market proportion Black (PB) is positively associated with various indicators of

[3] In terms of policy implications, it seems likely that reducing spatial mismatches – by no means a "simple" task – would reduce but not eliminate Black-White inequality in joblessness.

Black-White inequality.

Most analysts of relative Black population size effects attribute increased inequality to more hostile or defensive attitudes on the part of Whites – the "competition" or "threat" hypothesis (Burr, Galle & Fossett 1991; Beggs, Villemez & Arnold 1997). Under this hypothesis, Whites are believed to react more negatively toward minority groups when their own majority status is threatened by larger non-White groups.[4] This reasoning draws from Blalock (1967). He theorized that Whites' perceptions of threat could be either economic or political; if there were diminishing PB effects at higher levels, the threat was more likely economic, whereas political effects would more likely accelerate as PB increased. Taylor (1998) has found that effects on White attitudes diminish or even reverse at high levels of PB, consistent with Blalock's economic threat perspective.

Researchers investigating the threat hypothesis as a psychological or cultural mechanism by which PB affects labor market inequality have indirect evidence to support their view. In attitude studies, most recently Taylor (1998) has found that local PB affects white racial attitudes negatively. Quillian (1996) also demonstrated a relationship between PB and anti-Black attitudes across regions and time. Fossett and Kiecolt (1989), who argue that "Black concentration is an objective measure of the degree to which blacks as a group pose an implicit threat to white status" (833), find that PB diminishes White support for integration on survey questions. However, PB effects on these attitudes persist even when they control for Whites' expressed sense of threat, which suggests that perceived threat alone is not the PB mechanism.

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[4] For a recent thorough review, see Fossett and Seibert (1997).

There is also evidence that higher PB is associated with some anti-Black collective action on the part of Whites, including opposition to busing (Olzak, Shanahan, & West 1994), race riots (Olzak, Shanahan & McEneaney 1996), more lynching (Tolnay & Beck 1995; Tolnay & Deane 1996) and more executions (Tolnay, Beck & Massey 1992). Whites who live in predominantly Black or mixed Census neighborhoods are much more likely to leave than Whites who live in predominantly White areas (South & Crowder 1998),[5] and incidents of hate crime are elevated when non-White groups are moving into new areas (Green, Wong and Strolovitch 1996). Racial composition may also have indirect effects on White behavior. Liska, Logan, and Bellair (1998), for example, find that for "lily-white" suburbs, higher robbery rates have no effect on the White population size, but in racially mixed suburbs higher robbery rates provoke White flight. None of these are direct evidence of labor market effects, but suggest a basis for more discriminatory actions on the part of Whites in the presence of a larger Black population.

Some patterns of attitudes might interact with PB in ways that are not yet identified. For example, Kluegel (1990) argues that Whites use a lens of individualism to explain the inequality they see, including Black-White inequality. In the presence of larger Black populations – and greater Black subordination – it seems plausible that this individualism will translate more readily into racial generalization. Kirschenman and Neckerman (1991) have shown that employers use ostensibly non-racial reasons, such as bias against neighborhoods or people with particular family structures for *de facto*

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[5] However, the authors find that greater *metro-area level* Black population proportions are not associated with increased White mobility to White tracts, perhaps because there are fewer predominantly White tracts to move to.

racially selective hiring. This institutionalized practice seems more likely to emerge in high PB labor markets. Bridges and Steen (1998) find that the race of young offenders affects juvenile criminal sentencing recommendations, partly because officers employ "differential attributions about the causes of crime" (554), a largely subjective decision with serious implications for juvenile sentencing. If higher PB affects White racial attitudes, and such attitudes affect juvenile criminal case outcomes, it is possible these forces vary across metropolitan areas as a function of PB, in turn affecting labor market outcomes (as juvenile criminal outcomes certainly can). Other examples from the law enforcement and justice system can easily be imagined. Beyond attitudes, there is also evidence that health outcomes are affected by racial-ethnic population composition net of other factors. Sucoff and Upchurch (1998:581) find that "racial composition appears to be the key neighborhood variable predicting high rate of premarital first births in poor neighborhoods." In the long run, such influences could also translate into differential labor market outcomes.

This speculation is made necessary by the inability of existing studies of PB-effects on labor market outcomes to explain the mechanisms at work, mostly because the data needed are not available. Identifying discrimination at the employer level, for example, requires data on skills, training, and tenure as well as more commonly available demographic variables (Cancio, Evans & Maume 1996). Similarly, showing racial mobilization in the wider community requires evidence of collective action that cannot be assumed from cross-sectional earnings data; and studies of White racial attitudes (e.g., Fossett & Kiecolt 1989; Quillian 1996; Taylor 1998) are generally not linked to labor market outcomes. Beggs, Villemez and Arnold (1997) do find that their measure of local support for equality of opportunity reduces Black-White occupational inequality, but adding this variable to their models does not substantially reduce the effect of Black population concentration, which it would be expected to do if local attitudes were the mechanism by which PB operates on inequality. So causal claims in this area should be considered cautiously. Findings of an association between Black concentration and increased inequality do not necessarily support the visibility-discrimination hypothesis. Historical effects – which I will discuss here only by inference – are even more difficult to ferret out.

Viewing the distribution of racial inequality as a function of varying attitudes on the part of Whites is consistent with seeing contemporary racial inequality as primarily the result of negative attitudes. Although there is evidence of PB's attitudinal effects on Whites, it is important to remember that Black-White labor market inequality is rooted in the structure of U.S. society, and that variation in its depth and form is the outcome of long historical development in regions and local areas. Bonilla-Silva (1997:465) argues against the view of "racism as a purely psychological phenomenon," and instead uses the term only to describe the ideology of a "racialized social system." Despite the connection between PB and more anti-Black attitudes in local areas, research to date has not determined that attitudes are the crucial intervening factor in PB effects on labor market inequality.

Bonilla-Silva (1997:470) points out that racial group interests are "not subjective and individual but collective and shaped by the field of real practical alternatives, which is itself rooted in the power struggles between the races." The "racial structure of society" is therefore the aggregate of the "social relations and practices based on racial distinctions [that] develop at all societal levels" (474). In my view, variation in Black-White inequality across U.S. labor markets should therefore be seen as the broader outcome of collective power struggles rather than as the more simple result of greater attitudinal hostility on the part of Whites. Where Black or other minority groups are a greater proportion of the population, racial group interests play a more salient role compared to other conflicts, principally class and gender.

Because racism is not "a universal and uniformly orchestrated phenomenon" (475), Bonilla-Silva suggests the need for comparative work on the racial structure of different societies; but I believe looking at variation in the racial social structure across U.S. labor markets is also important to understanding these dynamics. To Park (1952:13), "the city is ... a state of mind, a body of customs and traditions, and of the organized attitudes and sentiments that inhere in these customs and are transmitted with this tradition." The dynamics of American cities, in their historical evolution as well as their contemporary articulation, develop in the context of Black-White and other inequalities.

Although the phenomenon under study has persisted over time (Burr, Galle & Fossett 1991; Fossett & Seibert 1997), recent patterns of investment and development, combined with residential segregation, may also play a role in contemporary PB effects. Industrial restructuring has disproportionately hurt Black communities (Logan & Molotch 1987; Squires 1992; Wilson 1987). Corporate and local businesses have made relocation decisions in ways that disadvantage Blacks (Squires 1984; Squires, Velez & Taeuber 1991), and the shrinking of local tax bases in traditionally Black areas has hurt school districts that serve predominantly Black populations (Roscigno 1995). Within metropolitan areas, these trends could have the effect of increasing the inequality between Black and White areas. Continued high levels of residential segregation (Farley & Frey 1994), the geographic concentration of poor Blacks within metropolitan areas

(Massey, Gross & Shibuya 1994), the suburbanization of capital (Kasarda 1995; Squires, Velez & Taeuber 1991), and its flight from metropolitan areas with more Blacks (Squires 1992), all contribute to difficulties in finding and keeping good jobs – a problem worsened by discrimination against job applicants known to live in poor Black neighborhoods within metropolitan areas (Wilson 1996). Larger Black populations could thus increase the distance to, and difficulty in finding and keeping, good jobs for Black workers, putting downward pressure on their wages or occupational status and increasing joblessness. Newer trends, such as the development of edge cities and fortified enclaves by the wealthy (Marcuse 1997), might also play a role. These developments appear to be driven in part by White fears of non-White populations (Booth 1998), and they might increase social and geographic distances within metropolitan areas, contributing to Black-White inequality in higher-PB areas.

Fossett and Kiecolt (1989) control for perceived threat to see if PB has effects on racial attitudes net of the threat effect. Similarly, it would be appealing to control for racism at the local level in models of labor market outcomes. Attitude measures are the most widely used variables for this purpose (e.g., Taylor 1998), but they are not reliably available for all metropolitan areas, and they are always suspect because they rely on answers to interviewer questions rather than social practices. On the other hand, some objective measures do exist, such as the number and type of complaints of discrimination filed with the Equal Employment Opportunity Commission. But this measure is also problematic because it may just as well reflect consciousness of discrimination or mobilization of its victims as local levels of racism itself.

An alternative means of identifying local racism is to let communities vote with their feet, to use residential segregation as an indicator of local racism. There is a long history of assuming that segregation both signifies and contributes to racism. Robert Park (1952:20) believed that "the isolation of the immigrant and racial colonies of the so-called ghettoes and areas of population segregation tend to preserve and, where there is racial prejudice, to intensify the intimacies and solidarity of the local and neighborhood groups." Emerson finds that residential segregation is generally positively correlated with PB, and concludes: "as the percent black increases, higher levels of segregation are needed" by Whites to minimize social contact (1994:577). Taylor (1998) argues that segregation might mitigate the negative effects of PB on White racial attitudes, because it implies less contact between Black and White populations, but she does not find a significant interaction effect. It seems likely that a large Black presence is a salient feature of the culture at the metropolitan-area level (Fossett and Kiecolt 1989) regardless of the level of segregation, especially given mass media and commuting patterns.[6]

Although residential segregation is slow to decline, and therefore could lag positive developments in Black-White relations, it probably is also true that the negative consequences of racism on local labor markets are slow to change as well. Therefore, residential segregation may serve as an imperfect indicator of local racism.

3.2.2. Crowding

A crowding-effect hypothesis compliments the threat or competition theory, positing that because of occupational segregation, the relatively greater supply of workers considered suitable for typed occupations will result in lower wages in those

[6] There is some evidence, not consistent with observed effects on inequality, that contact improves Black-White interpersonal relationships (Ellison & Powers 1994).

occupations. Once one discounts the process of achieving occupational segregation, this becomes a matter of supply and demand, regardless of the groups involved. An oversupply of Black women nurses' aides means they may get paid less, even if there are vacancies elsewhere in the hospital – if these women are not considered eligible or qualified for other positions. Cotter et al. (1997) show that higher local occupational sex segregation is associated with lower wages for women even outside of segregated occupations.

From previous research, then, one expects that the more a given group is occupationally segregated from White men, the lower their wages are likely to be. If local attitudes contribute to occupational segregation, and both influence earnings inequality (Tomaskovic-Devey 1993), it is likely that crowding and competition or threat work together. It remains to be seen whether occupational segregation can account for all or some of the observed PB effect.

3.2.3. Queuing

Queuing may also operate at the occupational or earnings levels. Mathematically, when the relative size of a population constrained to the bottom of any particular queue increases, the median for each group increases (Fossett & Seibert 1997). When there are only two groups and queuing is perfect, increases in the size of the subordinate group leads to equal increases in the median occupation levels for each group, with no change in the total difference. As McCreary, England and Farkas (1989:59) report, "The queuing model predicts higher absolute status for both blacks and whites where there are more blacks, but makes no predictions about relative status." This simple queue is shown in **Figure 2.2**. Note that by one measure of inequality only, the ratio of the medians, the queue here represents decreasing inequality. If there are three groups, on the other hand, increases in the relative size of the intermediate group increases inequality between the top and bottom. And so on through a complexity of scenarios, equations for which have been offered by Fossett and Seibert (1997).

We expect the primary beneficiaries of queuing effects to be the better situated members of subordinate groups, and the dominant group in general (Lieberson 1980; Olzak 1992). If there are more non-Whites than there are bad jobs for them to fill (or, not enough Whites to fill the good jobs) then employers might have to hire from the non-White pool to fill their better jobs. Note that crowding and queuing are potentially opposing effects. Both crowding (which lowers wages) and queuing (which raises wages or other outcome measures) depend on occupational segregation. To sort out these effects requires analysis of different labor market outcomes.

The simplest mechanism by which PB could affect Black-White inequality in employment status is from a hiring queue. **Table 2.1** describes five hypothetical labor markets in which there are only Black and White workers. In the first, 10% of the population is Black and 3.7% are unemployed, and the Black unemployment rate is about twice the white rate. In this scenario, 18% of the unemployed workers are Black. The next three labor markets reflect different assumptions as percent Black increases to 50%. In the second, the Black and white rates are fixed, and the total is permitted to change, assuming Black and White workers have intrinsic unemployment rates, which determine local rates – not a hiring queue. In this case, the total rate increases to 5% and the Black share of unemployment increases to 66%. In the third case, only the Black rate varies while the others remain fixed. In this case, the Black rate is only 4.0%, but their share of unemployment is still 54%. In the fourth case, only the white rate varies, falling below 1% as the Black share of unemployment hits 89%

Figure 2.2. Occupational attainment queue.

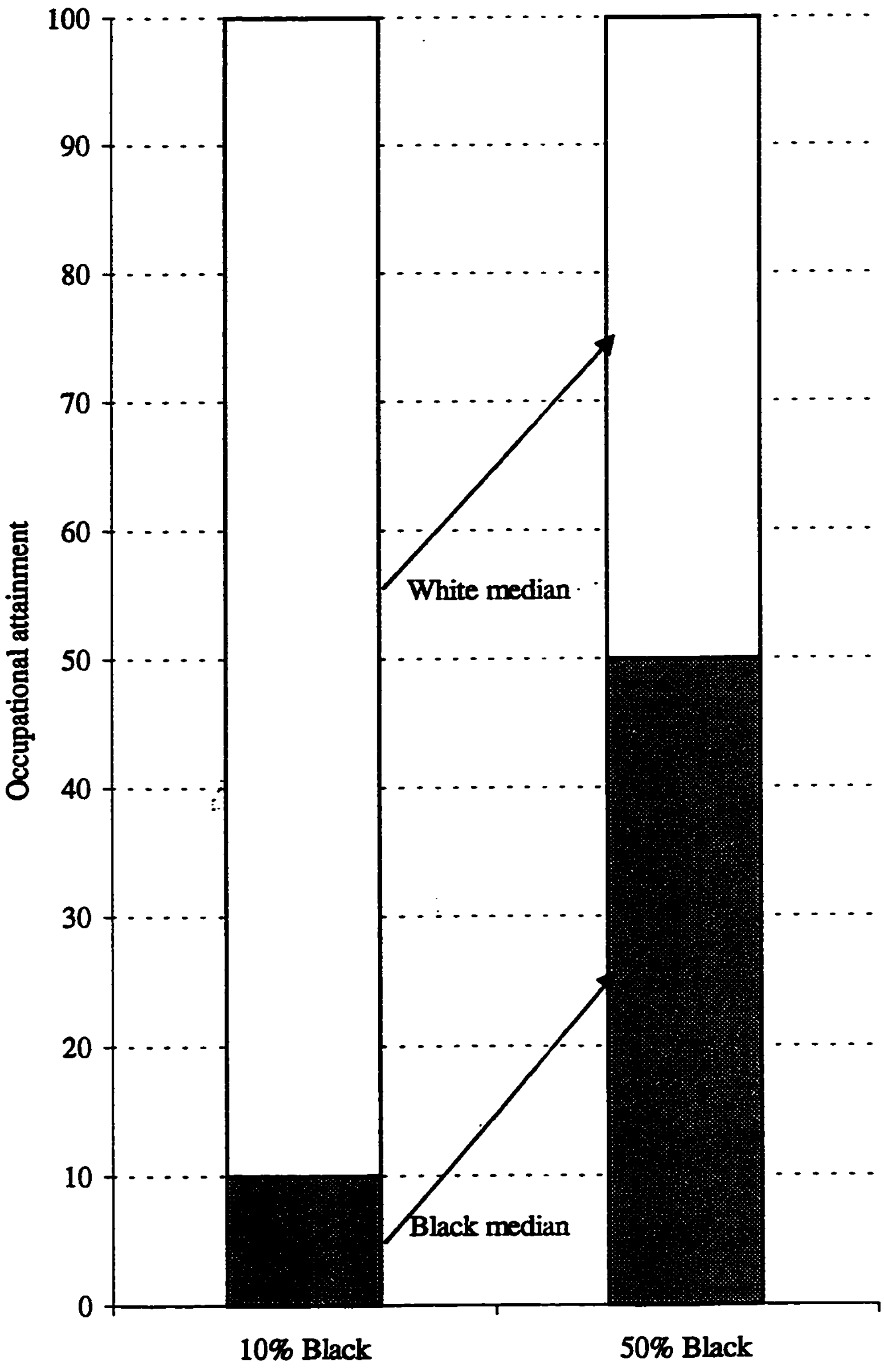


Table 2.1. Hypothetical labor markets.

Percent Black	10%	50%	50%	50%
	Baseline (1)	*Black & white fixed (2)*	*Total & white fixed (3)*	*Total & Black fixed (4)*
a. Total unemployment rate	3.7	5.0	**3.7**	**3.7**
b. Black unemployment rate	6.6	**6.6**	4.0	**6.6**
c. White unemployment rate	3.4	**3.4**	**3.4**	0.8
d. Black rate / White rate	1.9	1.9	1.2	8.3
e. Black as % of unemployment	18.0	66.0	54.0	89.0
f. Black rate / total rate	1.8	1.3	1.1	1.8
g. White rate / total rate	0.9	0.7	0.9	0.2

Note that in both markets where the total rate is fixed, the unemployment rate for either Black or White workers has fallen. These are the strict hiring queue cases.

Because of the many possibilities, identifying these trends is difficult. That is partly because definitions of inequality or discrimination are not uniform. One could focus on the Black-White disparity in rates, or the relative odds of not having a job (b/c = d), by which discrimination in the first two markets is 1.9. Under that assumption, market 4 is the most discriminatory, with a ratio of 8.3. In market 4, the odds for a given Black worker are no worse, but their odds are much worse when compared to the White odds. This is the most intuitive concept of discrimination because relative odds are compatible with the idea of fairness. For markets of equal proportion Black, Black share of unemployment measures this concept (e). That this indicator will always show higher proportion Black markets as more unequal, all else equal, makes this measure dubious. However, in terms of a hiring queue perspective, perhaps the greater share of unemployed "positions" going to Black workers would be a benefit to Whites – so market 2 would be better for Whites than market 1, even though their unemployment rate is the same. This is reflected in the share-of-unemployment to share-of-population ratios (f,g). According to this, market 2 is better for both Black and White workers than market 1, but market 4 (the most unequal in terms or rates) is much better for Whites, and no worse for Blacks than market 1. Using this measure, a 50% Black market would have to get to an unemployment ratio of 8.3 (d), as in market 4, to be as bad for Black workers as market 1.

These abstract markets do not represent pure hiring queues, however. In a computer simulation, 1 million workers enter a job queue one at a time in random order. White workers are twice as likely to be offered a job as Black workers. Any worker not offered a job re-enters the queue, and the process continues until all available jobs are filled. **Table 2.2.** shows the results of simulations running from 5% to 50% Black, with fixed unemployment rates set at 5%, 10% and 20%.[7] The crucial observation here is that unemployment rates fall for both groups in all queues as PB rises, but the proportional gap between Black and White workers increases. In the tighter labor markets the queues are steeper, and the increase in Black-White proportional inequality is greater.

Table 2.2. Simulated job queues

	Unemployment Rate					
	Five percent		Ten percent		Twenty percent	
	.05 PB	*.5 PB*	*.05 PB*	*.5 PB*	*.05 PB*	*.5 PB*
Black	20%	9%	30%	16%	44%	29%
White	4%	1%	9%	3%	19%	9%
Ratio	4.9	11.8	3.4	6.3	2.3	3.4

Note: Ratios calculated before rounding.

[7] In these simulations, White odds of being hired were set to 1.0 and Black odds to .50. Experiments with different parameters revealed essentially the same trends as long as White odds of being hired were about twice Black odds.

None of these simple scenarios apply directly, of course. The question is whether there is a queuing aspect to the relationship between inequality in employment status and proportion Black running in the background to other forces. **Table 2.3** applies this set of calculations to long-term jobless rates in four labor markets, using numbers from the 1990 Census 1% Public-Use Microdata Sample. The numbers of long-term jobless people in the sample are used to create **Figure 2.3**, which shows each group's percentage of the long-term jobless (among Blacks and Whites). Low-PB Buffalo and high-PB Memphis have similar total jobless rates and almost the same rates for Black men, but the rate for White men is considerably lower in Memphis; this is the only pairing that looks at all like the job queues above. Black women have lower rates in Memphis than in Buffalo, while White women's rates are higher.

Table 2.3. Long-term joblessness in four labor markets

	Buffalo	*Memphis*	*Hartford*	*New Orleans*
Percent Black[a]	6.8	37.8	7.0	30.3
Total percent	14.4	17.2	9.2	20.0
White men percent	5.6	3.3	3.1	7.3
Black men percent	18.6	19.1	9.0	24.0
White women percent	20.9	23.6	14.5	24.9
Black women percent	34.2	27.3	20.3	32.5
BM % of long-term jobless	3.7	18.8	3.1	15.6
BW % of long-term jobless	9.4	33.1	8.6	28.2
Black as % of long-term jobless	13.2	51.9	11.7	43.8
BM percent / WM percent	3.33	5.78	2.90	3.32
BW percent / WW percent	1.63	1.16	1.40	1.30

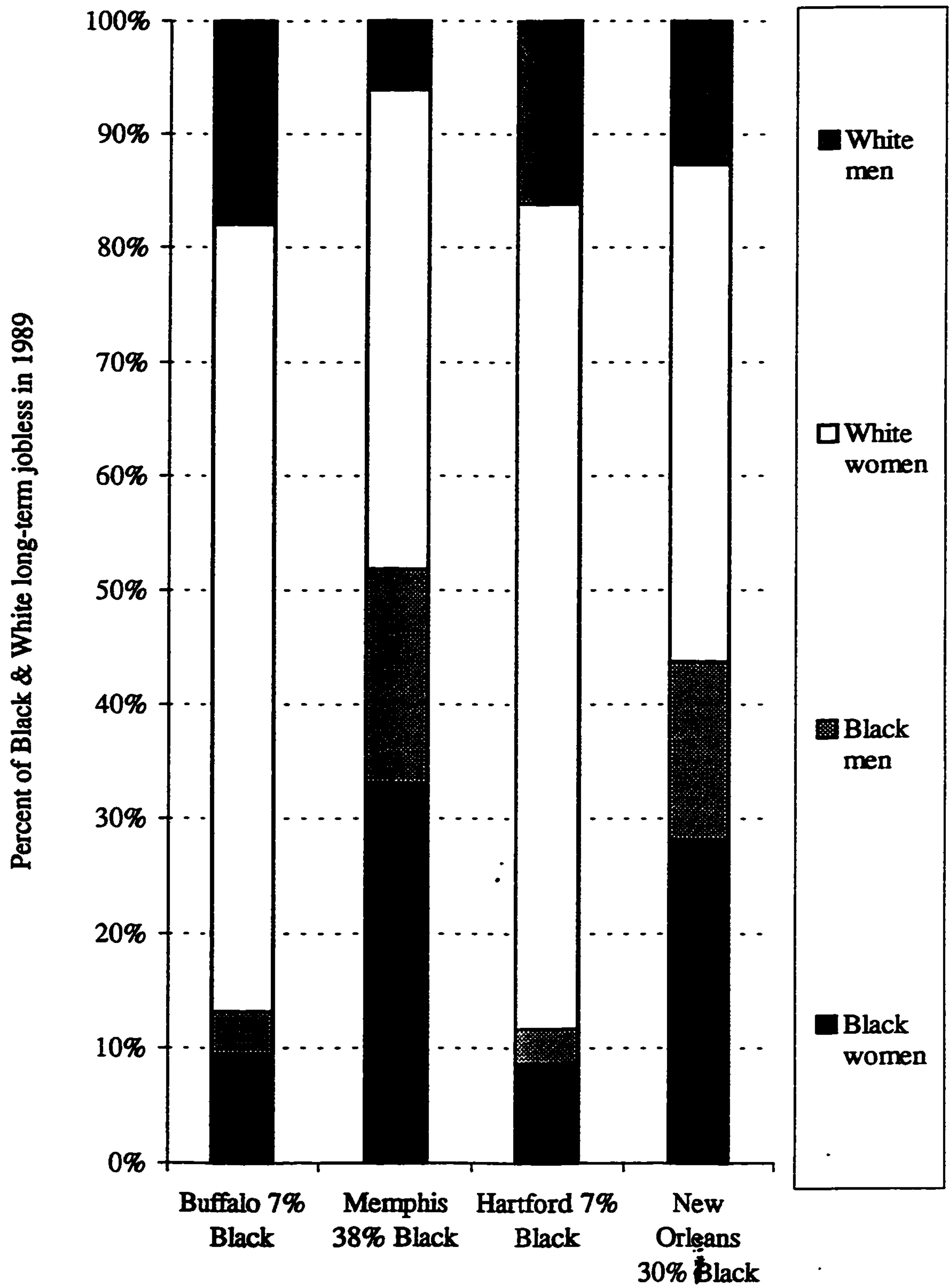
Note: long-term jobless = no weeks worked in 1989.
[a] Percent Black for this table is calculated from the Black and White sample.

In comparison, low-PB Hartford has much lower joblessness that high-PB New Orleans, and every group has higher jobless rates in New Orleans. For men, the higher PB markets have greater Black-White proportional inequality, while for women it is reversed.

An additional observation from these four labor markets is the large portion of the long-term jobless who are Black in the high-PB labor markets. The Black share of long-term joblessness far surpasses their population share. Setting aside issues of fairness or discrimination, it is possible that this observable fact has an impact on local White culture and attitudes. The resulting attitudes could themselves figure into PB effects.

Contrary to all predictions from the queuing hypothesis, in fact, studies reviewed in the previous chapter have found that PB is also associated with absolutely worse levels on employment status measures for Black workers, not just more success for White workers. **Table 2.4** shows the simple correlation between proportion Black and rates for the two variables under study here for White men and women, and Black men and women, in the 50 MAs with the largest Black samples in the 1% PUMS file. For the proportion working at all, each group except White men has a negative correlation between employment rate and PB, and only the correlation for White women is significant. For the proportion of workers employed full-time year-round the correlations are positive for Whites and negative for Blacks. Remember that in a strict hiring queue, employment rates would rise for each group, but most for Whites. If there is a hiring queue operating in the background here, it appears to only be working for Whites, and only at the level of selecting employed people into full employment.

Figure 2.3. Black-White joblessness in four metro areas.



As Farley (1987) points out, in labor markets with higher PB, Whites may expect greater returns from hiring discrimination against Blacks (i.e., a given increase in the rate of Black joblessness has twice the "benefit" for Whites if the Black population is twice as large). So to the extent that PB effects reflect zero-sum strategies on the part of racist Whites, past research suggests we might expect both decreases in Black employment and increases in White employment as PB increases.

Table 2.4. Employment status correlations with proportion Black.

	Correlation	*p*
Rate of working 1+ weeks in 1989		
White men	.13	.376
Black men	-.12	.402
White women	-.33	.020
Black women	-.11	.459
Rate of workers employed FTYR		
White men	.42	.002
Black men	-.18	.217
White women	.27	.054
Black women	-.32	.025

Source: 1% PUMS, 50 metropolitan areas with largest Black samples.

The most obvious direct set of actors in such an effect is the employers themselves. While difficult to measure, employer discrimination has been linked to overall joblessness. In a study of 47 MSAs from 1978 to 1982, Shulman (1987) found that employment-population ratios were lower for Blacks, and higher for Whites, in labor markets with more Equal Employment Opportunity Commission hiring discrimination complaints. In employer discrimination, however, "race, class, and space interact with each other" (Kirschenman & Neckerman 1991:217). That is, race does not act alone in employer perceptions. Kirschenman and Neckerman find that inner-city residence or class may have been a proxy for race. The former two factors were considered the more justifiable criteria for discrimination, as expressed by Black as well as White employers (Wilson 1996). In the consideration of PB effects, however, we must note that such a meaning scheme could not operate in a labor market with very few Black workers. "Inner city" can only logically represent "Black," and "suburb" mean "White," in areas with relatively high PB.

The hypothesis that Whites in general benefit from PB-related discrimination has received empirical support (Tigges & Tootle 1993), but in the case of employment it is not clear how increasing discrimination benefits employers more in higher PB areas. In fact, in higher PB areas, discrimination in hiring may result in refusing to hire those Black workers who receive even lower wages compared to Whites. Therefore, such employers are less likely to be acting by a direct competition or threat mechanism, suggesting a more generalized collective White response, which is necessarily harder to operationalize.

3.2.4. Gender interactions

A few studies have measured PB effects on Black-White inequality for women as well as men (Cassirer 1996; Grant & Parcel 1990; Beggs, Villemez & Arnold 1997). Beggs, Villemez and Arnold (1997) find that the effect of PB in adjacent labor markets on inequality is greater for women than for men, supporting the idea Black women might be especially hampered by difficulties traveling to jobs. Grant and Parcel (1990) find that PB has greater effects on Black-White inequality for women than men.[8] However, these studies do not examine the effects of PB on gender inequality, but rather its effects on Black-White inequality separately for men and women.

[8] Hirsch and Schumacher (1992) include women in their analysis, but do not theorize their position in the PB-related inequality. Their definition of labor markets (industry-occupation-region cells) is not comparable with the MA-level analysis used here.

Tienda and Lii (1987) believe it is important to examine within-group differentiation, and thus include education differences within racial-ethnic groups. Tomaskovic-Devey and Roscigno (1996:583) concur, arguing that "dominant ethnic or racial groups are often internally divided along class and regional lines," so that "who benefits from racial inequality cannot be answered from within a simple group competition model." However, although these authors are sensitive to the interactions of race-ethnicity and class, they are silent on the question of gender differentiation. Indeed, most major studies include only men in their analyses (Burr, Galle & Fossett 1991; D'Amico & Maxwell 1995; Fossett 1988; Tienda & Lii 1987; Semyonov, Hoyt & Scott 1984; Tigges & Tootle 1993; McCreary, England, & Farkas 1989).

This is problematic for several reasons. First, there is no basis offered from which to generalize from men to women; we cannot assume women's labor market experience parallels men's along racial-ethnic lines. Second, labor markets include a substantial if less than equal proportion of women, so any analysis of labor market dynamics that excludes women runs the risk of missing substantive effects and interactions that compromise the value of their conclusions. For example, Tienda and Lii (1987) discuss the implications of their results for an "overflow" hypothesis, or a queuing effect. But with women excluded from the analysis, perceptions of the job queue will be significantly distorted, the possibility of White women especially competing for these "overflow" jobs cannot be examined. This is important because of the historical racial-ethnic differences in women's labor force participation, and the greater choices available to White women regarding employment – perhaps they are more likely to compete for jobs when their relative chances are greater. Semyonov, Hoyt and Scott (1984), who broadly examine the queuing hypothesis, do so without considering women in labor markets.

White women might gain more from PB effects on labor markets than White men. At the same time, Black women might lose more or less than Black men. This range of possible outcomes would have different implications for Black-White as well as gender inequality. Methods that model only men, or men and women separately, cannot adequately distinguish these effects. If PB-related inequality is reflective of more ascriptive hierarchical structures, for example, White women might also suffer greater discrimination in higher-PB markets. If PB has specifically racial-ethnic effects, it might affect men and women equally, although differential effects by education or occupational level might help or hurt Black or White women in particular. Finally, gender differences in human capital characteristics vary by race-ethnicity, so PB effects might react differently to the application of individual-level control variables.

One way White women in particular might be expected to benefit from Black-White inequality resulting from PB is in a gendered queue. If women largely work in occupations that are typed as "reproductive" and sex segregated but hierarchically distributed by racial-ethnicity, then we might expect greater PB to allow White women to move up to higher positions in the racial division of paid reproductive labor (Glenn 1992). The narrower range of occupations open to women would lead to a steeper queue among women. Glenn concludes: "That the higher standard of living of one woman is made possible by, and also helps perpetuate, the other's lower standard of living is clearly evident" (1992:32). And this is largely the result of occupational distributions consistent with an "overflow" hypothesis. "White women are preferred in positions requiring physical and social contact with the public ... while racial-ethnic women are preferred in dirty back-room jobs" (1992:20).[9] White women might "overflow" into higher-visibility and higher-paying positions when there are Black women to fill those below.[10] Then, if higher PB is indeed associated with a greater level of anti-Black discrimination, that might increase the motivation of employers to fill better-paying jobs of higher visibility with White women; over a long historical period, this could be solidified into a set of local expectations about the racial-ethnic division of labor. Finally, if Black women are crowded into the lower levels of sex segregated occupations, they may suffer lower wages (and lower employment) in accord with the crowding hypothesis.[11]

More generally, Glenn argues that the racial division of reproductive labor is a central component of racial-ethnic inequality. If the institutions and traditions of local labor markets, the outcome of historical struggles and political-economic development, lead to greater Black-White inequality in labor markets with larger Black populations, then Glenn's analysis would lead to the prediction that labor-market inequality between groups of women would be greater as well. If it is shown that inequality between Black

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[9] An examination of occupational data from the 1990 Census supports this view (U.S. Bureau of the Census 1992). Of the top 20 occupations for which White women are most heavily favored (those in which they are most disproportionately represented) 17 involve extensive direct contact with the public. These include lower-level service jobs – such as secretaries (of which White women are 84 percent), receptionists (77 percent), and bank tellers (73 percent) – as well as professional occupations such as speech therapists (84 percent), teachers in pre-kindergarten and kindergarten (77 percent), and librarians (70 percent).

[10] Note that at high levels of PB this might benefit Black women as well, as the jobs to which they are constrained fill up and some "overflow" into better jobs.

[11] It is also true that Black men are more likely to have dirty and backroom jobs , but given the smaller number of occupations open to women at all, it seems likely this effect is more pronounced for Black-White differences among women.

and White women's occupational status is exacerbated, that would support her emphasis on the centrality of occupational ranking between groups of women as a mechanism for racial-ethnic inequality.

A different way PB might increase White women's earnings is by making it more economical to purchase the services required for women to make career commitments. A growing body of research documents the importance of the service-economy to married women's labor force success (e.g., Bergen 1991; Hanson & Ooms 1991; Oropesa 1993; Presser 1988). A greater presence of lower-paid Black (or other non-White) women and men to perform such services – from filling fast food orders to dry cleaning and housekeeping – might be expected to lead to lower costs for professional women as they devote more time to their careers. This might be of greater benefit to White women because they have higher education on average, or because of racial-ethnic differences in service economy consumption (Cohen 1998a). The net effect of PB could thus be to increase employment levels for White women, and increase wages and occupational attainment, which partly result for time in the paid labor force.

Finally, if the geographic dispersion of jobs in higher-PB metropolitan areas negatively affects Blacks more than Whites, this too might have differential effects by gender. Spain and Bianchi (1996:176) cite evidence that women face a greater imperative to work close to home than do men, which might increase the incentive for Black women to settle for lower-paid jobs. The spatial segregation of men's and women's jobs within metropolitan areas (Hanson & Pratt 1991; Rutherford & Wekerle 1988) raises further complications for analyzing PB effects that cannot be revealed in the present analysis, although Beggs, Villemez and Arnold (1997) offer some support for this hypothesis. In Kasarda and Ting's (1996) test of spatial mismatch effects across metropolitan areas – based on travel times – mismatch was associated with joblessness for Black and White women and men, but most strongly with women. This was presumed to be because "multiple family obligations ... fall disproportionately on women, [so] they are likely to need shorter commutes or to be less willing to accept a long commute in the first place" (1996:407), and because of women's greater reliance on mass transit, which further limits their mobility. Family obligations and transportation problems also contribute to so-called "statistical discrimination," as employers avoid workers for whom they anticipate problems getting to work (Wilson 1996).

It is also important to consider Black and White men and women together because they operate in the same labor markets, and their behaviors and obstacles affect each other. For example, in terms of employment, discrimination by Chicago employers is not limited to racialized comparisons: they expressed a clear preference for Black women over Black men as well (Wilson 1996). These ties are important to study despite the empirical difficulties they present. Lichter and Landry's (1991) analysis of labor force transitions showed that Black men and women were both less likely than Whites to make transitions into adequate employment. Black women had the lowest odds of moving into adequate employment, and the highest rates of transition into inadequate employment. In contrast, White women were most likely to drop out of the labor force. One conclusion could be that Black women have greater imperatives to hold jobs, while White women have more options outside of employment if their employment prospects dim. That interpretation is also consistent with Black women's much higher levels of unemployment.

Another study is worthy of discussion, both for its suggestive conclusions and for its faults. Szymanski (1976a) argues that racial discrimination is negatively associated with sex discrimination. Because capitalists need a subordinate group in the labor force to do the bad jobs, more racism brings benefits to White women through a queuing mechanism: with Black workers taking over the bottom rungs, others move up. This could in fact be from either increased numbers of the subordinate group, or from increased discrimination forcing the subordinate group into the bottom jobs. Szymanski tests the relationship between population percent non-White and ratios of median earnings at the state level. First he finds that percent non-White is positively correlated with gender equality (.67), a relationship which survives the introduction of several controls. Second, he finds that racial equality is negatively correlated with gender equality (-.50).

Thus, Szymanski finds an effect of non-White population size, as well as an effect of racial discrimination, apparently in support of his hypotheses. However, he defines "racial" inequality as a the ratio of Black to White *men's* median earnings, and he defines "gender" inequality as the ratio of *White* men's to women's earnings. This is the all-women-are-White, all-Blacks-are-men fallacy which has been roundly criticized by Black feminists (Hull, Scott, and Smith 1982). While Szymanski's conclusions are suggestive, then, they also conceal as much as they reveal.

<u>3.2.5. Class interactions</u>

Reich (1981) finds that Black-White income inequality is associated with a substantially greater share of income going to the richest 1 percent of Whites, and with a small decrease in the share going to middle- and lower-income Whites. This effect of

Black-White inequality is not the same as an effect of population proportion Black; PB is associated with variations in Black-White gaps, but we do not know what portion of all Black-White inequality may be attributed to PB-related phenomena. Tienda and Lii (1987) find that Black workers with the least education lost the most, and White workers with the most education gained most, from increases in the minority concentration of labor markets. They suggest that "competition and discrimination seem to be more severe among the well educated than among the less educated, who lack the power to bring about changes in their labor-market standing" (162). This last interpretation may be consistent with Tomaskovic-Devey and Roscigno (1996), who find that PB benefits to the White working class in North Carolina depend upon the form of the elite class structure. At higher levels of elite landowner concentration the White working class did not benefit from increased PB, but when the elites were less concentrated the White working class did gain.

Szymanski (1976b) finds a negative correlation between Black/White male earnings ratios and white Gini indexes of inequality at the state level, suggesting that White workers benefit from less male race discrimination in absolute terms and in relation to rich whites. Similarly, Reich (1972) uses the ratio of Black to White median family income for 1960 metro areas. He finds that White Gini indexes are lower where there is a smaller gap between Black and White family incomes, which holds up under controls for industrial composition, region, average income, and PB. Further, Reich finds that Black-White income inequality is associated with lower unionization rates and education levels for young White men (see also Roscigno & Kimble 1995). Reich (1972:318) concludes:

"Wages of white labor are lessened by racism because the fear of a cheaper and underemployed black labor supply in the area is invoked by employers when labor presents its wage demands. Racial antagonisms on the shop floor deflect attention from labor grievances related to working conditions, permitting employers to cut costs. Racial divisions among labor prevent the development of united worker organizations both within the workplace and in the labor movement as a whole. As a result, union strength and union militancy will be less the greater the extent of racism."

Reich argues against Becker's (1971) theory of "taste" in racial discrimination, which holds that employers make sacrifices in order to discriminate, which brings benefits to White workers. In contrast, Beck and Tolnay (1990) argue that both White workers and White elites may have benefited from racial violence: White workers from bettering their competitive position relative to Black workers, and elites from dividing working class groups from each other. Perlo (1975) sees clear motives for employer discrimination. Discrimination in pay provides greater profits for employers, and discrimination in hiring facilitates lower pay because it increases the reserve army of the unemployed. If the White working class exhibits racism, in this view, it is the result of discrimination, not its cause:

"That most white people have prejudices against Blacks cannot be denied. However, people are not born with prejudices. They are implanted by the laws, physical arrangements, and dominant culture of the social system under which they live. Racism was deeply implanted

> into generations of whites by the Jim Crow laws of the South. These were not written by white workers or poor farmers, but by the southern landlord class, abetted by their conquerors and saviors, the northern capitalists. ... Racism was deeply implanted by the physical separation of Blacks, by their appearance in real life only in positions of inferiority, in menial positions, in dirty jobs. ... The cultural environment has been and remains controlled overwhelmingly by the capitalist class. The physical separation and placing in inferior positions of Blacks is the work of bankers and real estate men, private and government employers. The working people of this country did not initiate these practices, nor did they influence them significantly" (1975:127-8).

To follow Perlo's reasoning, it might be that relative Black population size does increase White racism even among workers, but White workers do not have the clout to impose their will on employers in the labor market anyway.

Still, there are some ways that the racism of less powerful Whites could influence the shape of labor markets. White consumers, with their majority status and greater disposable incomes, might be able to influence employment practices by voting with their shopping dollars, choosing to patronize or do business with establishments that locate Black and White workers according to their local standards. DeSena (1994) documents White working class grassroots racism to enforce residential segregation, which she describes as an area in which relatively poor Whites can and do have influence on the racial structure of their communities. Whereas richer Whites can move to areas they favor on racial grounds, working class Whites might be compelled to stay in their neighborhoods but fight to keep them White.

One question to answer, then, is whether the advantages White workers gain from holding better positions relative to Black workers are swamped by the overall losses to working people by the weakening of working-class solidarity that racism implies. This is one of the propositions I will test in the analysis below.

3.3. Hypotheses

The literature review and theory discussion yield a number of specific hypotheses for this project. These fall into two general categories: those that generally improve the empirical basis for understanding the relation between proportion Black and labor market inequalities, and those that explore specific explanations for observed PB effects. Since in the analysis these purposes overlap, it will be helpful to state the hypotheses up front. With regard to extending previous empirical work, hypotheses include:

1. *Population proportion Black is associated with increased Black-White inequality across the labor market outcomes considered here*. This may result from positive effects on White outcomes, negative effects on Black outcomes, or both. From previous research inequality is expected to increase from positive PB effects on all White outcomes, and from negative effects on Black outcomes with regard to employment and earnings. Absolute occupation effects for Black workers are not clearly predicted.

2. *Increases in Black-White inequality associated with proportion Black occur for women as well as men*. Although it would be surprising if these effects were completely consistent across gender lines, there is no clear basis from previous

literature to believe that effects are restricted to men, and there is some previous evidence that they are not. If effects on women are stronger or weaker, gender inequality may be affected, but it is not clear from the outset where those changes would occur.

3. *Proportion Black effects on earnings will be observed across class lines.* There is contradictory evidence from studies (see section 3.2.5) which have mostly been based on the assumption that proportion Black effects result from employer discrimination. However, if the PB effect is more generalized, as I have suggested, then there is reason to believe it will be observed across classes.

With regard to explanatory hypotheses, there are several:

4. *To the extent that queuing mechanisms operate, outcomes for Black and White workers are positively affected by proportion Black.* Since queuing hypotheses generally assume "all things equal" outside of changes in relative population size, such effects may be difficult to detect in a cross-sectional study of diverse labor markets, even if they operate in the background. The strongest effects would be in employment and occupational attainment, because although employment rates and occupational structures vary across labor markets, they are not as malleable as pay rates. Every major labor market in the country has fast food, for example, even if White workers are the only ones available to serve it.

5. *Because of the long-term, institutional effects of relative Black population size, PB effects occur at least partly prior to labor market entry for individuals.* For example, since labor market outcomes for parents affect prospects for their children in terms of educational attainment, part of the proportion Black effect is expected to

operate through differential education levels. The same is expected of other "human capital" characteristics.

6. *Observed proportion Black effects will be reduced when Black-White residential segregation is controlled.* The competition or threat hypothesis suggests that proportion Black effects on the labor market result from increased White hostility. To the extent that residential segregation reflects generalized anti-Black hostility, this measure may account for a portion of PB effects. Residential segregation implies historical discrimination, and discrimination by people other than just employers, so this hypothesis has implications for my suggestion that the competition or threat hypothesis needs to be broadened beyond contemporary negative attitudes by employers and others with direct influence over labor market practices.

7. *Observed proportion Black effects will be reduced when occupational segregation is controlled.* Crowding hypotheses predict that proportion Black effects are exacerbated because Black workers are constrained to a limited number of occupations, resulting in relative oversupply of workers for those occupations when the Black population is relatively large. This is most likely to be a pronounced effect in models of employment (because when "suitable" jobs are filled, workers may be squeezed out of the workforce) and earnings (where relative over-supply increases employers' leverage to lower wages).

4. DATA AND METHODS

4.1. Data

4.1.1. Individuals

Data for individuals are from the 1990 Decennial Census Public-Use Microdata Samples (PUMS), 1% and 5%. For the analysis of employment status, I use the 1% sample, because the computing resources and time needed to run hierarchical logistic models (see below) made analysis of the full 5% sample prohibitive. In the analysis of occupational attainment and earnings, however, which are linear models, the full sample was used. Variables in the dataset identify the metropolitan area in which each adult lives and works, as well as a set of the demographic indicators commonly used to measure labor market outcomes. To study processes of inequality in labor markets, I restrict the samples used to non-Hispanic Black and White individuals aged 25-54 not in military occupations, school, or institutions in 1990.

Excluding Latino workers simplifies the analysis by reducing the complexity of controls at the individual level. (Immigrant status and language ability are typically left out of a Black-White model, for example.) However, analysis of Latinos across geographic areas is also complicated by the correlation of location and national origin. We can't analyze observed differences between Latinos in Miami and Los Angeles as the result of labor market variables, for example, without distinguishing between people of Cuban versus Mexican origin. So the analysis of Latino populations would also need to take into account national origin, further suggesting that this project should be postponed. However, it may be that the effect of Latino population size on other groups is less problematic. A similar case can be made for the analysis of diverse Asian groups.

For the present analysis there I will operate on the less faulty assumption that Latino and Asian populations of different national origins have the same effect on Black and White workers. Therefore, I will control for their proportions in the local population.

Most studies have not considered Hispanics, and have even not excluded them from White and Black racial categories (e.g., Beggs, Villemez & Arnold 1997; Cassirer 1996; McCreary, England & Parkas 1989; Tigges & Tootle 1993). However, results from Frisbie and Neidert (1977), Tienda and Lii (1987), and Grant and Parcel (1990) all demonstrate the importance of considering Hispanics separately. Tienda and Lii (1987) found that Black, Hispanic, and Asian workers all suffered earnings losses from increases in PB, which means including Hispanics among Whites confounds opposing effects.[12]

People in the ages 25-54 are of prime working age. Their employment status, earnings, or occupational attainment is not likely to be due to current retirement or school-related statuses. People who are in school may be jobless for reasons unrelated to labor market exclusion. Those in military occupations are excluded because their employment status and any discrimination they faced may not be a function of local conditions (as they are likely not to be serving in the area where they enlisted). Likewise, in the analysis of employment status, institutionalized people are excluded because their employment or joblessness, while relevant, are likely to be due to factors in the labor markets in which they were committed.

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[12] On the other hand, Grant and Parcel (1990) found that Hispanic population size reduced Black-White median income gaps for men (but not for women).

4.1.2. Labor markets

Labor markets are defined as the metropolitan area (MA), identified by the Bureau of the Census in 1993 based on 1990 population totals and commuting patterns. The analysis uses consolidated metropolitan areas where applicable (e.g., Washington-Baltimore). In the six New England states, New England County Metropolitan Areas are used instead of town- or city-based MAs, which makes them more comparable with MAs elsewhere. The MAs and MA-level data are as used by Cotter et al. (1997), who made their data available for this study. In the earnings and occupation analysis, individuals are assigned to the MAs where they work, which in some cases is not the same as where they live. For the employment status analysis, which includes people without jobs, individuals are identified based on where they live. These metropolitan areas, designed to delineate local labor markets, "provide a social context within which the complex sets of interactions between the population and the local economic environment are carried out" (Burr et al. 1992:386). Metro areas also form the basis for local mass media and personal networks (Fossett and Kiecolt 1989).

Some researchers (e.g., Beggs, Villemez & Arnold 1997; Tigges & Tootle 1993) use labor market areas (LMAs) that include non-metropolitan areas, which has the potential advantage of representing all U.S. labor markets. Neither of these studies, however, is able to include all LMAs due to small sample and Black population sizes in many areas. (The authors do not identify which LMAs are excluded, but they are presumably mostly non-metropolitan areas). Up to this point, results from LMA studies do not demonstrably differ from the large body of research using metropolitan areas; in the absence of such differences, and because both geographic units are defined by commuting patterns, these methods may be considered comparable. Others have used states as units of analysis (e.g., Szymanski 1976b), but although this too potentially includes all areas, states less closely approximate labor markets.

The hierarchical models here can include all metropolitan areas, by pooling individuals from MAs with small sample sizes for estimating fixed effects (Bryk & Raudenbush 1992). In preliminary analyses I restricted the MAs to those with large enough samples to reasonably examine each independently, which reduced the individual sample size by less than 10 percent (Cohen 1998b). Here I include all MAs. The list of metropolitan areas used and their population proportion Black are presented in Appendix **Table A4.1**.

4.2. Variables

4.2.1. Dependent variables

4.2.1.1. Employment status

I employ a nested strategy which examines two successive outcomes. First, in a sample of all potential workers, I model the probability of having worked one week or more in 1989. Here, 0 indicates a state of long-term joblessness (Jencks 1991), and 1 indicates an active member of the labor force (PUMS data do not indicate official-unemployment status for the previous year). Odland and Ellis (1998) use this variable as their indicator of labor force participation, and consider it more stable than employment at the time of the Census. With appropriate controls this is the best approximation of labor-market exclusion available in Census data. Like Odland and Ellis, I include self-employed people as employed. In the second stage, I restrict the analysis to those who worked at least one week last year, and model the probability that they worked full-time year-round (50 weeks and 35 hours per week or more). This sets the stage for the next two sets of models, for occupational attainment and earnings for full-time workers.

These employment statuses are challenging to model because people are jobless or work part-time or part-year for a variety of reasons. The basic tension is between "voluntary" (e.g., married women "choosing" to remain out of the labor force if their husbands are employed) versus "involuntary" (e.g., lack of educational credentials) determinants of employment. The goal here will be to include controls for both to the extent possible. Recognizing that techniques for modeling these outcomes for men and women are underdeveloped, I will assume that after employing the set of controls here joblessness or less-than full employment approximates an involuntary state of exclusion from the labor market. To the extent that voluntary elements are not controlled for, however, PB may also affect decisions to abstain from the labor force.

4.2.1.2. Occupational attainment and earnings

The dependent variable here is *occupational attainment* for people who usually worked 35 hours or more per week in 1989.[13] This constructed from the 5% PUMS file by calculating the natural log of the average weekly wage for full time workers by occupation, and applying the mean of that value to each worker in that occupation. Fossett and Seibert (1997) recommend an occupational scale that combines members' earnings and education. However, because I plan to use the occupation analysis to decompose the earnings effects, it seems better to use earnings only to construct the

[13] In both occupation and earnings models, people with negative earnings or negative weights are excluded from the sample.

occupational scale. This will allow us to see the extent to which PB effects involve selection into occupations or pay within occupations at a given level of average pay.

In the case of earnings, the dependent variable is the *natural log of average weekly wage*, where average weekly wage is annual earnings divided by weeks worked for people who usually worked 35 hours or more in 1989. (I will refer to this variable as wages and earnings interchangeably.)

4.2.2. Contextual variables

4.2.2.1. Variables used for all outcomes

The primary MA-level independent variable is *proportion Black*. The use of PB is consistent with including only Blacks and Whites in the models. Because the presence of other minority groups affects White gains from discrimination as well as employment queues (Fossett & Seibert 1997; Tienda & Lii 1987), I include *proportion Hispanic* and *proportion Asian* as independent variables at the MA-level. This differs from the approach of D'Amico and Maxwell (1995), who include Hispanic composition only in models of Hispanic inequality, and Black composition only when considering Black inequality. Results reported by Frey and Farley (1996) suggest that the interaction of multiple racial-ethnic groups is important to consider with regard to segregation, and this is presumably also the case with regard to earnings. Considering the argument that achieved characteristics rather than ascription are more likely to predominate in larger urban areas with more rational and competitive industries, greater bureaucracies and higher levels of education (Fossett and Kiecolt 1989), I also control for the *log of MA population size*.

The metro-area models include a set of variables to control for economic structure and conditions. Burr, Galle, and Fossett (1991) find that growing populations and high levels of White male employment were associated with higher levels of occupational inequality, as local economic well-being apparently brought greater benefits to White men than Black men. This contradicted the hypothesis that a healthy local economy meant more to go around, and a subsequent narrowing of the Black-White gap. On the other hand, others have reported a negative effect of a strong local economy on Black-White inequality in employment (Moore 1992; Freeman 1991). I therefore include *net in-migration* – the total change in population as a result of migration in the last five years – as an indicator of long-term economic growth.

To control for relative labor demand, I constructed an industrial demand for Black men's, White women's, and Black women's labor, based on the national representation of each demographic group in each industry group and the industrial composition of each MA's labor force. This differs from the occupational demand measure used by Cotter et al. (1998) to examine gender effects, but is more consistent with the approach of Beggs, Villemez and Arnold (1997). Since I add controls for occupational segregation (see below), this seems appropriate.[14]

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[14] The industrial demand for Black men, White women, and Black women was constructed by calculating the representation of each in the workforce for each of 17 industry groups (from the 1990 5% PUMS file, using person weights), and multiplying those national weights by the proportion of jobs in each industry for each metropolitan area (from the STF3C file). The industrial demand for White women's labor, for example, is calculated according to the equation:

$$WWDEM_j = \sum (IPROP_{ij} * WWREP_i)$$

where $WWDEM_j$ is the industrial demand for White women's labor in metropolitan area j, $IPROP$ is the proportion of the labor force in industry i for metropolitan area j, and $WWREP$ is the national representation of White women in industry i.

Following previous research (e.g., Blalock 1956; Burr, Galle & Fossett 1991; Cassirer 1996; Fossett 1988), I also include a control for *percent manufacturing* in the labor force to capture some of the industrial structure. The final measure of economic structure is a Herfindahl index of industrial concentration. This is the sum of the squared proportion of workers in each of 17 industrial groups; it theoretically ranges from near 0 for perfect distribution across industries to 1 when all workers are employed in the same industry. With regard to employment, in general, U.S. labor markets with more industrial diversity have since the 1930s had lower unemployment rates (Simon and Nardinelli 1992; Simon 1988). With regard to earnings, South and Xu (1990) report that workers in locally dominant industries earn more, especially Black workers in core and state sectors.

In subsequent models, I add residential segregation as a measure of local racism, as a test of the competition or threat hypothesis. If PB effects work through increased anti-Black sentiment among Whites, local residential segregation might increase Black-White inequality and reduce PB effects. For Black-White residential segregation, I use index of dissimilarity scores. Most are from Census Bureau calculations for 1990 (Harrison & Weinberg 1992). Many of these were for smaller PMSAs and MSAs, which I aggregated up to the larger CMSAs and other combined MAs in the Cotter et al. (1997) dataset I use. However, since the MAs I use are from the Census Bureau's 1993 release of metro-area definitions, some could not be matched to the Harrison and Weinberg earlier definitions of metro areas. When possible, I used dissimilarity scores obtained from Reynolds Farley (Farley & Frey 1994) for these. Finally, for 10 metro areas in the data I could not obtain scores from either source; to these I assigned values of .551, the mean for the other 251, and added an indicator variable (coded 1 for missing segregation data, and 0 otherwise). This approach is inferior to calculating consistent segregation scores on these metro areas myself, but given the slow rate of change in segregation and the similarities in the drawing of metro areas, I decided this would not seriously compromise the results.

Finally, I add measures of occupational integration as a test for crowding effects. If PB results in greater Black-White wage differentials because Black workers are consigned to a restricted number of occupations, with resulting lower wages because of relative labor over-supply, then occupational segregation should contribute to inequality, and reduce PB effects. Occupational integration also reflects on the threat hypothesis, however, because it too may result from anti-Black behavior that varies across labor markets. It differs from residential segregation in that it implies a different set of actors – employers and related institutions, and perhaps patrons as well, rather than realtors, banks and neighborhood actors.

For measures of occupational integration, I use the adjusted index of dissimilarity as described by Cotter et al. (1997). This uses the three-digit Census occupations, rather than only the broad occupational groups used by Tigges and Tootle (1993). The adjustment uses expected values to account for random fluctuations due to the small number of workers in some MA-occupation cells. Their gender segregation measure can be interpreted as "the percentage of workers of either sex who would have to change occupations in order for the two distributions not to differ by any more than would be expected by chance" (719). The measure of segregation used in that study compared men and women only. A subsequent calculation by Reeve Vanneman allowed me to use an adjusted index of similarity comparing each group to White men's distribution. This resulted in three variables, one each for White women, Black men, and Black women. They are reversed to represent occupational integration, so higher scores reflect more similarity in the occupational distributions.

In the results, I refer to "PB only" models, which have to only proportion Black (and its square, if appropriate) at the MA level; to "Basic MA-level" models, which have all the MA-level controls except residential and occupational segregation; and to "Complete MA-level" models, which have all controls including the segregation measures.

4.2.2.2. Employment status

The models for employment status differ from the basic MA model with the inclusion of two variables. First, because welfare payments in some areas are greater than the earnings workers can expect in available unskilled jobs (Kasarda & Ting 1996), I include a control for *welfare maximum*, or the maximum payment of means tested welfare available for a family of four,[15] as a possible disincentive to employment.

Second, I include a simple measure of mean *travel time to work* for full-time, year-round, non-military workers in each MA, as collected on the Census and included in the 5% PUMS file. This is intended to control for potential spatial mismatch, or the geographic separation of jobs from potential workers as a cause of Black-White differentials in employment (Rosenbaum & Popkin 1991). Kasarda and Ting use average travel times by race as a proxy for spatial mismatch. "While this is an imperfect

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[15] Because these levels are set by states, in those MAs that include people from several states this variable averages state payments, weighted by the population proportion from each state.

measure of spatial mismatch, it does indirectly tap spatial separation of workers from jobs (including patterns of urban development) and workers' reliance on typically more time-consuming public transit" (1996:401). To consider the spatial mismatch hypothesis regarding employment status, I use the overall average travel time to represent the dispersion of the labor market and the distance (in time) between workers and their jobs. Areas with greater dispersion are expected to pose more problems for workers who are most vulnerable to joblessness.

Kasarda (1995) points out that Black workers are more likely to rely on public transportation and Wilson (1996:39) found that only 28 percent of jobless workers in the Chicago survey had cars. However, Cohn and Fossett (1996), in a detailed look at access to jobs in two cities, reveal that Black workers have more geographic access to jobs, not less, even controlling for access to transportation, so the effect of this variable is not certain. Finally, because both Bianchi and Spain (1996) and Odland and Ellis (1998) offer evidence that women's obligations lead them to seek jobs with shorter commutes, it is possible this variable will have different effects across gender as well as racial-ethnicity.

4.2.2.3. Occupational attainment and earnings

The models for occupational attainment and earnings add only one variable to the basic contextual model, the *unemployment rate* in 1989. This is intended to control for short-term economic conditions, complimenting the in-migration measure of long-term conditions. It is not used in the employment status models because that would introduce a very similar variable on both sides of the equation. In their earnings models, Tienda and Lii (1987) and Cassirer (1996) use average earnings as an MA-level control for variations in costs of living. However, cost of living variation between MAs is presumably similar for Blacks and Whites. (The control for population size that I use may in fact proxy for cost of living as well.)

Summary statistics for the contextual variables are presented in **Table 4.1**. Correlations between the contextual variables are shown in Appendix **Table A4.2**.

4.2.3. Individual-level variables

4.2.3.1. Variable used for all outcomes

The hierarchical model (see below) will allow for a full metro-area level model to predict the *slopes* of individual-level independent variables. The individual-level coefficients of interest are dummy variables for Black men *(BM)*, White women *(WW)*, and Black women *(BW)*; White men are the excluded category. These coefficients, measuring the difference from White men on each dependent variable, net of any individual controls, are simultaneously modeled in the MA-level equations.

The individual-level model comprises variables that interact with each race-gender group, allowing them to have different effects on each group. They include *years of education*, *potential experience* and its square (calculated by subtracting education-plus-6 from age), and a dummy variable for individuals who report a work-limiting or -preventing *disability*.[16] Family context variables include *married* and *formerly married*[17] (never-married is the excluded category), number of *own children*

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[16] People with work-preventing disabilities are by definition not working. In the earnings and occupation models, then, the disability variable indicates work-limiting disability. In the employment models, this includes those for whom disability prevents working. Using this control makes the measures of race and gender inequality somewhat more conservative, because some proportion of self-identified disabled workers are probably discouraged workers (Levy 1980).

[17] Formerly married is coded to include separated, divorced, and widowed people.

under 18 in the household, and presence of *own children under 5*. A series of family interaction variables allow the effects of children under 18 and presence of children under 5 to vary by marital status (and each of these interacts with White men, White women, Black men and Black women).[18] Summary statistics for individual-level variables appear in **Tables 4.2 - 4.4.**

Table 4.1. Metropolitan-area Variable Summary Statistics

	White		*Black*			
Variable	Mean	Std. Dev.	Mean	Std. Dev.	*Min.*	*Max.*
Proportion Black	.121	.082	.181	.087	.0003	.455
Proportion Asian	.029	.038	.028	.032	.001	.600
Proportion Hispanic	.082	.100	.083	.095	.002	.939
Population (*ln*)	14.43	1.46	14.75	1.43	10.95	16.78
West	.202	.401	.105	.307	0	1
South	.303	.460	.467	.499	0	1
North Central	.248	.432	.217	.412	0	1
Manufacturing	.172	.056	.165	.053	.036	.463
Unemployment	.061	.013	.063	.014	.028	.143
Net inmigration	.001	.041	-.002	.038	-.154	.261
AFDC maximum	489	183	441	182	144	940
White women demand	38.2	1.16	38.3	1.07	33.3	44.6
Black men demand	4.61	.10	4.63	.09	4.08	4.99
Black women demand	5.32	.23	5.36	.23	4.46	6.37
Travel time	23.6	4.11	25.0	3.95	12.1	31.5
Herfindahl	.090	.009	.088	.008	.079	.151
Segregation	.640	.119	.673	.106	.234	.849
Segregation missing	.008	.088	.009	.096	0	1
WW occ. integration	.501	.025	.498	.025	.397	.621
BM occ. integration	.643	.050	.644	.033	.412	.720
BW occ. integration	.438	.032	.423	.029	.337	.542

Sources: Census STF3C, Cotter et. al (1997), and subsequent calculations (see text).

[18] With regard to weights, the HLM software does not permit the use of person weights in the nonlinear (employment status) models. However, weights are used in the earnings and occupation models.

Table 4.2. Individual-level summary statistics for work 1+ weeks models

	White men		*White women*	
Variable	Mean	Std. Dev.	Mean	Std. Dev.
Worked 1+ weeks	.954		.796	
Education	13.83	2.79	13.54	2.49
Potential experience	19.50	8.55	19.77	8.77
Potential exp^2	415.4	348.2	429.2	358.4
Other income (ln)	9.139	1.400	9.980	1.292
Minimum other income	.196	.397	.093	.290
Married	.710	.454	.719	.450
Was married	.119	.323	.166	.372
Own children in HH	.948	1.137	1.006	1.140
Married*Children	.885	1.132	.857	1.127
Married*Children LT5	.613	.487	.618	.486
Was married*Children	.041	.286	.125	.494
Was married*Children LT5	.096	.294	.136	.343
Never married*Children LT5	.135	.342	.092	.289
Disabled	.072	.259	.062	.242
N=	278,436		283,255	

	Black men		*Black women*	
Variable	Mean	Std. Dev.	Mean	Std. Dev.
Worked 1+ weeks	.842		.761	
Education	12.55	2.72	12.75	2.54
Potential experience	20.05	8.82	19.85	8.86
Potential exp^2	44.6	378.2	433.7	374.0
Other income (ln)	9.204	1.362	9.149	1.431
Minimum other income	.187	.390	.201	.401
Married	.505	.500	.410	.492
Was married	.192	.394	.296	.456
Own children in HH	1.035	1.284	1.366	1.390
Married*Children	.727	1.166	.588	1.095
Married*Children LT5	.428	.495	.348	.476
Was married*Children	.113	.534	.391	.974
Was married*Children LT5	.153	.360	.243	.429
Never married*Children LT5	.246	.430	.248	.432
Disabled	.114	.318	.101	.302
N=	32,882		40,486	

Source: 1% PUMS.

Table 4.3. Individual-level summary statistics for full-employment models

	White men		*White women*	
Variable	Mean	Std. Dev.	Mean	Std. Dev.
Full-Time Year-Round	.787		.550	
Education	13.93	2.70	13.78	2.39
Potential experience	19.30	8.46	19.29	8.64
Potential exp^2	406.5	340.8	408.9	343.5
Other income (ln)	2.209	1.404	2.980	1.329
Minimum other income	.200	.400	.109	.311
Married	.722	.448	.688	.463
Was married	.115	.319	.182	.386
Own children in HH	.966	1.139	.905	1.072
Married*Children	.905	1.136	.755	1.051
Married*Children LT5	.624	.484	.589	.492
Was married*Children	.040	.280	.129	.489
Was married*Children LT5	.093	.290	.148	.356
Never married*Children LT5	.128	.334	.104	.305
Disabled	.049	.216	.039	.195
N=	265,583		225,497	

	Black men		*Black women*	
Variable	Mean	Std. Dev.	Mean	Std. Dev.
Full-Time Year-Round	.666		.590	
Education	12.82	2.57	13.15	2.37
Potential experience	19.74	8.71	19.37	8.61
Potential exp^2	427.2	368.6	411.7	353.2
Other income (ln)	2.287	1.378	2.245	1.477
Minimum other income	.196	.397	.224	.417
Married	.552	.497	.433	.495
Was married	.180	.384	.294	.456
Own children in HH	1.057	1.257	1.252	1.282
Married*Children	.792	1.182	.598	1.064
Married*Children LT5	.468	.499	.367	.482
Was married*Children	.108	.511	.360	.902
Was married*Children LT5	.144	.351	.241	.428
Never married*Children LT5	.219	.413	.228	.420
Disabled	.057	.231	.049	.215
N=	27,673		30,805	

Source: 1% PUMS.

Table 4.4. Individual-level summary statistics for occupation and wage models

	White men		White women	
Variable	Mean	Std. Dev.	Mean	Std. Dev.
Weekly wage (ln)	6.414	.665	5.979	.613
Occupational attainment	6.063	.397	5.833	.451
Working class	.451	.498	.496	.500
Education	13.97	2.66	13.88	2.38
Hours worked (ln)	3.810	.175	3.775	.137
Potential experience	19.33	8.40	19.18	8.71
Potential exp^2	406.4	338.4	406.4	342.8
Married	.745	.436	.631	.483
Was married	.108	.310	.212	.409
Own children in HH	.998	1.143	.744	.986
Married*Children	.944	1.143	.583	.939
Was married*Children	.037	.267	.140	.498
Married*Children LT5	.648	.478	.538	.499
Was married*Children LT5	.088	.283	.174	.379
Never married*Children LT5	.116	.320	.125	.330
Disabled	.035	.183	.025	.155
N =	1,255,742		789,042	

	Black men		Black women	
Variable	Mean	Std. Dev.	Mean	Std. Dev.
Weekly wage (ln)	6.061	.645	5.872	.606
Occupational attainment	5.851	.406	5.697	.440
Working class	.665	.472	.634	.482
Education	12.91	2.59	13.33	2.38
Hours worked (ln)	3.756	.159	3.712	.131
Potential experience	19.83	8.75	19.51	8.53
Potential exp^2	431.2	369.4	415.5	348.4
Married	.592	.492	.435	.496
Was married	.169	.375	.303	.460
Own children in HH	1.082	1.254	1.150	1.211
Married*Children	.861	1.206	.572	1.027
Was married*Children	.093	.466	.341	.847
Married*Children LT5	.505	.500	.366	.482
Was married*Children LT5	.137	.344	.247	.431
Never married*Children LT5	.194	.395	.215	.411
Disabled	.034	.182	.026	.158
N =	114,444		117,580	

Source: 5% PUMS.

4.2.3.2. Employment status

To account for the potentially voluntary nature of joblessness, presumably especially among women, I include in the employment status models *other household income (ln)* and a dummy variable for *no other income*. These account for "exogenous income," which is a disincentive to labor force participation, and is traditionally included in models of labor supply (Killingsworth & Heckman 1986). I construct a measure of other income that is similar to those used by Levy (1980) and Tienda, Donato, and Cordero-Guzmán (1992), by subtracting own earnings from total household income. However, I use a log transformation for other income, after rounding all values below $1,000 up to $1,000 – then add a dummy variable equal to 1 when the value has been bottom-coded. This dummy variable therefore identifies people who are the only significant earners in their households.[19] These two variables are included separately for the four race-gender groups.

Controls for family composition and marital status are important here, but also potentially problematic. Although many studies have shown a negative correlation between fertility and women's labor force participation, the effects are almost certainly endogenous, the characteristics "jointly determined" (Angrist & Evans 1998:451). Nevertheless, Angrist and Evans show that *exogenous* variation in family composition – that is, the randomly-assigned condition of same-sex siblings – does affect labor force participation. Odland and Ellis (1998) present evidence that most of the variation in women's labor force participation across metro areas is accounted for by different

[19] In individual cases where own earnings were top-coded in the PUMS file ($284,000+), I also bottom-coded the other income variable.

behavior among women with similar characteristics, rather than variance in characteristics across metro areas. Because the effects of children on labor supply vary across racial-ethnic groups (Browning 1992), it is also appropriate that these are included separately for each group in my models. Models that control for the presence of children are not perfect, however. Nakamura and Nakamura (1994) report that women with children are less likely to work, but this is conditional on the amount they worked previously, which is not something I can control for in models in which the dependent variable is already last year's employment status.

There is also considerable evidence of marital sorting, which complicates the interpretation of the other household income measure (Winkler 1998). The tendency for married women to work has historically been dampened by their husbands' earnings. However, that influence has declined over the last 20 years (Leibowitz & Klerman 1995). This might reflect the increase in marital sorting by education and earning potential. When men and women with similar earning potential and labor force commitment marry each other, the causality behind the observed relationship may be reversed: people who have chosen to work might marry people who earn more. Thus, the labor force participation precedes, and partially determines, the other household income rather than the other way around.

Further, including controls for marital status, which Tienda, Donato, and Cordero-Guzmán (1992) do but D'Amico and Maxwell (1995) do not, probably introduces a conservative bias into the inequality measures, because marriage at least in part results from employment, especially among younger Black workers (Mare & Winship 1991; Testa & Krogh 1995; Wilson 1996). As noted, marriage rates are also affected by community-level influences such as sex ratios and other characteristics of the marriage market, including possibly racial-ethnic composition (Kiecolt & Fossett 1995; McLanahan & Casper 1995).

4.2.3.3. Occupational attainment and earnings

The occupation analysis uses only the variables used for all outcomes (see above). The individual model for earnings adds a control for *hours usually worked per week* (*ln*), interacted with the four race-gender groups. In the first analysis of earnings, I also do not include occupation, industry, union representation, or other "correlates of wages that are endogenous to the discrimination process," as these should not be included in earnings models in order to let the race variables reflect some of their influence (Cancio, Evans & Maume 1996:544). Subsequently, I repeat the earnings analysis controlling for occupational level, to see how much of the pay differences occur within occupation levels.

This is a not a complete discrimination model, which would include skills, training, and work experience. So the coefficients for WW, BM, and BW cannot be interpreted to measure discrimination *per se*, but they are the closest approximation possible with PUMS data. (References in the results to models "with individual-level controls," refer to those with all controls except occupational attainment.)

4.2.3.5. Class interactions

The tests for class interactions consist of two sets of models for two conceptions of class. In the first, I break White men, White women, Black men, and Black women into working class and non-working class subgroups based on occupation, creating seven dummy variables instead of three (with non-working class White men as the new reference category). I use Szymanski's (1983) definition of working class, based on relations of production in the neo-Marxist sense, instead of a more expansive definition such as Perlo's (1975), which includes everyone who works for a wage or salary, or a more restrictive one that only includes blue-collar occupations. Unlike Perlo, Szymanski takes authority into account with his definition, so that teachers, blue-collar supervisors, and police, for example, are not included as working class. In 1990 Census categories, then, this definition of working class includes: sales workers (except finance and business services and non-retail commodities); all technical, sales, and administrative support occupations (except supervisors); all service occupations (except protective service); and all non-supervisory agriculture and blue-collar workers. In the first step of the class interaction analysis, coefficients for these seven dummy variables are dependent variables at the MA level in models otherwise identical to the earnings models above.

The second test of class interactions employs a different conception of class. Tienda and Lii's (1987) analysis tested the effects of racial-ethnic composition on returns to education in the earnings model. I repeat their use of returns to education as a proxy for class interaction (although I use continuous years instead of credential-year dummy variables). In the hierarchical model, this means adding coefficients for the education-interaction terms (White-men-education, Black-men-education, etc.) as dependent variables in the metro-area equations. For each dependent variable, then, I test the effect of proportion Black on the slope for education for each group in the analysis. If PB has positive effects on the education coefficients, that means better-educated workers gain benefits that those with less education do not.

4.3. Models

4.3.1. Measurement issues in PB effects

PB effects on labor market inequality have been the subject of studies at the *aggregate* level and the *individual* level. Design problems limit the effectiveness of most previous studies, however. Aggregate-level studies cannot measure effects net of individual variations, and purely individual-level studies do not correctly estimate environmental influences. For the study of variations in Black-White inequality, "an appropriate analysis must draw on *both* individual-level and aggregate data" (Fossett 1988:469). The most common method, appending contextual level variables to individual records, results in downward bias in the standard errors due to the restricted variance of the contextual variables (Bryk & Raudenbush 1992; Hirsch & Schumacher 1992:609). While there may be many thousands of degrees of freedom at the individual level, most studies use less than three hundred contextual-level units.

In large, complicated models (e.g., Cassirer 1996), this problem is especially pronounced and its effects difficult to discern. Cassirer (1996) includes a much broader array of variables than previous studies, and runs separate models for men and women in a study using 1980 Census data. In particular, she uses more MA control variables than others, including regional interactions. Her design differs from the present work in several important ways, but most seriously, Cassirer's results are undermined by the problem of underestimated standard errors. With the 1% PUMS sample from 267 MAs and 18 metropolitan-area variables (including 12 interaction terms) attached to individual records, her model assumes many thousands more degrees of freedom than it actually has at the MA level.

4.3.2. HLM to improve estimation

HLM improves the confidence of predictions, and it allows for simultaneous estimation of a full macro-level model to predict the *slopes* of individual-level independent variables. D'Amico and Maxwell (1995), using 1980 PUMS data, run regression models for each labor market area in their analysis, and then in a second stage use aggregated data to predict coefficients for the individual-level variables of interest across labor markets. They weight their second-stage analysis by the inverse of the standard error of the dependent variable obtained in their first stage, which they say corrects for heteroskedasticity. The authors call this two-stage estimation "simpler and more feasible than the relatively new hierarchical linear models" (1995:974). However, hierarchical models offer several benefits here (Bryk & Raudenbush 1992). These models account for variance in the standard errors of individual-level coefficients, which differ for Blacks and Whites. Hierarchical linear models are also better than the two-stage approach at estimating individual-level effects, because they pool individuals for the consideration of fixed effects. Without this ability, models of individual-level effects are not reliable (or, sometimes, possible) across macro-level units, some of which have small sample sizes.

4.3.3. Equations

4.3.3.1 Employment status

In the analysis of employment status I use a hierarchical *logistic* model, which is essentially a hierarchical linear model (Bryk & Raudenbush 1992) with modifications for fitting dichotomous dependent variables.[20]

The individual-level model is represented by Equation 1:

$$\log\left[\frac{\phi_{ij}}{1-\phi_{ij}}\right] = \beta_{0j} + \beta_{1j}(BM_{ij}) + \beta_{2j}(WW_{ij}) + \beta_{3j}(BW_{ij}) + \sum \beta_{aj}(WM_{ij})(X_{kij} - \overline{X}_{k..})$$
$$+ \sum \beta_{bj}(BM_{ij})(X_{kij} - \overline{X}_{k..}) + \sum \beta_{cj}(WW_{ij})(X_{kij} - \overline{X}_{k..}) + \sum \beta_{dj}(BW_{ij})(X_{kij} - \overline{X}_{k..})$$
$$+ r_{ij} \qquad (Eq\ 1)$$

where ϕ_{ij} is the probability of employment or FTYR employment for individual i in MA j; β_{0j} is the intercept (White men); $\beta_{1\text{-}3j}$ are coefficients for the difference between Black men, White women, and Black women and White men in MA j; β_{aj}-β_{dj} are the vectors of coefficients for the interaction of WM, BM, WW, and BW with variables X_{kij} in MA j; $\overline{X}_{k..}$ is a vector of k grand means of the control variables; and r_{ij} is an error term for individual i in MA j. Two control variables are not centered: disabled, and presence of children under age 5. The centering of the rest of the control variables means that the intercept (β_{0j}) equals the log-odds of joblessness for non-disabled White men with average characteristics on all the control variables and no children less than 5 years old, and the coefficients for inequality represent predicted differences for Black men and women and White women at the same levels of the control variables.

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[20] Models are estimated using the HLM software from Scientific Software International. The manual for this package refers to this class of models as "hierarchical generalized linear models," but I prefer the more specific "hierarchical logistic models."

These individual-level coefficients are the dependent variables at the MA-level of the model, represented by Equation 2:

$$\beta_{0j} = \gamma_{00} + \gamma_{01}(PB_j) + \sum \gamma_{m0}(Z_{mj} - \overline{Z}_{m.}) + u_{0j}$$
$$\beta_{1j} = \gamma_{10} + \gamma_{11}(PB_j) + \sum \gamma_{m1}(Z_{mj} - \overline{Z}_{m.}) + u_{1j}$$
$$\beta_{2j} = \gamma_{20} + \gamma_{21}(PB_j) + \sum \gamma_{m2}(Z_{mj} - \overline{Z}_{m.}) + u_{2j}$$
$$\beta_{3j} = \gamma_{30} + \gamma_{31}(PB_j) + \sum \gamma_{m3}(Z_{mj} - \overline{Z}_{m.}) + u_{3j}$$
$$\beta_{aj} - \beta_{dj} = \gamma_a - \gamma_d \qquad (Eq\ 2)$$

where γ_{00} is the intercept for the MA-level model of White men's predicted log-odds (β_{0j}) and γ_{01} is the effect of PB on β_{0j}; γ_{10} is intercept for the MA-level model of β_{1j} (the BM-WM difference in log-odds) and γ_{11} is the effect of PB on β_{1j}, and so on for WW and BW; $\gamma_{m0\text{-}3}$ are the vectors of *m* MA-level coefficients for the effects of Z_{mj} on the individual-level coefficients; $\overline{Z}_{m.}$ is a vector of *m* grand means of the MA-level variables; $u_{0\text{-}3j}$ are the error terms for MA-level random effects; γ_a-γ_d are constant coefficients across all MAs. The centering of MA-level control variables means the individual-level intercept represents log-odds for White men at average levels of the individual controls in MAs with average values on the MA controls and zero PB.

4.3.3.2. Occupational attainment and earnings

The hierarchical linear model combines data from individuals and metropolitan areas. In the occupation and earnings models the individual-level coefficients for White women, Black men, and Black women measure the difference of each group from White men, net of individual controls. Coefficients for these dummy variables again are the dependent variables in the MA-level equation.

The individual-level wages and occupation equation takes the form:

$$\begin{aligned} Y_{ij} = \; & \beta_0 + \beta_{1j}(WW_{ij}) + \beta_{2j}(BM_{ij}) + \beta_{3j}(BW_{ij}) + \sum \beta_{bj}(WM_{ij})(X_{kij} - \overline{X}_{k..}) \\ & + \sum \beta_{bj}(BM_{ij})(X_{kij} - \overline{X}_{k..}) + \sum \beta_{cj}(WW_{ij})(X_{kij} - \overline{X}_{k..}) \\ & + \sum \beta_{dj}(BW_{ij})(X_{kij} - \overline{X}_{k..}) + r_{ij} \qquad (Eq. 3) \end{aligned}$$

where the structure of model is the same as the employment models (above), except that Y_{ij} is the natural log of *occupational attainment* or *wages* for individual *i* in MA *j*, and the form of the equation is linear. Centering of the control variables, as in the employment status models, means the intercepts represents the occupational attainment or average weekly wage of non-disabled White men with average characteristics on all the control variables and no children less than 5 years old. The metropolitan-area equation is essentially the same as in the employment models, though the control variables differ as noted above. Then, in the final set of models, occupational attainment will be added to Equation 3 as a control variable [β_{4j}(OCC)].

4.3.4. Analysis plan

The analysis proceeds through several steps for each labor market outcome, at both the individual and metro-area levels. There are several reasons for this. First, at the individual level there are substantial issues of endogeneity when treating Black-White gaps in labor market outcomes (Cancio, Evans & Maume 1996). Most importantly, perhaps, are the human capital variables which, while accounting statistically for a significant portion of the Black-White gap in outcomes such as employment and earnings, may also themselves be the result of the same processes that affect inequality net of human capital (Roscigno 1995; Szymanski 1983). With regard to PB effects, this means that a historically higher level of racial antagonism or inequality related to population composition may have affected education levels – even as PB in 1990 has effects on inequality net of education. The same is also true with the use of controls for marital status and family composition, which may also be sensitive to PB and its related influences. As Odland and Ellis (1998) report, market dynamics can affect demographics by influencing decisions such as migration, and labor-market impact on marriage rates is a subject of long-standing debate (e.g., Wilson 1987, McLanahan & Casper 1995).

Second, at one level, patterns of Black-White inequality are of intrinsic interest regardless of their cause, because Black-White differences themselves have important consequences. Therefore, analysis of PB effects on Black-White outcomes with no control variables will be an important result itself, while providing a baseline for additional steps in the analysis. At the metro-area level, a series of steps will allow examination of several hypotheses regarding PB effects, and test the strength of the PB relationship in the presence of important control variables. For each dependent variable, I present results of an individual level model which approximates a standard OLS regression. Metro-area effects are then shown with and without controlling for these individual-level factors.

As in individuals-level models, there is a "total" racial-ethnicity effect and a partial effect at the metro-area level, and both are of interest. Many variables at the metro-area level could be engodenous to racial-ethnic composition, for example economic variables such as the unemployment rate. A strong case may also be made that regional differences, which are often controlled to account for historical differences in culture and politics, reflect the interaction of racial-ethnic composition with other historical factors. Is the South-versus-non-South difference in culture, for example, separable from the historical presence of large Black populations? With regard to class interactions, Perlo (1975) has argued that the very fact of generally lower earnings in the South is evidence that racism is harmful to White as well as Black workers. So controlling for region in that case might mask a true historical PB effect.

Several attitude studies have considered this South question in relation to PB effects. Taylor (1998) finds that when controlling for PB, South effects on White racial attitudes are cut in half, and are no longer significant, while PB remains significant. Fossett and Kiecolt (1989) report that PB increases White perceptions of status threat and opposition to integration in both the South and non-South. They contrast a subculture and a composition hypothesis for the South. In the former, Southern differences in cultural attitudes and practices are greater than differences in demographic composition would imply, while by the latter hypothesis differences can be accounted for with the appropriate statistical controls. In their view, the hypothesis for a Southern subculture suggests that PB should have a stronger effect in the South, and region effects should persist net of controls. If PB reduces but does not eliminate region effects, it suggests that both subculture and composition are at work. The issue is further complicated by the question of PB's nonlinear effects (Blalock 1967; Taylor 1998). In the Fossett and Kiecolt (1989) results, PB has slightly less effect on White attitudes in the South, but they attribute that to PB's nonlinear effects, which taper off at higher reaches of population concentration. Cassirer (1996) modeled South and non-South PB effects separately, as well including nonlinear terms.

After initial tests, in the models that follow I decided to use nonlinear terms in the earnings and occupation models, but not in the employment status models, and to control for region but not interact it with proportion Black. Unlike models in which contextual variables are attached to individual-level records, in the hierarchical linear models degrees of freedom at the contextual level are relatively scarce, increasing incentives for parsimony. To consider total PB effects, however, I also include results with no controls at the MA level.

5. RESULTS

5.1. Employment status

The individual-level models for working 1+ weeks and full employment are shown side-by-side in **Table 5.1.** In these models, there are no MA-level variables, but the coefficients for the intercept (White men), White women, Black men, and Black women are permitted to vary across MAs. In effect, then, these models show the effects of individual-level variables, controlling for the differences across metro-areas. These models are the basis for the MA-level models that follow, and although they are not unchanged when MA-level variables are added, it is not necessary to present individual-level results for the full set of MA-level models.

These logistic coefficients may be used to calculate predicted probabilities by taking the exponent of the coefficient divided by 1 plus the exponent of the coefficient. The intercept for White men in the first column of **Table 5.1** is 3.814. Because

$$\left[\frac{\exp(3.814)}{1+\exp(3.814)}\right]=.978,$$

97.8 percent of White men at the mean of the control variables are predicted to have worked at all in 1989. The coefficient from the second column means that 78.6 percent of those who worked are predicted to have worked full-time year-round. By adding the intercept coefficients, we obtain the corresponding numbers for the other groups.

Table 5.1. Individual-level models for working 1+ weeks and FTYR

Variable	*White men (intercept)*		*Black men*	
	Work	FTYR	Work	FTYR
Intercept	3.814 ***	1.304 ***	-.978 ***	-.374 ***
Education	.130 ***	.081 ***	.169 ***	.094 ***
Potential Experience	-.049 ***	.015 ***	-.052 ***	.004
Experience^2 (/100)	.033 **	-.013 *	.117 ***	.025
Other income	-.219 ***	-.031 ***	.122 ***	.090 ***
Minimum other income	.155 ***	.202 ***	.845 ***	.496 ***
Married	1.172 ***	.661 ***	1.221 ***	.642 ***
Was married	.274 ***	.115 **	.304 **	.185 *
Children	-.104 ***	-.110 ***	-.143 ***	-.090 ***
Married*children	.119 ***	.137 ***	.132 ***	.120 ***
Was married*children	.139 **	.093 ***	.202 ***	.083 *
Married*children LT5	.046	.051 **	.063	-.032
Was married*children LT5	.061	-.001	-.014	.015
Never married*children LT5	.007	.023	.085	.055
Disabled	-2.727 ***	-1.168 ***	-2.240 ***	-1.168 ***

Variable	*White women*		*Black women*	
	Work	FTYR	Work	FTYR
Intercept	-1.704 ***	-1.011 ***	-1.714 ***	-0.862 ***
Education	0.160 ***	-0.016 ***	0.230 ***	0.042 ***
Potential Experience	0.047 ***	0.026 ***	0.019 **	0.041 ***
Experience^2 (/100)	-0.170 ***	-0.083 ***	-0.042 **	-0.078 ***
Other income	-0.362 ***	-0.177 ***	0.190 ***	0.126 ***
Minimum other income	-0.357 ***	-0.168 ***	1.142 ***	0.439 ***
Married	-0.555 ***	-0.217 ***	0.175 *	-0.153 *
Was married	-0.132 *	-0.015	0.236 **	-0.036
Children	-0.719 ***	-0.412 ***	-0.311 ***	-0.205 ***
Married*children	0.303 ***	-0.008	0.150 ***	0.081 ***
Was married*children	0.308 ***	0.136 ***	0.108 ***	0.102 ***
Married*children LT5	-0.180 ***	-0.064 ***	-0.046	-0.019
Was married*children LT5	-0.177 ***	-0.071 *	-0.039	-0.073
Never married*children LT5	-0.180 ***	0.007	-0.055	-0.114 +
Disabled	-1.623 ***	-1.110 ***	-1.818 ***	-1.008 ***

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).
Note: Coefficients for other groups represent differences from White men.

For Black men, the first column yields

$$\left[\frac{\exp(3.814-.978)}{1+\exp(3.814-.978)}\right]=.945,$$

So 94.5 percent are predicted to work at the mean of control variables. The second column is used to calculate that 71.7 percent of those are predicted to work FTYR. The procedure also yields levels for White women (89.2 percent and 57.3 percent), and Black women (89.1 percent and 60.9 percent).

Several other results from this table merit comment. Black men and women have larger coefficients for the education variables, meaning there is a greater discrepancy in employment rates across education levels for Black workers. For White women, notably, those with more education who work are less likely to be fully employed.

With regard to family and household variables, the effects show the importance of distinguishing by racial-ethnicity and gender. Other income is negatively associated with both stages of employment for White men and women, in what is assumed to be the traditional effect of other income on labor supply. However, for both Black men and women, the effect is positive. This suggests that a marital sorting process (by which employable people who intend to work for pay marry each other) is stronger among Black couples than White couples. Or it may be that White couples are more likely to choose – or be able to afford – only one earner. The minimum other income dummy variable – indicating people who are the sole earners in their households, have positive effects on each group except White women. This means that, except for White women, those without other earners in the household are more likely to work than is predicted by the linear effect of the other-income variable.

Further differences emerge with the marital status and children variables. Both groups of men are more likely to work when married or formerly married as opposed to never married. Among women, however, married White women are less likely to be working at all or to be fully employed, while married Black women are more likely to be working (but if working, less likely to be fully employed). The coding of the interaction variables makes the main effect for number of own children in the household refer to those who are never married. For each group, the presence of children for never married people reduces the odds of working. For each group, the presence of children in conjunction with other marital statuses increases the odds of working compared to never married people. But total effects of children (adding the children coefficient to the interaction term) are modest for men, slightly negative for Black women, and strongly negative for White women. Any of the children being less than five years old leads to further reductions in work among White women, and less so among Black women.

For descriptive purposes, **Figure 5.1** and **Figure 5.2** show scatterplots of Black-White ratios of employment rates (working 1+ weeks) for men and women for the 25 largest metropolitan areas by proportion Black, with the points for the 10 largest MAs labeled by name.

Figure 5.1. White / Black Male Rates of Working 1+ Weeks:
25 largest MAs

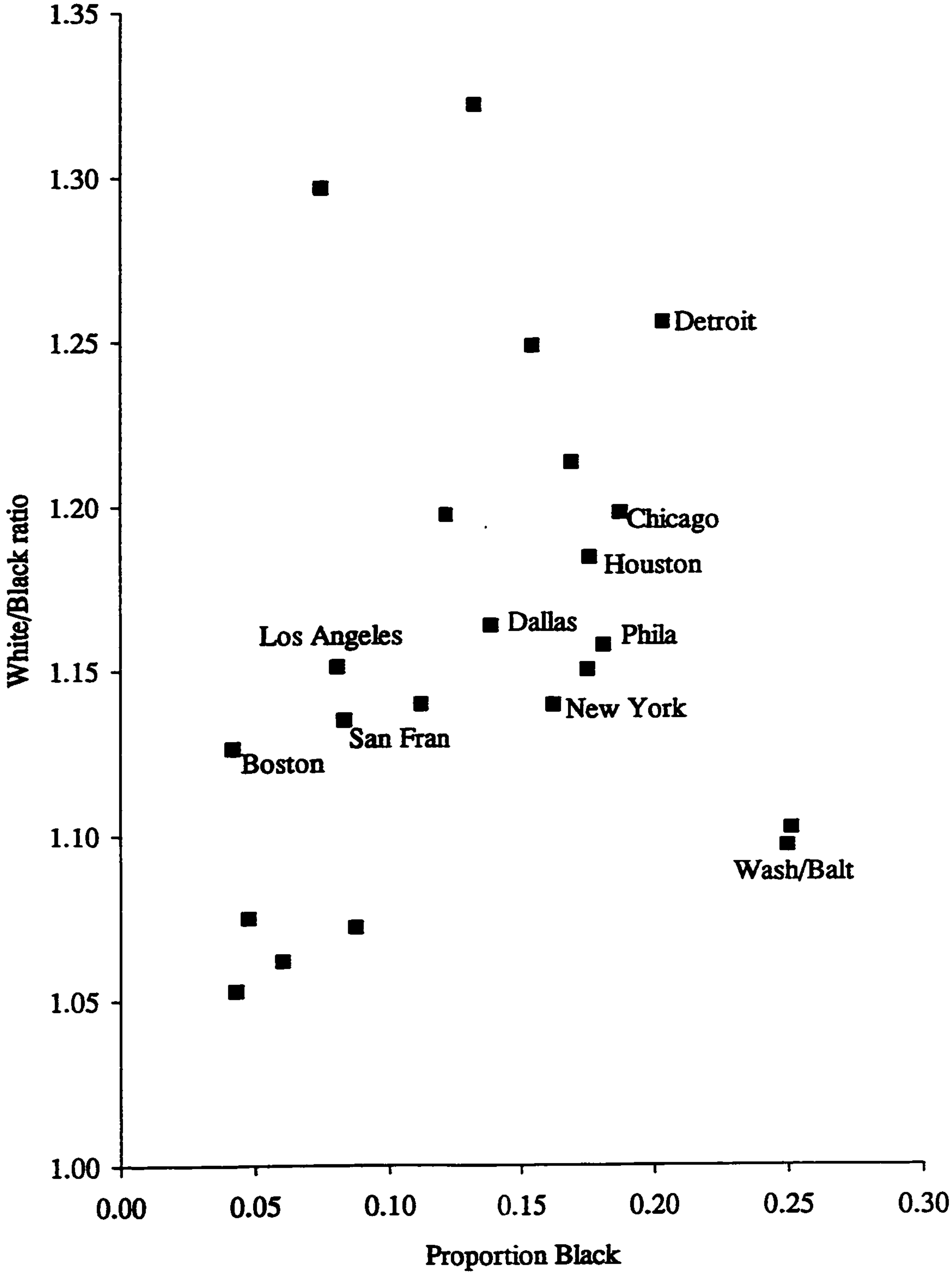
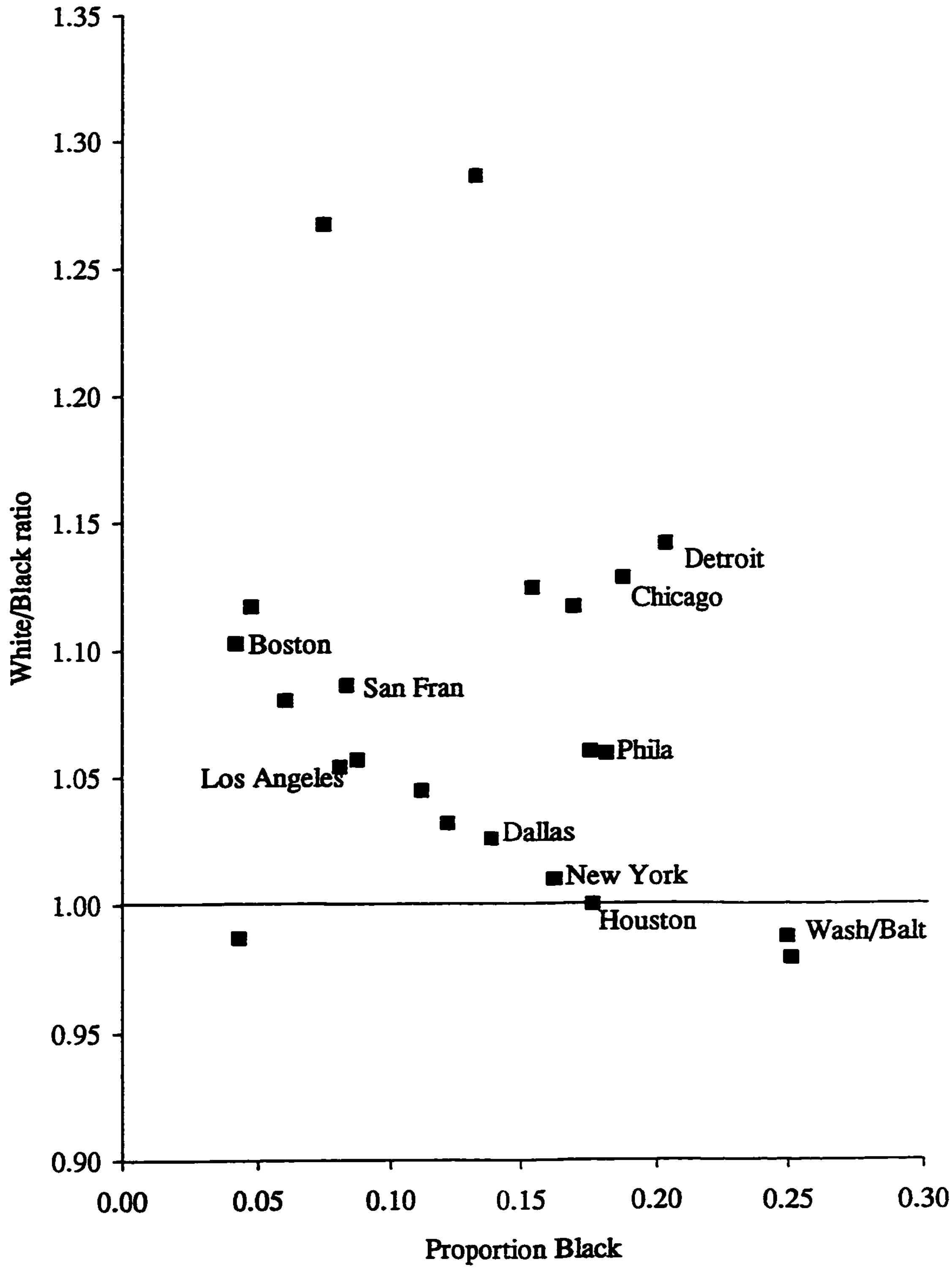


Figure 5.2. White / Black Female Rates of Working 1+ Weeks: 25 largest MAs



Remember that **Table 2.4** showed a small positive correlation of PB with employment for White men, and a small negative correlation for Black men. This appears consistent with the first figure, which shows that among large labor markets, those with higher PB labor generally have more Black-White inequality in male employment rates. The correlations also showed negative relationships between PB and employment for both White and Black women. and thus it is not surprising that the second figure does not show much relationship between PB and Black-White inequality for women. Further conclusions will be based on the models run with all metro areas.

In the logistic HLM models, proportion Black coefficients for White men (the intercept) are positive when they increase the individual-level intercept across metro areas; the significance test determines the probability that the slope of the intercept deviates from zero. So the intercept is the logistic coefficient for White men at the mean of the control variables and 0 PB, and the PB coefficient for the intercept shows the effect of PB on White men. The intercept terms for White women, Black men, and Black women show the difference from White men at the mean of the control variables and 0 PB. The PB coefficients for White women, Black men, and Black women reflect differences from the slope of the intercept. Significance tests for these effects determine the probability that the slopes differ from the intercept (White men) slope, not whether they deviate from zero. Thus, the significance tests identify absolute effects on White men, and changes in levels of inequality compared to White men for the other groups.

As an overview, **Table 5.2** presents the HLM results for working 1+ weeks, with only the intercepts and PB coefficients from two models. The first column includes results for a model with the basic MA-level control variables and no individual-level controls. The second column shows results from the same MA-level model, but with the addition of individual-level controls.

With or without individual-level controls, in **Table 5.2** PB has a positive effect for White men, significantly increasing their odds of working. Both groups of women fall further behind White men as PB increases in these models. For Black men, the effects are negative but not significant when individual-level controls are added. The results from column A in **Table 5.2** are graphically represented in **Figure 5.3**, which shows the total PB effects on working 1+ weeks per year. Since MA-level variables are centered, these lines reflect predicted odds of working in metro areas with average values on the control variables as PB increases from 0 to .5. The predicted increase in employment for White men as PB increases from 0 to .5 nears 2 percent – from less than 95 percent to almost 97 percent (potential variation here is limited by the 100 percent ceiling). Black men have a 3.9 percent decrease, and Black women have an 8 percent decrease in employment rates as PB increases. Although the proportion Black coefficient for White women is negative and significant (the gap between White men and women increases), the figure shows that total effect for White women is flat. The net result is an increase in Black-White inequality and an increase in gender inequality for Blacks and Whites (larger for Blacks than Whites).

Table 5.2. Summary of basic models for working 1+ weeks.

	With no individual controls (A)	*With individual controls (B)*
White men	2.841 ***	3.712 ***
Proportion Black	.843 **	.596 *
Black men	-.961 ***	-.755 ***
Proportion Black	-1.458 ***	-.622
White women	-1.514 ***	-1.592 ***
Proportion Black	-.857 ***	-.655 **
Black women	-1.636 ***	-1.572 ***
Proportion Black	-1.658 ***	-.969 **

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).
Note: Coefficients for other groups represent differences from White men. Basic MA-level controls, and individual-level controls for column B, not shown.

Table 5.2 shows that PB effects are substantially reduced by the introduction of individual-level controls (from column A to column B), which means that individual characteristics favorable to employment are more inequitably distributed in higher-PB labor markets – the total PB effect is mediated through individual characteristics. For comparison, **Figure 5.4** represents the model in column B graphically (on a reduced scale). This describes PB effects on individuals with equal values on the complete set of control variables. In this model PB does not change the percent working more than 1 percent for any group except Black women, for whom PB is associated with a decrease of nearly 2 percent as it increases from 0 to .5. The directions are the same as in the previous figure, except that the PB effect on Black men appears flat when individual controls are added.

Figure 5.4. Proportion Black effects on Percent Working 1+ Weeks in 1989: With individual and basic MA-level controls

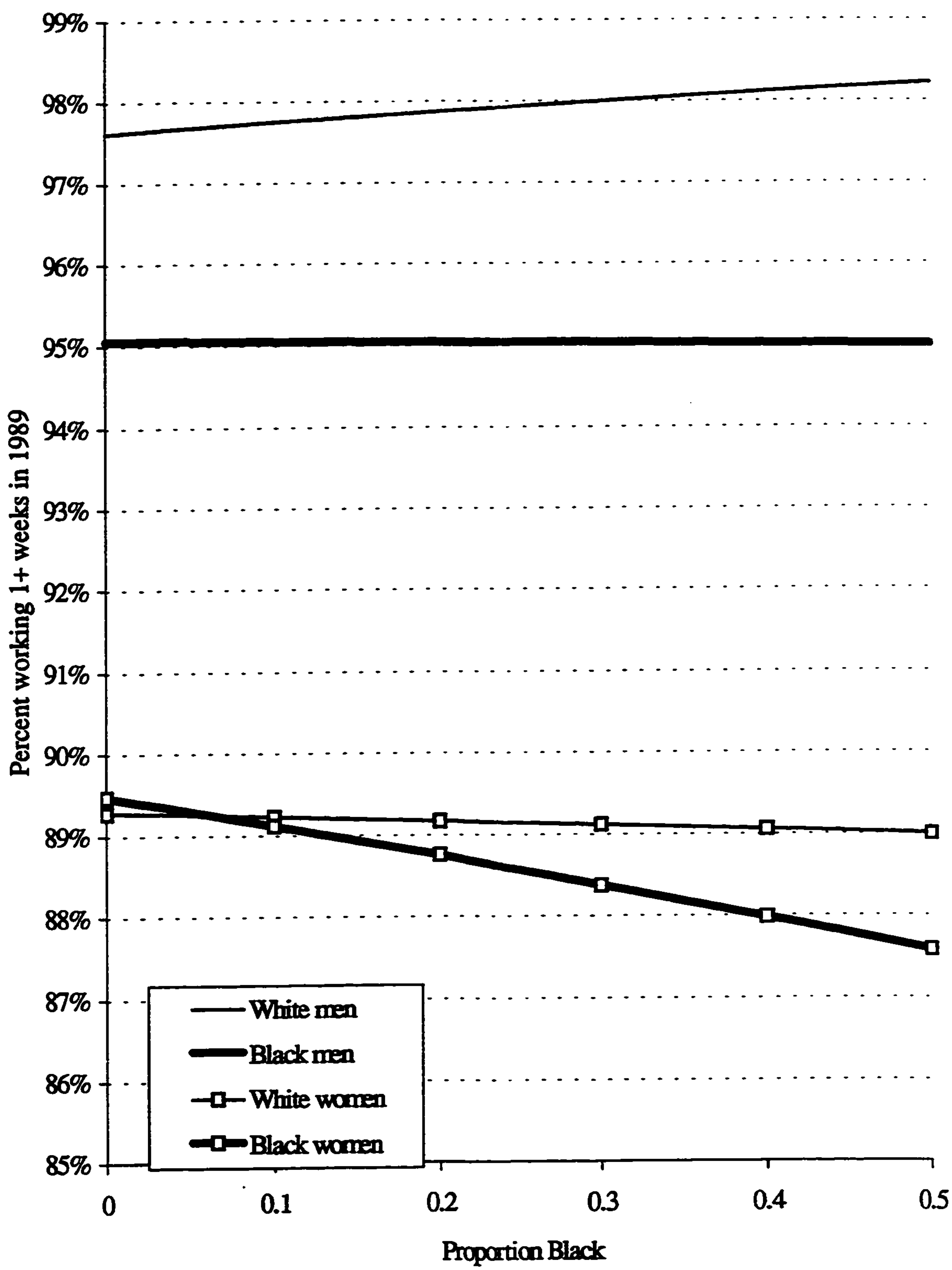
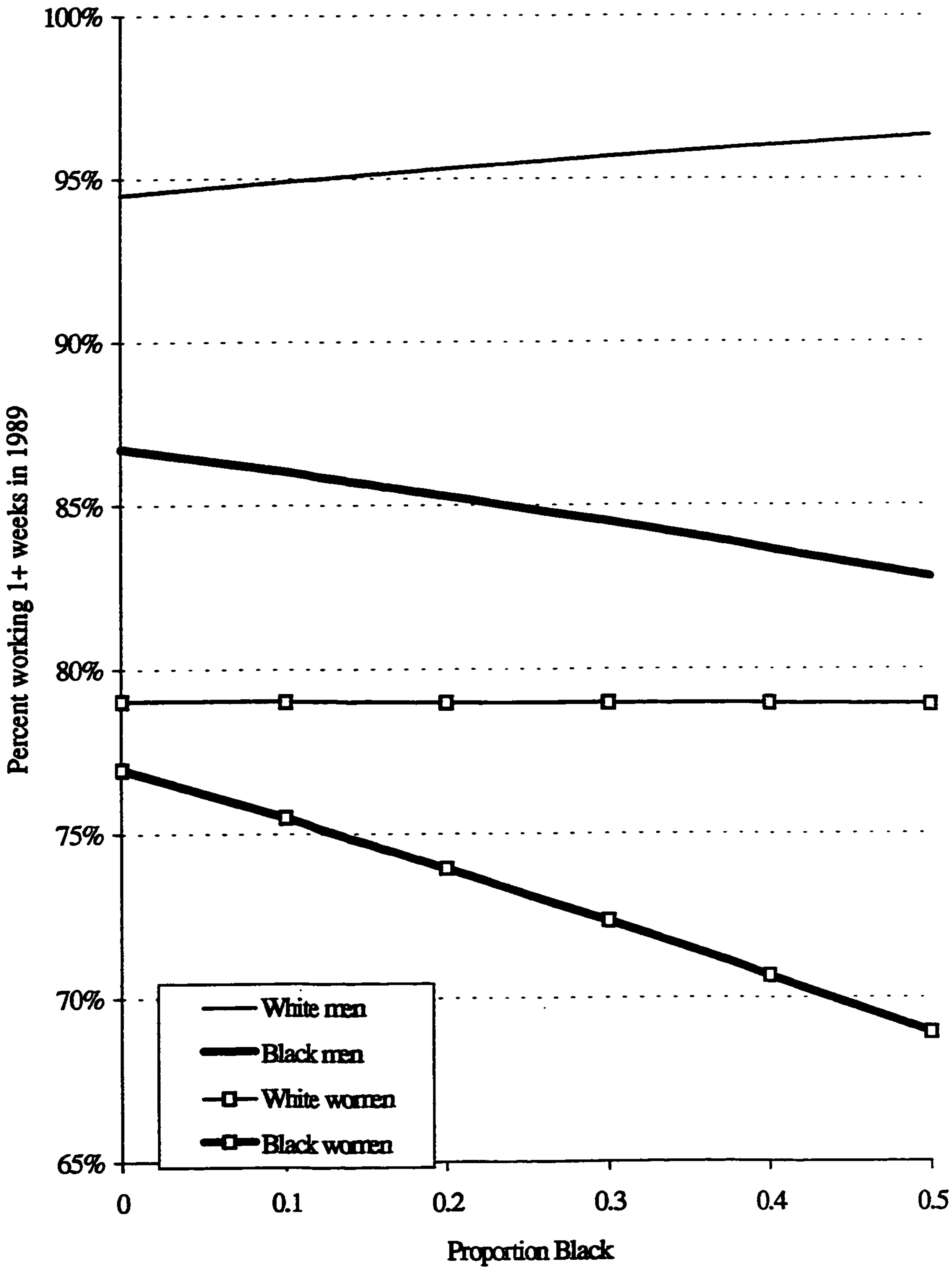


Figure 5.3. Proportion Black effects on Percent Working 1+ Weeks in 1989:
With basic MA-level controls only



Complete metro-area models for working 1+ weeks are presented in Appendix **Table A5.1**, showing logistic coefficients for five models in which MA-level variables are successively added. Each of these models includes the full set of individual-level controls (not shown); the first model is the baseline model described in full in **Table 5.1**. Model 3 is the one from which **Table 5.2**'s column B was extracted (and column A includes the same MA-level variables).

The effects of residential segregation in model 4 are negative for White men, and for Black men, indicating that White men are less likely to be employed in these labor markets, and that the gap between White and Black men is further increased as well. These effects are reduced in model 5, which introduces the occupational integration measures. White men are significantly more likely to be employed in labor markets in which White women are more integrated, but White women are drawn no closer to White men's employment rates. Black men are more likely to be employed in markets in which they are more integrated, but surprisingly, Black women are *less* likely to be employed in those markets in which they are more occupationally integrated. PB effects on all groups are not reduced after these variables are introduced.

The only consistently significant effects of the other racial-ethnic proportions are the effects of proportion Hispanic on White men, which are significantly negative. Regional effects show that White men have reduced odds of employment in the West and South, compared to the North Central and Northeast regions. The positive coefficients for all three regions for White women indicate that White women lag behind White men the most in the Northeast. For both Black men and women, there is weak evidence that their employment rates are closest to White men's in the South.

Population size and net in-migration have mostly positive effects on White men. Net in-migration is associated with relative increases in Black women's employment, but population size increases the gap between Black women and White men. Industrial demand for White women's labor is associated with reduced inequality for both White women and Black men. The Herfindahl index of industrial concentration, which is significantly associated with lower White men's employment in one model, is strongly related to increases in Black men's employment. Average travel time is associated with decreased employment rates for White men, but not with increases in inequality between White men and others. This does not support spatial mismatch theories of Black-White inequality in employment status.

In the second set of MA-level models, I examine the effects of metro-area characteristics on the likelihood of people who work at all working full-time and year-round. To begin with, **Figure 5.5** and **Figure 5.6** show scatterplots of Black-White ratios of FTYR rates for men and women for the 25 largest metropolitan areas by proportion Black, with the points for the 10 largest MAs labeled by name. The correlations previously presented in **Table 2.4** showed White FTYR rates were positively correlated with PB, and Black FTYR rates were negative correlated. This broad relationship appears to be reflected in the two figures – even though in most large labor markets working Black women are more likely than their White counterparts to be working FTYR (ratios less than 1.0).

Figure 5.5. White / Black Male Full Employment Rates:
25 largest MAs

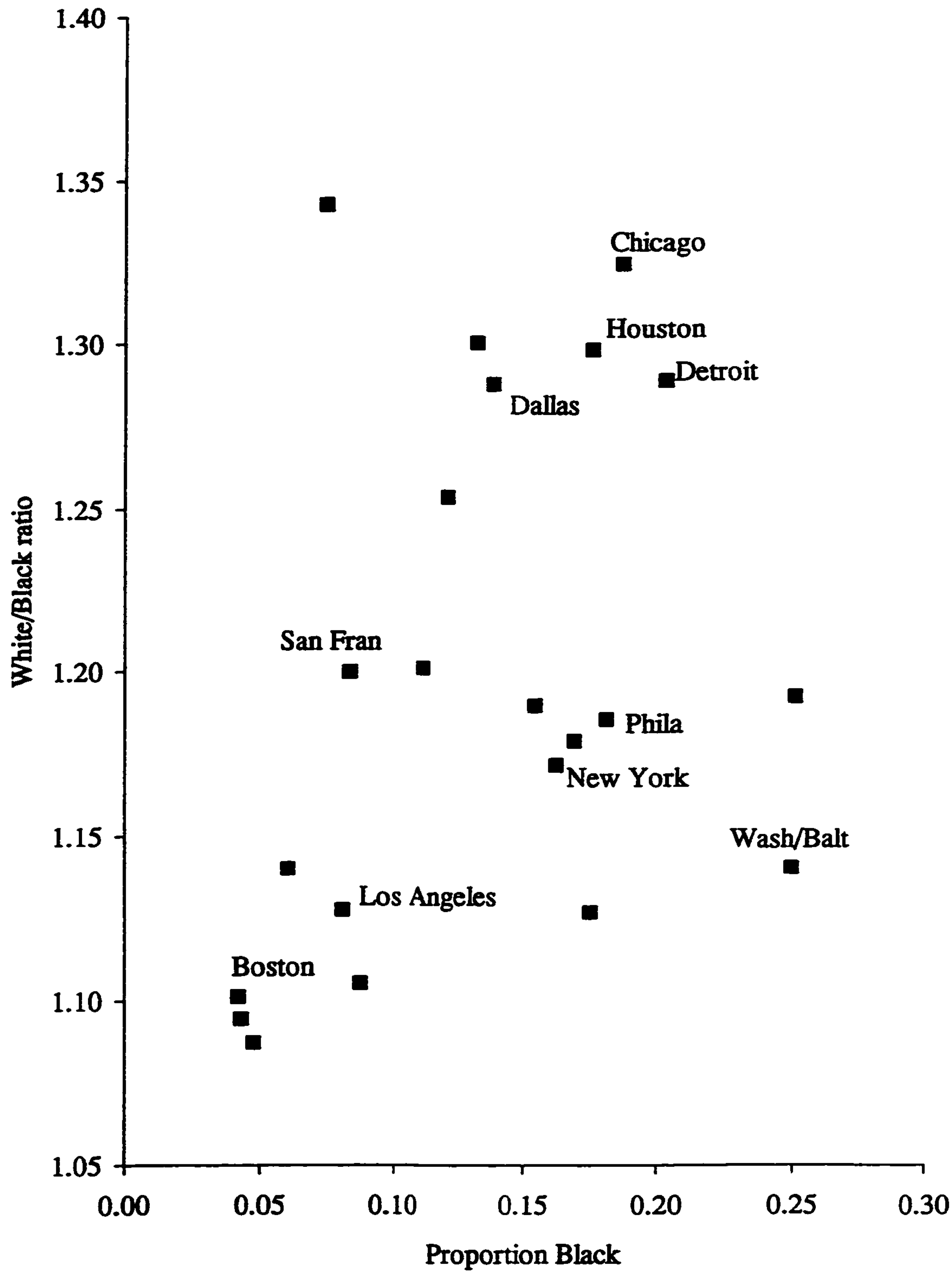
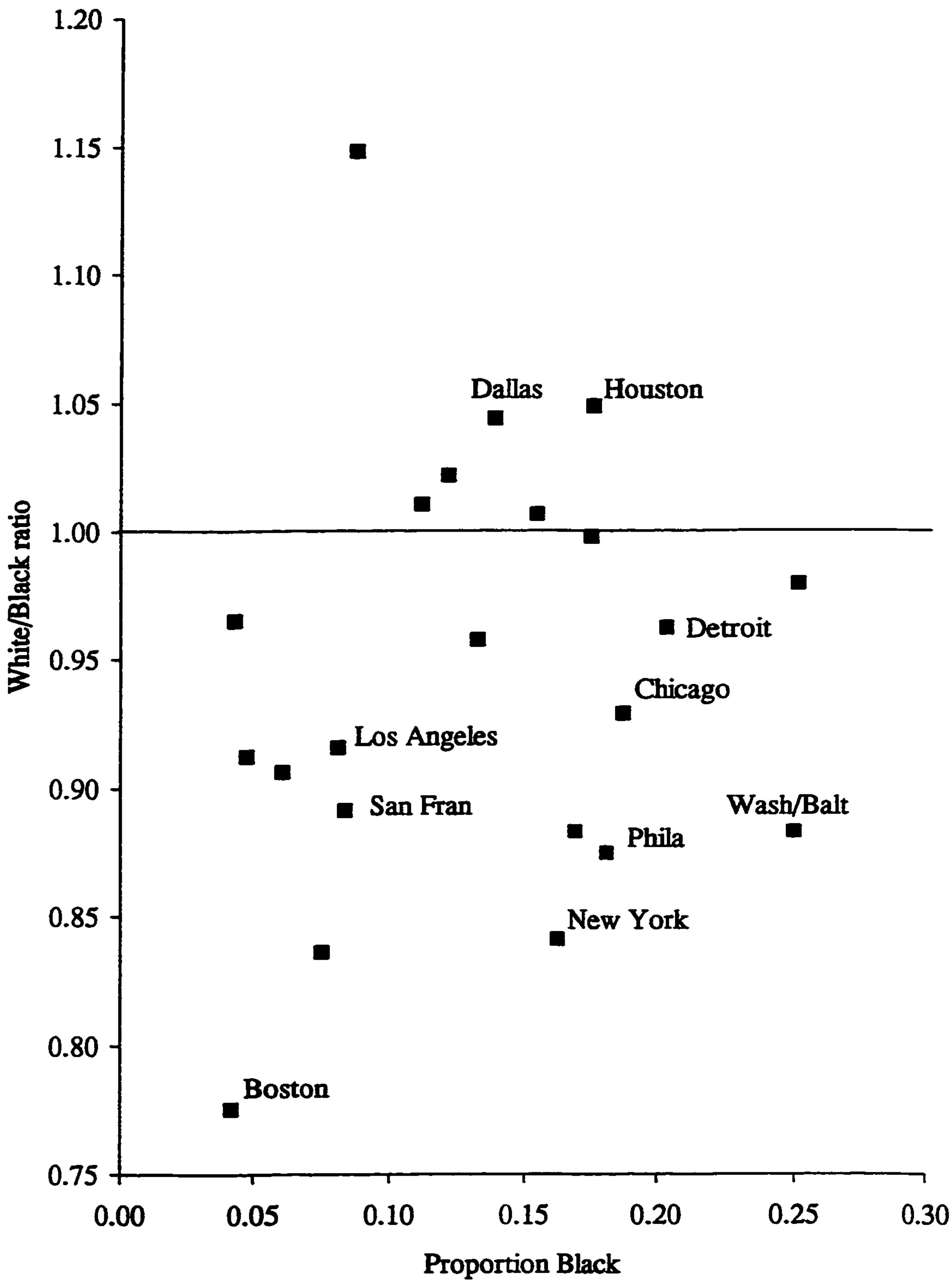


Figure 5.6. White / Black Female Full Employment Rates:
25 largest MAs



As in the previous models, **Table 5.3** presents the intercepts and PB coefficients from a model with the basic MA-level control variables and no individual-level controls (column A) and from the same MA-level model with individual-level controls added (column B). The coefficients in the table show that, with or without individual controls, working White men are more likely to be fully employed in labor markets with higher PB, and there is a widening gap predicted between each other group and White men. Again, the effects of PB are considerably reduced when individual differences are controlled.

Table 5.3. Summary of basic HLM models for working FTYR.

	With no individual controls (A)	*With individual controls (B)*
White men	1.174 ***	1.224 ***
Proportion Black	.768 ***	.696 ***
Black men	-.483 ***	-.231 ***
Proportion Black	-1.178 ***	-.876 **
White women	-1.030 ***	-.948 ***
Proportion Black	-.572 **	-.444 **
Black women	-.916 ***	-.749 ***
Proportion Black	-1.281 ***	-1.108 ***

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).
Note: Coefficients for other groups represent differences from White men. Basic MA-level controls, and individual-level controls for column B, not shown.

The results from column A of **Table 5.3** are graphed in **Figure 5.7**. These show PB effects with the basic MA-level controls and no individual level controls. As the figure shows, working White men are predicted to increase their full employment rates by more than 6 percent, and White women by 2.4 percent. Black men and women are predicted to have full employment rates decreased by 4.7 and 6.4 percent respectively, as PB increases to .5.

Results from column B, presented in **Figure 5.8**, with individual controls, show that PB effects are also substantial net of individual differences. Working White men's full employment rates increase by more than 5 percent, White women's increase more than 3 percent, and the decrease in rates for Black men and women is 1.8 percent and 5 percent respectively. Again, the greatest changes are along racial-ethnic lines, while PB also appears associated with increases in gender inequalities among both Black and White workers. The reduction in PB effects from the model with no individual controls to the model with controls is more modest in the full-employment model than it was in the work 1+ weeks model, but there are still greater effects in the model without these controls. Again, the implication is that individual characteristics favorable to full employment are more inequitably distributed in higher-PB labor markets.

Full metro-area models for working FTYR are presented in Appendix **Table A5.2**, which shows logistic coefficients for five models in which MA-level variables are successively added, where each includes the individual-level controls (not shown), and the first model is the baseline model described in full in **Table 5.1**. (Model 3 is the one from which **Table 5.3**'s column B was extracted.)

Figure 5.7. Proportion Black effects on Percent Working FTYR in 1989: With basic MA-level controls only

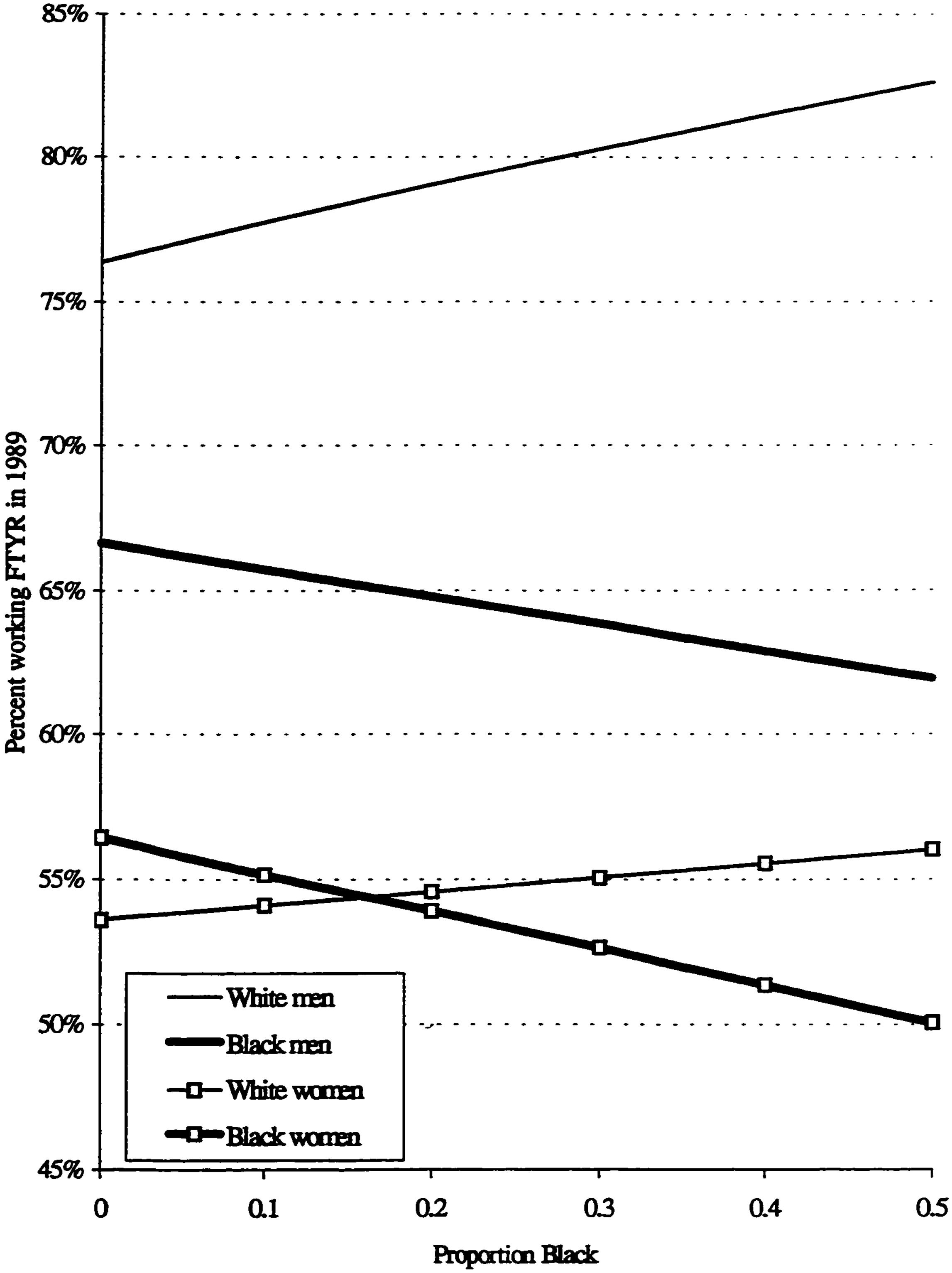
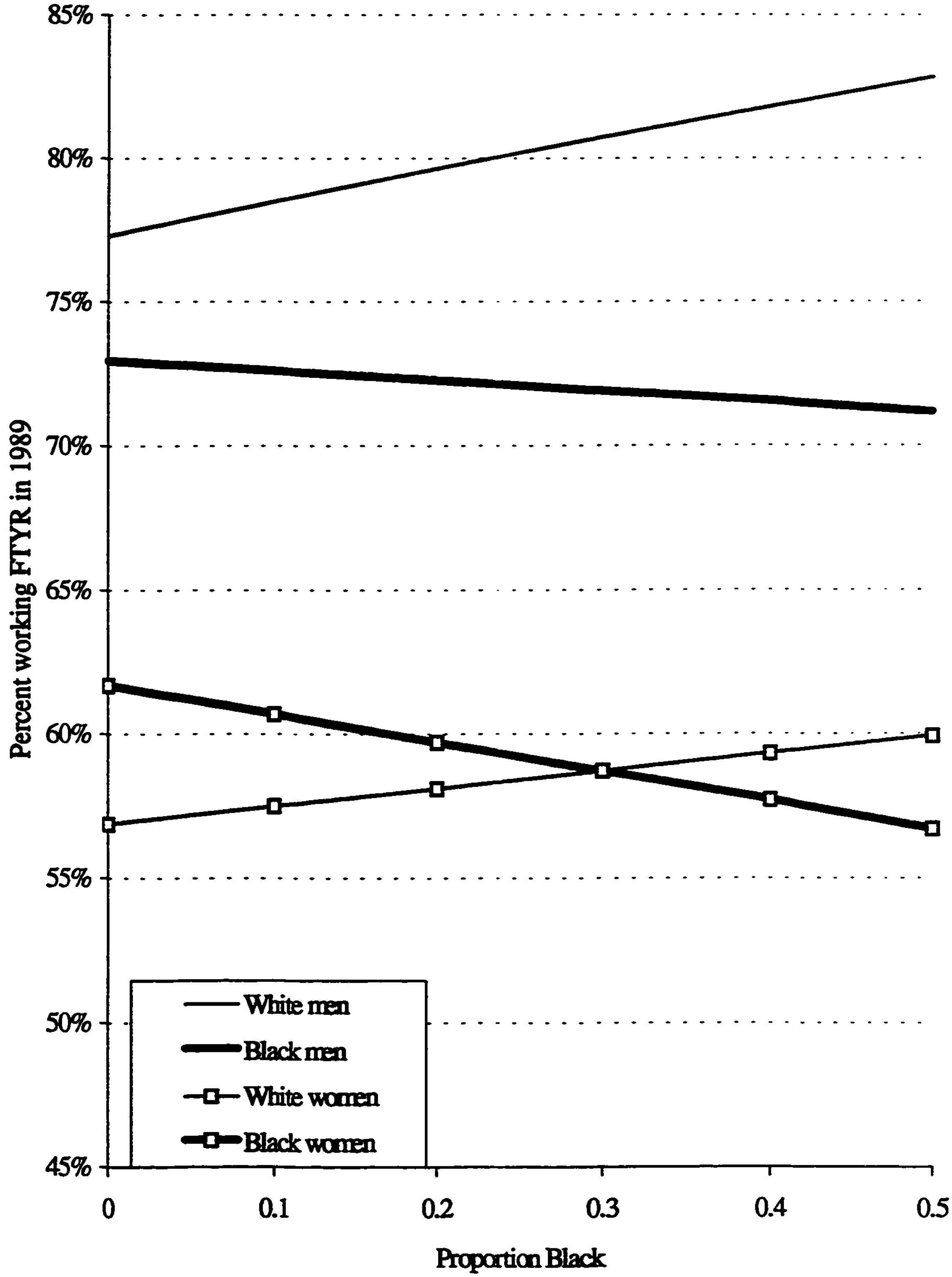


Figure 5.8. Proportion Black effects on Percent Working FTYR in 1989: With individual and basic MA-level controls



In all models on **Table A5.2**, PB is shown to increase Black-White inequality in full employment rates. Again, these results are not diminished with the introduction of basic controls, or the controls for residential and occupational segregation. Except for the model with PB only, PB is also associated with greater gender inequality between White men and women in each of the models. Residential segregation has a negative effect on White men's full employment rates, but no significant effects on observed inequalities. Again, White men are more likely to be fully employed where White women are more occupationally integrated. In these models, Black women are less likely to be employed where Black men are more fully integrated into the occupational distribution.

Some of the control variable effects differ from the work 1+ weeks models. First, Asian population size is positively associated with White men's full employment, and increases the gap in full employment rates between White men and Black women. Second, proportion of the labor force in manufacturing is associated with greater full employment for White men, and increases in the gaps between White men and both groups of women. Industrial concentration (Herfindahl) is associated with lower rates of full employment for White men, but it has no significant effects on inequalities.

These results support the argument that PB affects inequality in joblessness and full employment as well as occupational and earnings inequality, the traditional focus of PB-related research. In the full metro-area results in **Table A5.1** and **Table A5.2**, proportion Black is the most consistent predictor of Black-White inequality. PB is thus an important labor market characteristic in the determination of labor market inequality in employment status.

5.2. Occupational attainment and earnings

The individual-level models for occupational attainment (occupation) and average weekly wage (earnings) are presented in **Table 5.4**. The dependent variable in the first column of each panel is the mean of the average logged weekly wage for all workers in each person's occupation. The second column presents coefficients for logged weekly wage, and the third column presents results for earnings controlling for occupation level, which is constant across groups. This is the baseline model, with no MA-level variables, and only the coefficient for the intercept, White women, Black men, and Black women permitted to vary across labor markets.

The coefficients show that inequalities between each group and White men are greater in earnings than in occupation level, and that controlling for occupation has the greatest proportional reduction in the intercept for Black women (from -.449 to -.303), while the coefficient is reduced about one-fourth for Black men and White women. Black women suffer the greatest occupational and earnings inequality, but when occupation is controlled Black women and White women have the same deficit compared to White men.

Table 5.4 Individual-level models for earnings and occupational attainment

	White men		
	Occupation	*Earnings*	
Intercept	6.045 ***	6.291 ***	6.245 ***
Occupation	–	–	.445 ***
Education	.064 ***	.095 ***	.067 ***
Potential Experience	-.007 ***	.029 ***	.032 ***
Experience^2 (/100)	.024 ***	-.033 ***	-.043 ***
Hours(*ln*)	–	.441 ***	.383 ***
Married	.103 ***	.211 ***	.166 ***
Was married	.050 ***	.090 ***	.068 ***
Children	-.014 ***	-.034 ***	-.028 ***
Married*Children	.024 ***	.063 ***	.053 ***
Was married*Children	.023 ***	.029 ***	.019 ***
Married*Children LT5	.000	-.002	-.002
Never married*Children LT5	-.013 ***	-.007 *	-.001
Was married*Children LT5	-.001	.000	.000
Disabled	-.070 ***	-.184 ***	-.154 ***
	White women		
	Occupation	*Earnings*	
Intercept	-.240 ***	-.404 ***	-.302 ***
Occupation	–	–	.445 ***
Education	.075 ***	.099 ***	.066 ***
Potential Experience	.002 ***	.024 ***	.023 ***
Experience^2 (/100)	-.005 ***	-.048 ***	-.046 ***
Hours(ln)	–	.402 ***	.315 ***
Married	.016 ***	-.023 ***	-.032 ***
Was married	.004	.005	.003
Children	-.059 ***	-.087 ***	-.061 ***
Married*Children	.031 ***	.040 ***	.026 ***
Was married*Children	.041 ***	.040 ***	.022 ***
Married*Children LT5	.003	.010 ***	.009 ***
Never married*Children LT5	-.005 +	-.014 ***	-.013 ***
Was married*Children LT6	-.008 **	-.012 ***	-.009 **
Disabled	-.068 ***	-.151 ***	-.120 ***

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).
Note: Coefficients for other groups represent differences from White men.

Table 5.4 Continued.

	Black men		
	Occupation	*Earnings*	
Intercept	-.149 ***	-.208 ***	-.147 ***
Occupation	–	–	.445 ***
Education	.057 ***	.080 ***	.056 ***
Potential Experience	-.004 ***	.019 ***	.021 ***
Experience^2 (/100)	.019 ***	-.010 ***	-.018 ***
Hours(*ln*)	–	.418 ***	.346 ***
Married	.090 ***	.172 ***	.133 ***
Was married	.037 ***	.028 **	.012
Children	-.012 ***	-.030 ***	-.024 ***
Married*Children	.015 ***	.038 ***	.031 ***
Was married*Children	.007 *	.015 **	.012 **
Married*Children LT5	.005	.008	.006
Never married*Children LT5	-.012 *	-.008	-.002
Was married*Children LT5	-.001	.022 *	.023 **
Disabled	-.048 ***	-.110 ***	-.089 ***
	Black women		
	Occupation	*Earnings*	
Intercept	-.330 ***	-.449 ***	-.303 ***
Occupation	–	–	.445 ***
Education	.076 ***	.097 ***	.063 ***
Potential Experience	.003 ***	.025 ***	.024 ***
Experience^2 (/100)	-.006 ***	-.040 ***	-.037 ***
Hours(ln)	–	.259 ***	.224 ***
Married	.021 ***	.015	.005
Was married	.011 +	.006	.001
Children	-.036 ***	-.054 ***	-.038 ***
Married*Children	.022 ***	.036 ***	.026 ***
Was married*Children	.016 ***	.025 ***	.018 ***
Married*Children LT5	.007	.009	.005
Never married*Children LT5	.002	-.002	-.003
Was married*Children LT6	.000	-.006	-.006
Disabled	-.048 ***	-.105 ***	-.083 ***

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).
Note: Coefficients for other groups represent differences from White men.

The education coefficients show that White workers have higher returns to education than Black workers of the same gender in each model, and that men have slightly lower returns than women. Years out of school has negative returns for men in the occupation models, but positive returns for women. In the earnings models, White men have higher returns to experience than White women, but Black men have lower returns to experience than Black women. Among the family context variables White men have greater returns to marriage than Black men. Both groups of women are in better occupations when they are married, but White women have lower earnings relative to White men when they are married, unlike Black women. Married White women also have larger earnings penalties for the presence of children than do Black women.

The basic MA-level models of occupational attainment are presented in **Table 5.5**. The table presents only intercepts and coefficients for PB and PB-squared for White men (the intercept), White women, Black men and Black women. The models in both columns include the basic-MA control variables. Column A shows a model without individual controls, and column B shows the same model with individual controls. Note the centering of individual-level and MA-level variables discussed previously. (Because models with a nonlinear term are difficult to interpret in table form, the PB-squared in these tables has been centered at .01, so we can see the slope of proportion Black at .10 PB, near the mean of proportion Black.)

Table 5.5. Summary of basic HLM models of occupational attainment

	With no individual controls (A)	*With individual controls (B)*
White men	6.002***	6.020***
Proportion Black	.309***	.275***
Proportion Black^2	-.278	-.319*
White women	-.246***	-.235***
Proportion Black	-.007	-.089
Proportion Black^2	.089	.282*
Black men	-.159***	-.137***
Proportion Black	-.382**	-.078
Proportion Black^2	.383	.153
Black women	-.312***	-.282***
Proportion Black	-.797***	-.544***
Proportion Black^2	1.287***	1.021***

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).
Note: Coefficients for other groups represent differences from White men. Basic MA-level controls, and individual-level controls for column B, not shown. Proportion Black^2 is centered at .01.

Figure 5.9 graphs the results shown in column A of **Table 5.5**. Here PB effects on occupational attainment are represented converted back into average weekly wages. The positive PB effect for White men translates into a predicted occupational attainment increase of 9 percent as PB increases to .5. White women's PB slope does not differ significantly, and they are predicted to have occupation increases of 11 percent. Black men have significantly negative effects similar in size to the White men's benefit, so they see no net change. Black women predicted to have absolute losses up to 30 percent Black, rebounding only in the highest ranges. These patterns are not consistent with queuing hypotheses, which predict increasing average occupational status for all groups as the lower group increases in size.

Figure 5.9. Proportion Black effects on Occupational Attainment:
With basic MA-level controls only

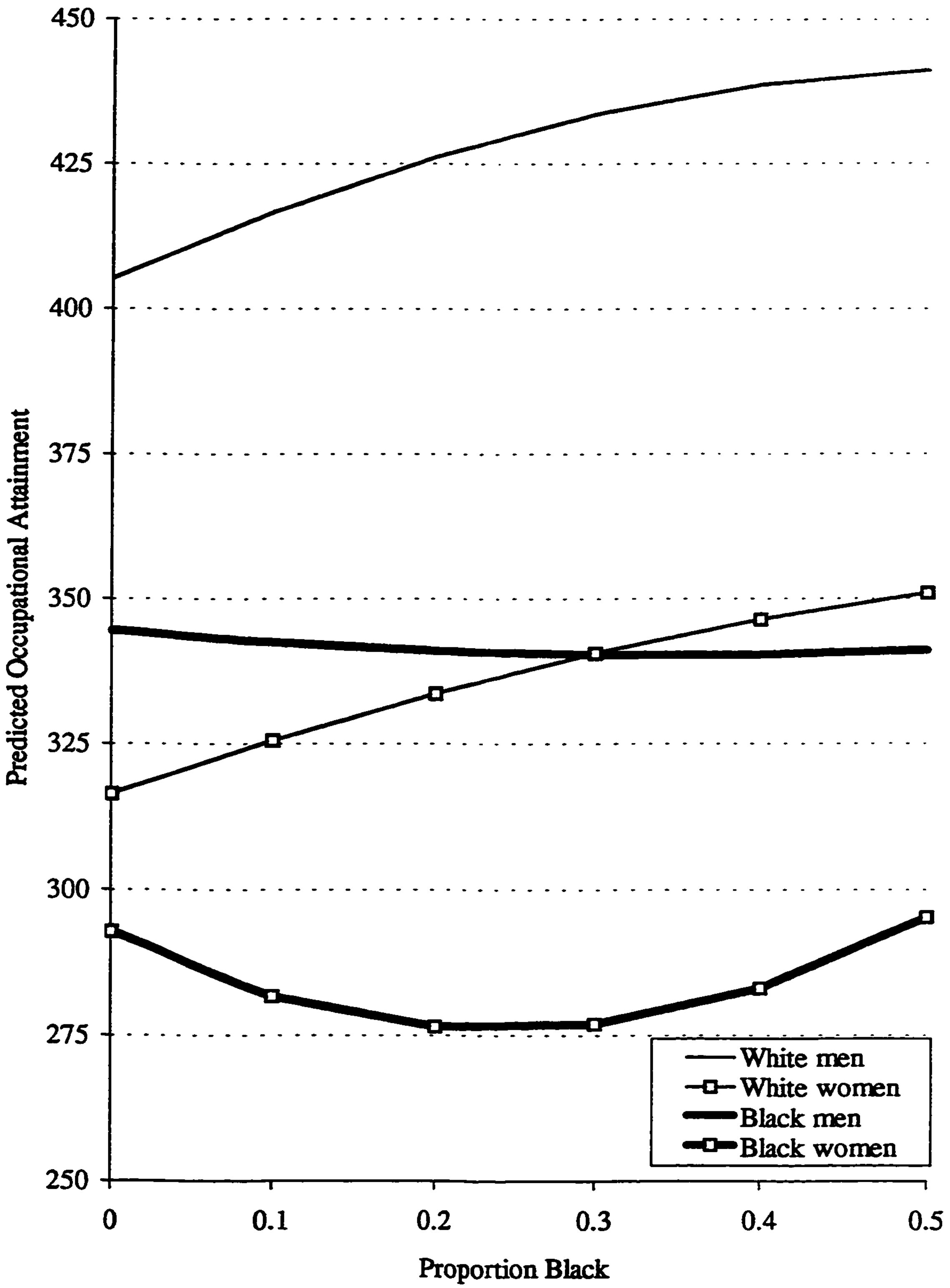
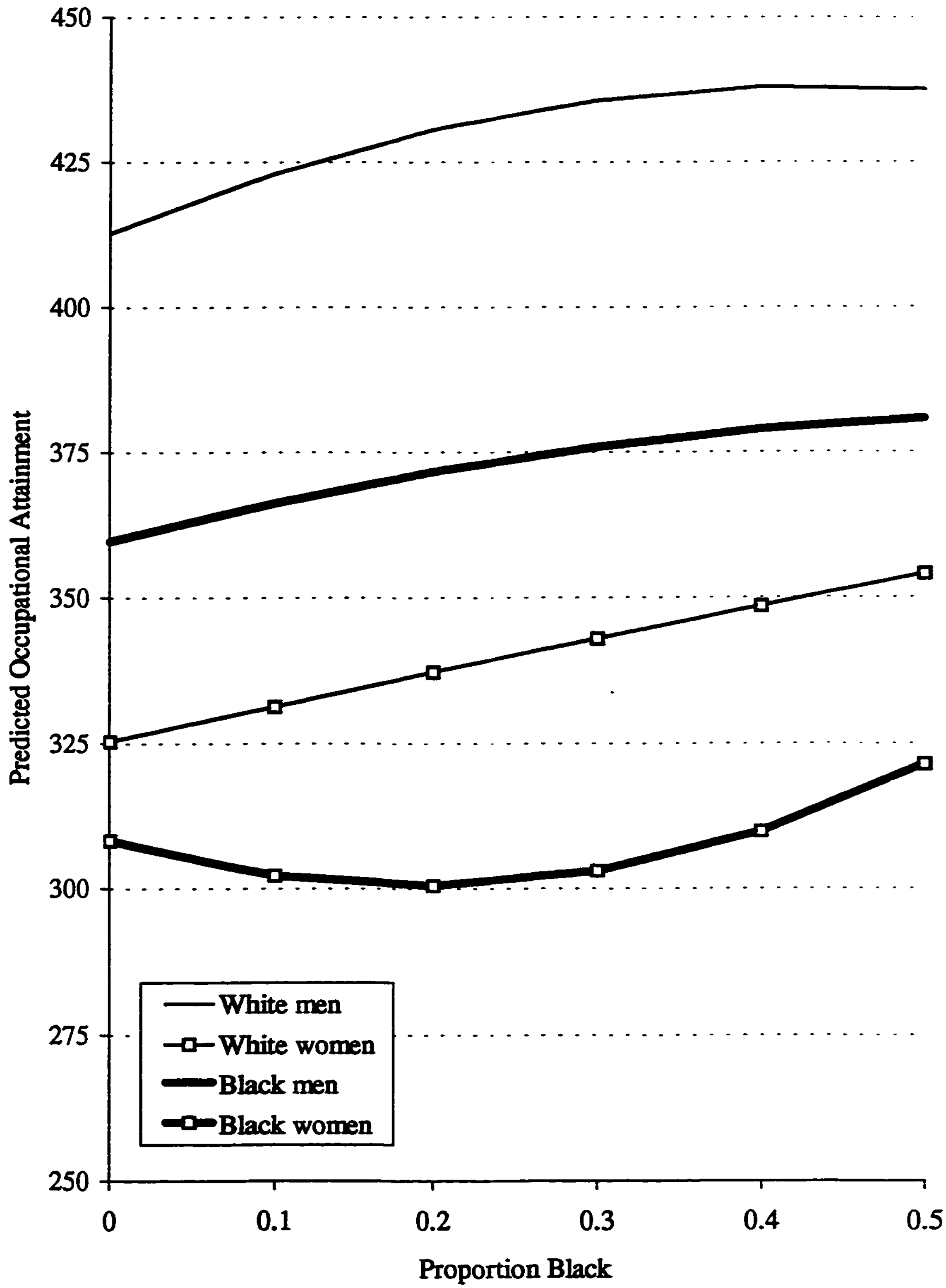


Figure 5.10 represents the results from column B in **Table 5.5**, using both individual-level controls and the basic MA-level control variables. The slopes are positive for each group except Black women, who have a negative slope until PB reaches .2. By .5 PB, White men's predicted occupational attainment has increased 6 percent, White women's has increased 8.8 percent, Black men's has increased 5.9 percent, and Black women's has increased 4.3 percent. Thus, White women draw somewhat closer to White men as a function of PB and Black women fall further behind (especially in the middle range of PB). Except for Black women, these patterns are more consistent with queuing-effect predictions.

More complete MA-level models of occupational attainment are presented in Appendix **Table A5.3**, which shows partial results for 10 models. In the A series of each panel, MA-level control variables are added to a model with no individual-level controls, to obtain the total MA-level effects. In the B series the same set of MA-level variables are added to models that control for the individual level model seen in the previous table. This presentation allows us to see how the PB effects change with the introduction of the MA-level controls, and see the further effects of the two types of segregation.

The coefficients show that White men achieve higher occupations as a function of PB in each model, and the effects are substantially reduced as both individual-level and MA-level variables are added. For White women, PB has no significant effects except in the last two models, meaning that their PB slopes parallels White men's. The larger squared effects for White women in the models with individual controls mean that at higher levels of PB, White women's occupational inequality is reduced.

Figure 5.10. Proportion Black effects on Occupational Attainment:
With individual and basic MA-level controls



For Black men, PB has significant effects in each model without individual controls; these effects are greatly reduced with the introduction of the basic MA controls, and then further reduced with the inclusion of occupational segregation measures. However, Black men's PB effects are much lower, and not significant after the first model, in the models with individual controls. The PB effects on Black men's occupational inequality, therefore, occur more in the determination of individual-level characteristics conducive to higher occupational attainment rather than in discrimination against men with the same characteristics. The pattern is similar for Black women in term of changes in the effects, but PB remains significant and negative for Black women in each model. The larger squared coefficients mean that Black women move in the direction of White men (and White women) at higher levels of PB.

The occupation analysis has interesting implications for the queuing versus threat hypotheses. The occupational distribution appears to follow a queue pattern only when individual differences in resources are controlled. Without these controls, however, there is no evidence of the queue at work. This suggests that the competition or threat mechanism operates more at the political or institutional level – in the determination of characteristics (e.g., family composition) and allocation of resources (e.g., education) favorable to occupational attainment. At the point of hiring, however, which might reflect more individual than institutional decision-making, the queuing effect seems more operable.

With regard to the segregation measures, residential segregation has no significant effects on occupational inequalities. Occupational integration is favorable for both White women and Black women. However, there are two interesting negative effects. Black men are in lower-paid occupations in labor markets where White women are more integrated, and Black women see a negative effect from Black men's occupational integration.

The final stage of the analysis examines the determinants of average weekly wage (earnings). I again begin with scatterplots for the 25 largest metro areas, with the largest 10 labeled by name. **Figures 5.11 - 5.13** show the ratios of White men's average weekly wage to White women's, Black men's and Black women's respectively. These give a sense of the range of inequalities and the bivariate relationships with no controls at any level, and offer the chance to consider individual labor markets of interest. Again, my conclusions will be based on the HLM model results which take into account all metropolitan areas.

Table 5.6 summarizes the basic MA-level model of average weekly wage. Each column presents intercepts and proportion Black coefficients from a model that includes the basic MA-level controls. Column A includes no individual controls, column B includes all individual controls except occupation level, and the final column adds occupation level as a control as an approximation of within-occupation inequality. (Again, proportion Black squared is centered so that the proportion Black slope is presented at .10 PB.)

Figure 5.11. White Male / White Female Weekly Wage:
25 largest MAs

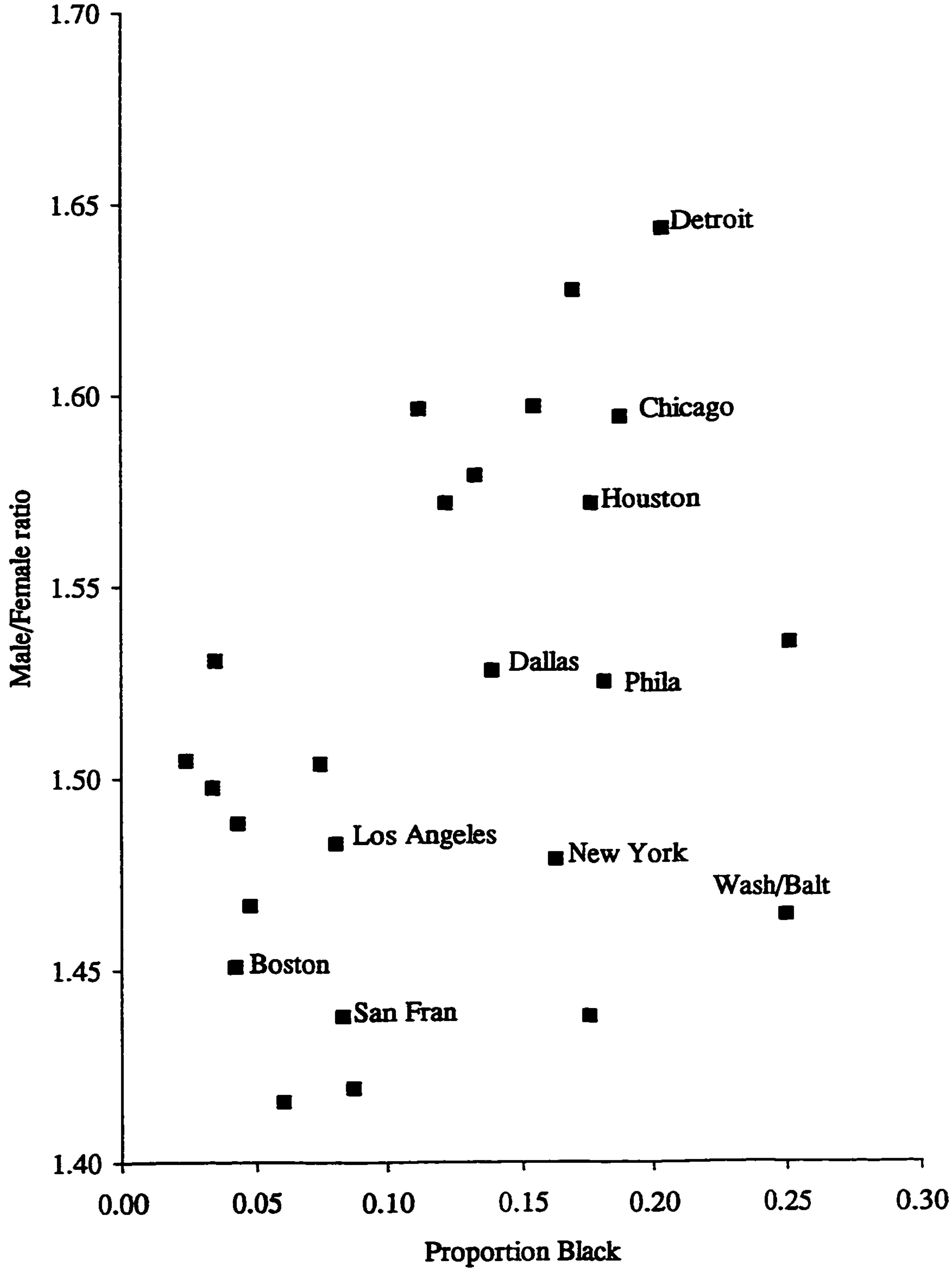


Figure 5.12. White Male / Black Male Weekly Wage:
25 largest MAs

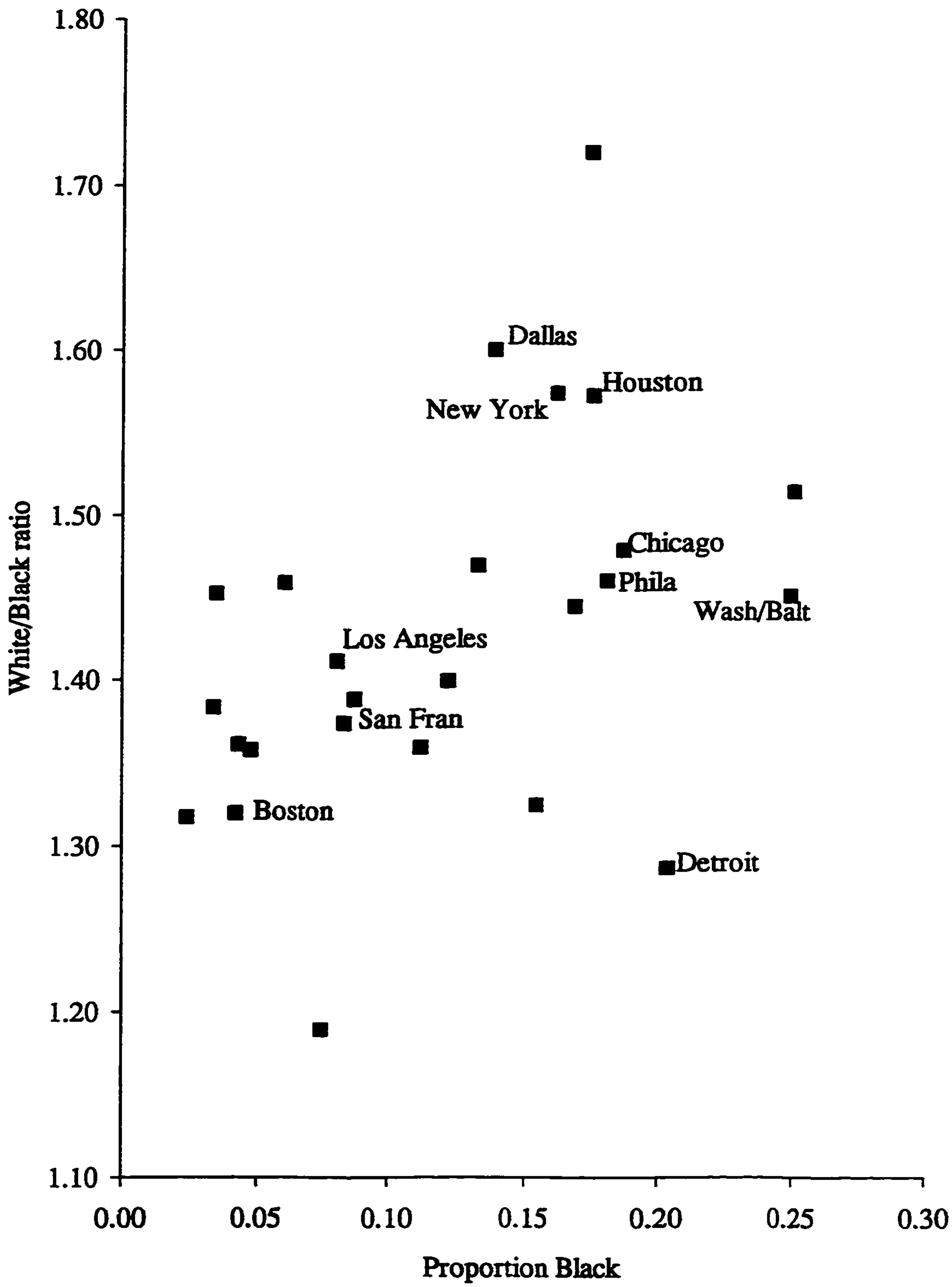


Figure 5.13. White Male / Black Female Weekly Wage:
25 largest MAs

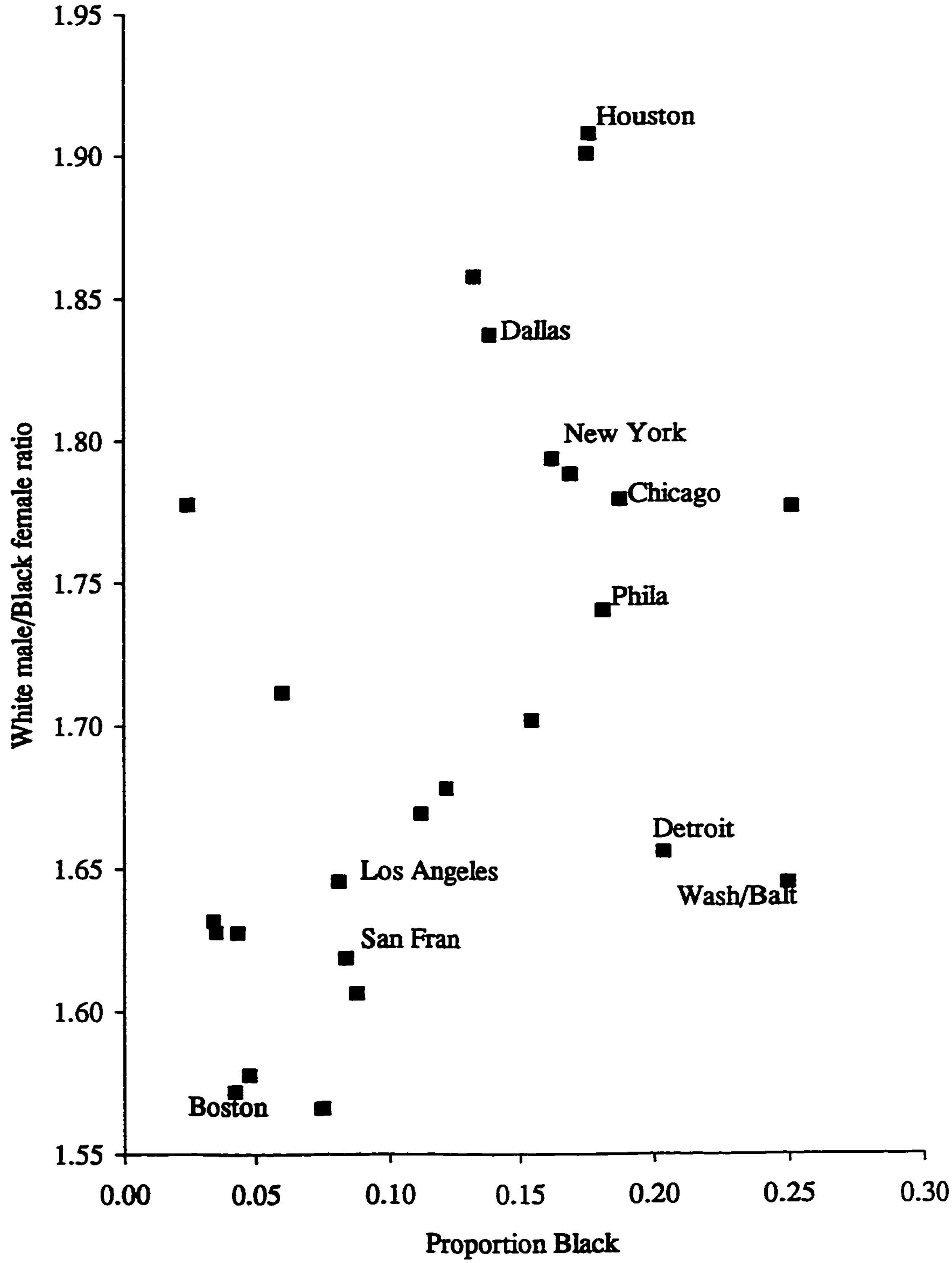


Table 5.6. Summary of basic HLM models of average weekly wage.

	With no individual controls (A)	*With individual controls (B)*	*With individual controls and occupation (C)*
White men	6.230***	6.246***	6.211***
Proportion Black	.524**	.492**	.375*
Proportion Black^2	-.534	-.625	-.487
White women	-.442***	-.396***	-.296***
Proportion Black	.014	-.110	-.077
Proportion Black^2	-.067	.258	.135
Black men	-.223***	-.155***	-.099***
Proportion Black	-.630**	-.337+	-.284+
Proportion Black^2	-.081	-.178	-.286
Black women	-.456***	-.373***	-.247***
Proportion Black	-.884***	-.689***	-.482**
Proportion Black^2	.855+	.803*	.407

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).
Note: Coefficients for other groups represent differences from White men. Basic MA-level controls, and individual-level controls for columns B & C, not shown. Proportion Black^2 is centered at .01.

The results in **Table 5.6** show positive PB effects on White men, which do not significantly differ from the effects on White women. Significant PB effects on Black men and women increase the gap between each group and White men as PB increases. Here again, effects are substantially reduced with the introduction of individual-level controls, indicating that the PB effect is mediated through individual characteristics, which are more inequitably distributed in higher-PB areas. These results are presented graphically in **Figures 5.14 - 5.16** – translated back into dollar values – each on the same scale. In all three figures the slopes are positive for White men and women, and negative for Black men and women, with White men having the steeper positive slopes and Black men having the steeper negative slopes as PB increases to .5. As a result, in each figure Black-White inequality is increased for both genders, more for men than for women.

Gender inequality appears substantially reduced for Black workers as Black men fall further, and gender inequality among Whites is mostly unchanged. For Black men, their predicted weekly wage in relation to White men's fall from 80 percent to 57 percent in the model with no individual controls, from 86 percent to 69 percent in the model with individual controls, and from 91 percent to 73 percent in the model that controls for occupation. Black women's wages are predicted to fall from 63 percent to 50 percent, from 68 percent to 59 percent, and from 78 percent to 68 percent. White women's predicted wages in relation to White men's do not move more than one percent in any of the models.

Figure 5.14. Proportion Black effects on Average Weekly Wage: With basic MA-level controls only

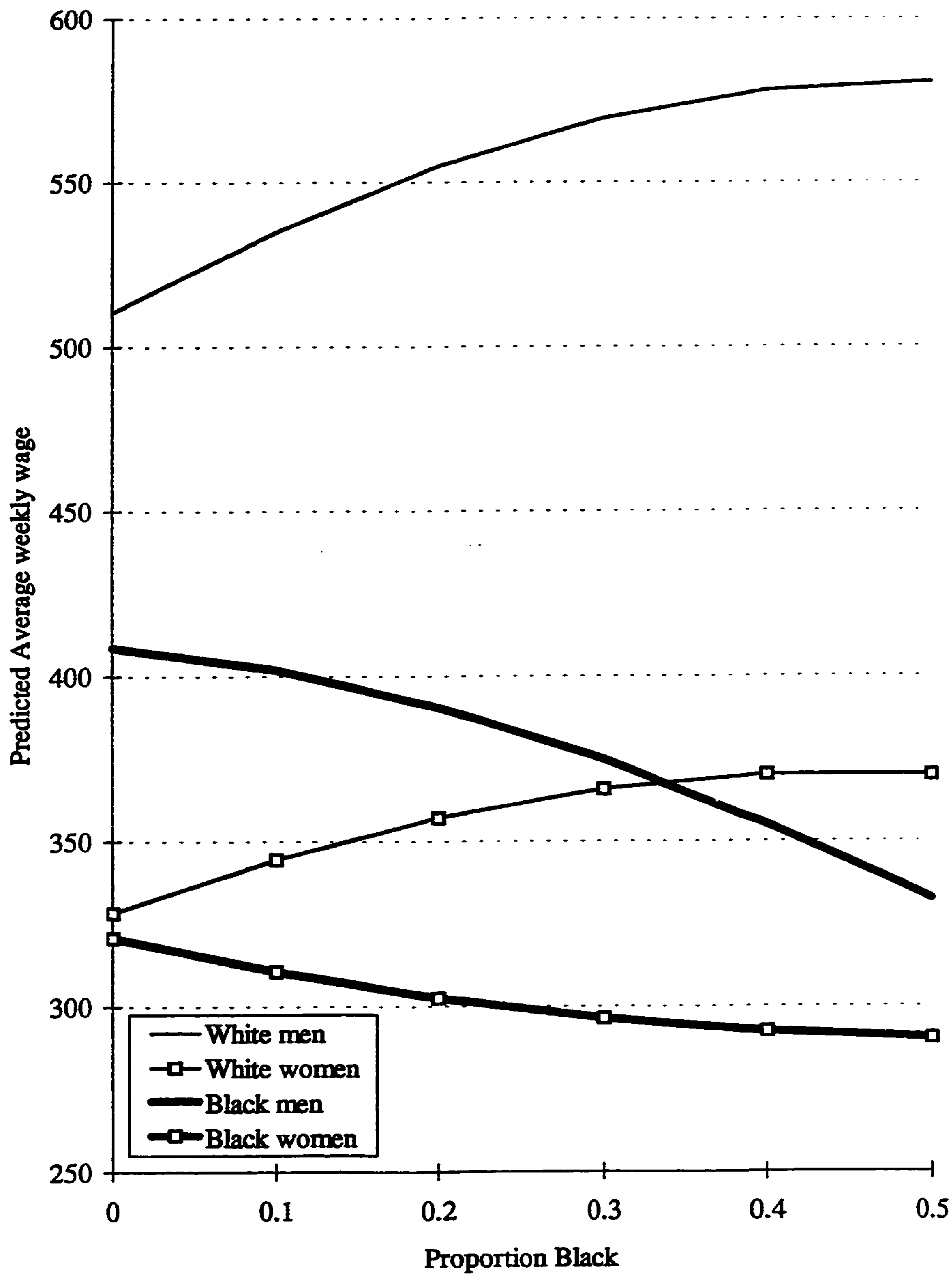


Figure 5.15. Proportion Black effects on Average Weekly Wage:
With individual-level and basic MA-level controls

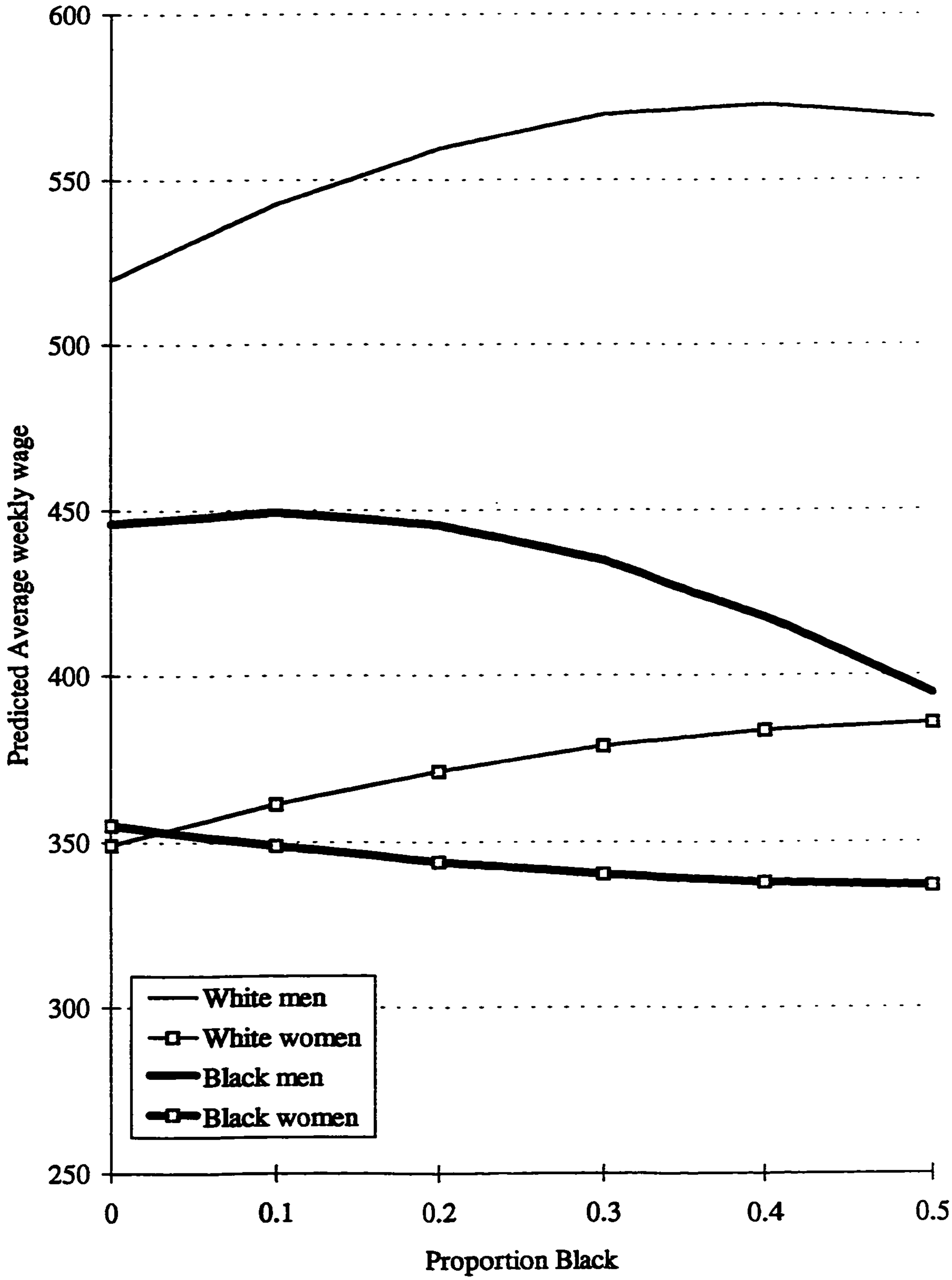
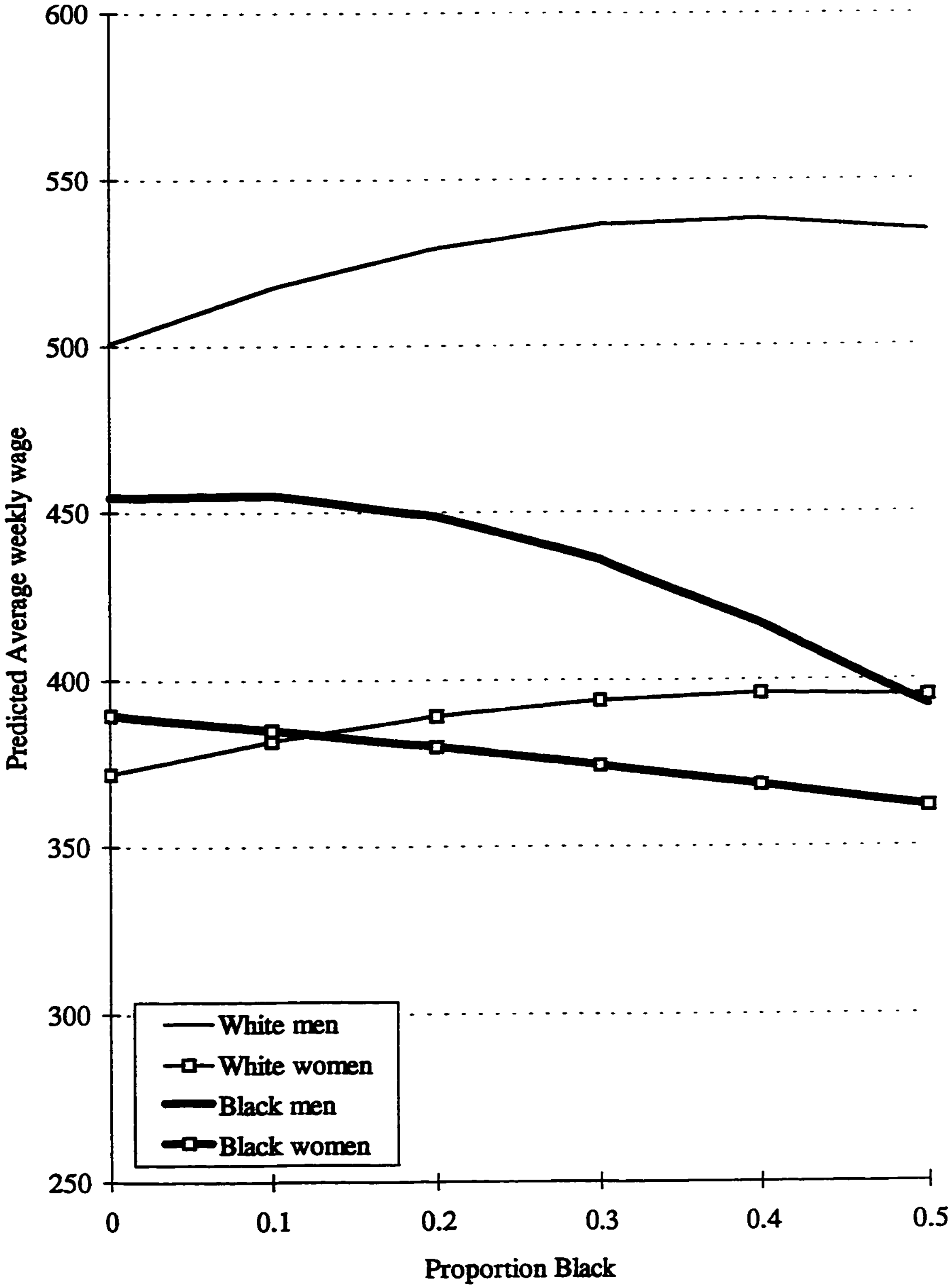


Figure 5.16. Proportion Black effects on Average Weekly Wage net of Occupation: With individual-level and basic MA-level controls



More complete results for these models are presented in Appendix **Table A5.4** which follows the same pattern as **Table A5.3**, except that the earnings table features a C series, in which MA-level effects on earnings net of occupation are presented. To summarize the pattern of PB effects here, effects on earnings are essentially positive for White workers, and negative for Black workers, with substantial reductions in the magnitude of the effects as both individual and MA-level controls are introduced. PB effects for White men are positive and significant in all but the last model of the C series, when occupational integration is added to the model which controls for occupation levels. PB effects for Black women are negative and significant in all models. For Black men, negative effects are significant in the models that do not include occupational integration. For White women, there are no significant PB effects, indicating that their PB slope parallels the (positive) White men's slope.

Results shown in **Table A5.4** shed light on several hypotheses. First, residential segregation has no significant effects on Black-White inequality. And inclusion of this variable does not reduce proportion Black effects. Therefore, the competition-threat hypothesis does not receive support in this step. The test for a crowding hypothesis with occupational segregation measures is more supporting. The inclusion of occupational integration measures substantially reduces PB effects, up to one-half for Black men and somewhat less for Black women. This is consistent with the crowding hypothesis, which posits that wages are lower when subordinate-group workers are restricted to a narrower range of occupations. Still, perhaps a more definitive test of this hypothesis would include the interaction of proportion Black and occupational integration, which is not included here. These results suggest a causal chain from proportion Black to occupational segregation to lower wages. This could also be the result of the hypothesized threat mechanism, however, because occupational segregation could be the result of greater discrimination on the part of employers.

Finally, full MA-level models for each outcome are presented in **Table A5.5**, which shows MA-level coefficients for occupational attainment, average weekly wage, and wage net of occupation in models that control for individual-level variables. (These provide detail to the column B model in **Table 5.5** and the column B and C models in **Table 5.6.**)

Regional effects show that White men fare best in the Northeast, other things equal, while White women have the greatest inequality in the North Central region and Black men and women are furthest behind White men in the South. Proportion Hispanic increases the occupation level and wages of White men, and decreases the gender gap faced by White women, while increasing the relative disadvantage of Black men. Asian population size increases the earnings of White men and women, and increases the inequality between Black women and White workers.

Economic context effects show that Black men's earnings are closer to White men's in markets with higher unemployment rates. Net in-migration is associated with decreased gender inequality. White women are in better occupations but do not earn more in markets that are more skewed toward industries they usually work in. Black men and women do better where industrial demand is most in their favor. And counter to expectations, higher scores on the Herfindahl index of industrial concentration appear to benefit Black men and women relative to White men.

5.3. Class interactions in earnings effects

In the final portion of the analysis, I conduct two sets of tests for differences in PB effects on average weekly wages across class groups. In the first, I use an adaptation of Szymanski's (1983) definition of working class to test whether PB effects cross class as well as gender lines. In the second, I adapt Tienda and Lii's (1987) use of returns to years of education, to see if PB is associated with increases in earnings inequality across educational attainment as well as gender lines.

For the first analysis, instead of three dummy variables and the intercept, the individual-level model now has seven dummy variables of interest, one each for White and Black men and women of working and non-working classes (non-working class White men are now the reference category). **Table 5.7** shows summary results from two such models, one with and one without the individual-level controls used previously. The results show that among White women above the working class, and both groups of White working class workers, PB effects do not significantly differ from the reference group, with or without individual-level controls. Most of the research on this question previously has concerned White working class men, and this group has the smallest deviation in the PB effect compared to the reference group. That means the benefits to Whites of relative Black population size are distributed equally across class as well as gender in this formulation.

Table 5.7 also shows that the brunt of Black men's PB-related losses fall on middle class Black men. The PB coefficients for working class Black men, while negative and larger than for other Whites, are not significant with or without individual-level controls. The same is not true of Black women.

Table 5.7. Metro area-level models of earnings by class status

	Without individual controls (A)	*With individual controls (B)*
Not working class		
White men	6.415 ***	6.322***
Proportion Black	0.487 **	0.480**
Proportion Black squared	-0.563	-0.587
White women	-0.394 ***	-0.336***
Proportion Black	0.002	-0.117
Proportion Black squared	-0.216	0.064
Black men	-0.163 ***	-0.098***
Proportion Black	-0.879 ***	-0.677**
Proportion Black squared	0.489	0.359
Black women	-0.433 ***	-0.343***
Proportion Black	-0.422	-0.459*
Proportion Black squared	0.106	0.272
Working class		
White men	-0.374 ***	-0.169***
Proportion Black	0.000	0.045
Proportion Black squared	-0.230	-0.236
White women	-0.818 ***	-0.612***
Proportion Black	-0.080	-0.121
Proportion Black squared	0.254	0.335
Black men	-0.545 ***	-0.317***
Proportion Black	-0.234	-0.146
Proportion Black squared	-0.738	-0.576
Black women	-0.777 ***	-0.540***
Proportion Black	-0.708 **	-0.685**
Proportion Black squared	0.548	0.717

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).
Note: Coefficients for other groups represent differences from non-working class White men. Basic MA-level controls, and individual-level controls for column B, not shown. Proportion Black^2 is centered at .01.

Most of the debate over White working class benefits from Black-White inequality has been more concerned with total effects than with effects controlling for individual differences. Both Reich (1972) and Szymanski (1983) argue that effects without individual controls should be considered when addressing this question. The summary **Table 5.8**, therefore, shows results from the model controlling for the basic MA-level variables but no individual-level variables (column A of **Table 5.7**). Rather than present a figure with eight lines, this table shows the predicted weekly wage of White men outside the working class as PB increases from 0 to .5, and the predicted relative wages of each other group.

Table 5.8. Summary of basic HLM model of average weekly wage by status
White male non-working class weekly wage, and relative wages for other groups.

	Proportion Black					
	0	0.1	0.2	0.3	0.4	0.5
Not working class						
White men ($)	614	641	662	675	682	680
White women (%)	.68	.67	.67	.66	.65	.64
Black men (%)	.85	.78	.72	.68	.64	.62
Black women (%)	.65	.62	.60	.58	.56	.54
Working class						
White men (%)	.69	.69	.68	.68	.67	.65
White women (%)	.44	.44	.44	.44	.44	.45
Black men (%)	.58	.57	.54	.51	.47	.43
Black women (%)	.46	.43	.41	.39	.38	.37

Note: Calculated from column A in **Table 5.7**.

The biggest predicted changes in **Table 5.8** occur in the lower ranges of PB. White men outside the working class are predicted to gain $48 as the Black population increases from 0 to 20 percent. The table also shows that the other White groups follow the same trajectory – their predicted wage as a proportion of the reference group is essentially unchanged. This is also the case for Black men in the working class up to 10 percent Black. Above that point, however, these men are predicted to fall further behind non-working class White men, eventually losing 15 percentage points to the level of White working class women. Both groups of Black women slip further behind the reference category in almost linear fashion, with middle class Black women falling 11 points compared to 9 points among working class Black women. The most dramatic predicted decline, however, is among middle class Black men. They fall a full 13 percentage points further behind non-working class men as the Black population reaches just 20 percent, and another 10 percent when the Black population reaches 50 percent.

The relative changes of Black men and Black women suggest that PB contributes to decreased gender inequality among Black workers, especially above the working class, because of Black middle class men's precipitous fall. This appears to be the only substantial PB effect on gender or class inequality in this analysis. (More detailed results are presented in **Table A5.6**, which walks through five models.)

In the second test of class differences in PB effects, I examine PB effects on returns to education. In the models, that means that the education-interaction terms (White-men-education, White-women-education, etc.) become dependent variables at the MA-level of the analysis. Results from four models are presented in **Table 5.10**, which shows the coefficients for years of education for each group as a function of proportion Black. Because I had no *a priori* reason to assume a nonlinear PB function, in this table I present results with and without a PB-squared term.

Table 5.10. Proportion Black effects on returns to education

Education returns	*Proportion Black only*		*Proportion Black and basic MA-level controls*	
White men	.091 ***	.089 ***	.094 ***	.095 ***
Proportion Black	.023 ***	.064 **	-.002	-.013
Proportion Black^2	--	-.119 *	--	.027
White women	.102 ***	.101 ***	.105 ***	.104 ***
Proportion Black	.007	.018	-.029 **	-.008
Proportion Black^2	--	-.033	--	-.052
Black men	.084 ***	.090 ***	.089 ***	.093 ***
Proportion Black	-.001	-.062	-.025	-.081
Proportion Black^2	--	.140	--	.124
Black women	.092 ***	.088 ***	.096 ***	.090 ***
Proportion Black	.055 ***	.093 +	.008	.072
Proportion Black^2	--	-.097	--	-.135

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).
Note: Individual controls not shown; basic MA controls not shown. Proportion Black^2 is centered at .01.

In the first two models, PB (and its square) is the only MA-level variable entered. There is a positive effect on White men's returns to education, diminishing at higher levels of PB. In the second model, which adds the basic MA-level controls, this effect is erased. In the linear model with MA-level controls PB is shown to reduce White women's returns to education, in other words narrowing the class differences among White women. This may be consistent with the results summarized in **Table 5.8**, in which non-working class White women slip a few percentage points compared to White men (calculated from a non-significant effect in **Table 5.7**). Thus there is not persuasive evidence that proportion Black increases class inequalities among White men, and it may reduce class inequalities among White women.

6. SUMMARY AND CONCLUSIONS

This research helps broaden our empirical understanding of the proportion Black effects on labor market inequality. With regard to hypothesis 1, that proportion Black is associated with increased Black-White inequality across labor market outcomes, the overview presented in **Table 6.1** is clear. The table indicates positive and negative signs for proportion Black effects in the models of the main analysis. It shows that proportion Black has positive effects on labor market outcomes for White men in all the basic models. On the other hand, PB has significant negative effects in every model for Black women, meaning that Black women face more inequality compared to White men on every outcome. Black men face greater inequality compared to White men in all the models that do not control for individual characteristics. For occupation and earnings, White women benefit in tandem with White men from increases in PB.

Hypothesis 2, that PB effects will be observed for women as well as men, is also supported. As **Table 6.1** shows, PB effects for White women are not statistically different from White men's effects in the occupation or earnings models. White women do have significantly smaller PB-related increases in employment and full-time year-round employment rates than White men. However, although the models do not test the significance of the difference between White women and Black women, the net results presented appear consistent with opposite effects for the two groups of women. The presence of larger Black populations, combined with greater discrimination against Black women workers, increases the labor market opportunities and rewards for White women as well as White men.

Table 6.1. Proportion Black effects summary

	White men	White women	Black men	Black women
	Absolute	*Relative to White men*		
Work 1+ weeks				
basic MA model only	+	-	-	-
Plus individual controls	+	-	o	-
Workers working FTYR				
basic MA model only	+	-	-	-
Plus individual controls	+	-	-	-
Occupational attainment				
basic MA model, no micro	+	o	-	-
Plus individual controls	+	o	o	-
Earnings				
basic MA model only	+	o	-	-
Plus individual controls	+	o	-	-
Earnings net of occupation				
basic MA and individual controls	+	o	-	-

Note: + or - indicates proportion Black effect at p<=.10.

The results with regard to gender are consistent with the discussion at the outset, in which it was suggested that larger Black population size allows White women to move up to higher positions in the racial division of paid reproductive labor. White women gain relative to Black women as proportion Black increases, and there is also some evidence for a negative correlation between Black male success and White women's integration, which suggests that White women benefit from discrimination specifically against Black men as well.

In employment status, PB was not associated with increasing employment rates for White women, but it appears associated with an increased likelihood of working full-time year-round. However, White women's employment and FTYR employment gap with White men also statistically increases as PB increases. This suggests a middle position for White women. On the one hand, the occupation and earnings results imply that White women have more reason to invest in labor market work in higher-PB areas, because they face better occupations and higher pay. In the FTYR results, this is consistent with the possibility suggested at the outset that a greater presence of lower-paid Black women and men to perform services might lead to lower costs for White women as they devote more time to their careers. This hypothesis is also supported by the finding that the size of the local Latino population also helps White women reduce the gender gap with White men.

On the other hand, the increased gap between White women and White men in employment outcomes ironically may be related to the increased opportunities for White men which benefit White women in their families. The marital status and other income results in the individual-level models show that White women's employment is strongly affected by the opportunities of other household members, presumably mostly spouses. Therefore, as labor market opportunities for White men improve, White women are less likely to pursue employment or FTYR employment (which is not true of Black women). The reduction in the negative PB coefficients for White women when individual characteristics are controlled supports this interpretation.

Likewise, class interactions are important here. With regard to hypothesis 3, that PB effects on earnings will be observed across class lines, results show that White men and women inside and outside of the working class benefit from PB effects, contrary to previous research in this field. My findings contradict Tienda and Lii's (1987:162) conclusion that (speaking of men only) "only college-educated whites gained from the presence of minorities, while whites with less education did not." They also find that

Black men with less education had the greatest negative percent minority effect, while I report no effects on returns to education for Black workers. In fact, my results by occupation group show that Black men above the middle class suffered the greatest negative PB effects.[21]

Tienda and Lii conclude that "competition and discrimination seem to be more severe among the well educated than among the less educated, who lack the power to bring about changes to improve their labor-market standing" (1987:162). My results show equal positive results across class for White workers. However, my finding that middle class Black men lose the most could be interpreted to show that White men outside the working class are more able to impose their will on local labor markets – resulting in lower wages for the Black men in closest competition with them. On the other hand, the difference could result from differential resources across class among Black workers. It may be that Black working class men suffer smaller PB-related losses because their work-places are more likely to be unionized, offering them some protection. Reich (1972) and others have argued that by dividing the working class, racism damages the prospects for both Black and White workers. My results indicate that White working class men do actually benefit from PB effects. Further investigation that considers the role of unionization and labor movements as intervening factors is warranted here.

Hypothesis 4, the queuing hypothesis, posited positive outcomes for all groups as proportion Black increases. Outside of the occupation analysis, there is little evidence

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[21] Tienda and Lii (1987) use data from 1980, include men only, and use different statistical models, making direct comparisons with the results inappropriate.

to support queuing effects here. In the occupation models that control for individual characteristics, each group had higher expected occupational attainment as a function of PB, which is the prediction of the queuing hypothesis. However, subsequent results show that this does not translate into increases in earnings. In the employment status models there was no sign of reduced underemployment effects for Black workers, as would be expected in a hiring queue. Hiring queue hypotheses do not predict increased joblessness as a result of increasing Black population size.

An important feature of the results presented here is the comparison of effects with and without controlling for individual-level characteristics, treated in hypothesis 5. This has demonstrated that a significant portion of the PB effect is mediated through differences in individual-level characteristics, as well as differences between individuals with similar observed characteristics, and thus the hypothesis is supported. This supports the argument that PB effects cannot be entirely attributed to contemporaneous racism on the part of employers or others with direct influence in the labor market. Some structural or long-term effects appear to be operating at the "pre-market" level for individuals.

For hypothesis 6, to examine competition-discrimination or threat mechanisms, I included controls for residential segregation as a proxy for anti-Black antagonism. Tests showed that residential segregation contributed to increases in White men's earnings (and increased some White gender gaps), and reduced Black women's earnings relative to White men. However, controlling for residential segregation did not reduce PB effects on labor-market outcomes, implying that if this measure does proxy for anti-Black antagonism, this is not the principal mechanism by which PB operates.

Finally, in a test for crowding effects proposed in hypothesis 7, I introduced measures of occupational segregation. It was reasoned that earnings would be depressed for groups that are more crowded into a narrower range of occupations, and that workers might be squeezed out of employment when there are too many "suitable" workers for a narrow range of occupations. These controls did have substantial effects, especially on White and Black women's earnings, but did not eliminate PB effects for Black women. For Black men, PB earnings effects were eliminated with the introduction of occupational segregation measures. Occupational segregation, an important part of labor market inequality, is thus a partial mechanism for PB effects, lending support to the role of crowding in Black-White inequality.

Reflecting upon the results from the two sets of segregation controls, some ambiguities arise. First, if Black-White residential segregation indicates long-term embedded racism, the results here do not support my contention that proportion Black effects are the result of the historical evolution of institutional practices at the local level. However, it should be noted that this mechanism was not thoroughly explored. Residential segregation was added only to one set of models with a full range of MA-level controls. So further investigation might reveal more residential segregation effects, especially given the strong positive correlation between such segregation and proportion Black.

At the same time, it is not clear that occupational segregation is testing only crowding effects. Might we not also assume that occupational segregation also measures some degree of local racism? Given that this measure did substantially reduce PB effects, it is possible that crowding and competition/threat are both proxied by these variables. Again, a more elaborate set of models and comparisons is needed to tease out this interpretation.

In addition, several testable alternatives remain unexplored. First, it is possible that racial-ethnic composition affects patterns of investment and development in ways that affect labor market inequality. Second, Black-White inequality in high-PB labor markets could be exacerbated by selective migration, by which Black workers with better opportunities have migrated to labor markets with smaller Black population proportions. Finally, given the long period of time over which this phenomenon has been observed, cyclical or self-fulfilling mechanisms are also plausible, whereby Whites develop anti-Black attitudes and practices based in part on the Black-White inequality they observe; this local tradition mechanism could shape political, economic and cultural institutions over time in ways that exacerbate Black-White inequality.

The "racial structure of society" in labor markets, which represents the aggregate of the "social relations and practices based on racial distinctions [that] develop at all societal levels," (Bonilla-Silva 1997) is conditioned by the relative size of the Black population. Greater relative size of the Black population appears to encourage the development of social, political and economic institutions and practices along racial-ethnic lines. The prominence of racial-ethnic divisions relative to other inequalities is thus partly conditioned by relative Black population size. This research is consistent with prior studies which showed that, at a given point in time, relative Black population size is associated with negative White attitudes and behaviors, which maintain and exacerbate the local racial structure – but this explanation appears insufficient. Contemporaneous attitude effects cannot account for long-term trends in the allocation of resources and determination of individual-level characteristics.

One may say ideologically that all Whites benefit from racism because of the privilege it entails. Or, alternatively, it may plausibly be argued that racism degrades the quality of life for people of all races. However, such arguments should take into consideration empirical evidence in support or contradiction to the claim. If it is true, as I believe these results show, that in general increased Black-White inequality brings labor-market benefits to Whites across gender and class lines, then this fact must be reckoned with. With regard to social movements, for example, an uncomplicated appeal to Blacks and Whites to confront racism out of a sense of self-interest will ring hollow if it is contradicted by observable facts on the ground. These issues need greater sustained attention, especially in quantitative studies of social stratification.

Larger relative Black population size means more "race" in the local economy, and more "racial" inequality by definition. The basic question asked in this project has therefore been, is more "race" good or bad for White and Black men and women at the individual level, and whom does Black-White inequality help or hurt in what ways? The unmistakable conclusion from these results is that when the Black population is larger, Black-White inequality is more salient, and more important relative to class and gender inequality. By what mechanism exactly this process develops has not been demonstrated, but I have shown in a consistent set of models that it applies to a series of labor market outcomes, and across gender and class groups – as well as within and across variation in individual-level characteristics besides racial-ethnicity. These results are consistent across distinct labor market outcomes, suggesting a depth and breadth to the relationship that has not previously been demonstrated. Black-White inequality again appears pervasive and structural to the U.S. system of social stratification.

APPENDIX A. Detailed Tables

Table A4.1. Metropolitan areas by population proportion Black.

Metropolitan Area Name	*Proportion Black*
Albany, GA MSA	0.455
Sumter, SC MSA	0.432
Pine Bluff, AR MSA	0.429
Jackson, MS MSA	0.424
Rocky Mount, NC MSA	0.418
Memphis, TN-AR-MS MSA	0.406
Florence, SC MSA	0.386
Columbus, GA-AL MSA	0.365
Montgomery, AL MSA	0.358
Macon, GA MSA	0.350
New Orleans, LA MSA	0.345
Shreveport-Bossier City, LA MSA	0.345
Savannah, GA MSA	0.341
Greenville, NC MSA	0.333
Goldsboro, NC MSA	0.322
Danville, VA MSA	0.316
Augusta-Aiken, GA-SC MSA	0.316
Fayetteville, NC MSA	0.314
Monroe, LA MSA	0.309
Jackson, TN MSA	0.309
Columbia, SC MSA	0.302
Charleston-North Charleston, SC MSA	0.300
Tallahassee, FL MSA	0.299
Baton Rouge, LA MSA	0.295
Richmond-Petersburg, VA MSA	0.290
Birmingham, AL MSA	0.286
Norfolk-Virginia Beach-Newport News, VA	0.281
Alexandria, LA MSA	0.278
Mobile, AL MSA	0.272
Lafayette, LA MSA	0.271
Tuscaloosa, AL MSA	0.258
Atlanta, GA MSA	0.251
Washington-Baltimore, DC-MD-VA-WV CMSA	0.250
Raleigh-Durham-Chapel Hill, NC MSA	0.240
Beaumont-Port Arthur, TX MSA	0.233
Lake Charles, LA MSA	0.228
Texarkana, TX-Texarkana, AR MSA	0.220
Dothan, AL MSA	0.211
Tyler, TX MSA	0.207
Athens, GA MSA	0.205
Longview-Marshall, TX MSA	0.204

Table A4.1 Continued. Metropolitan areas by population proportion Black

Metropolitan Area Name	*Proportion Black*
Detroit-Ann Arbor-Flint, MI CMSA	0.203
Clarksville-Hopkinsville, TN-KY MSA	0.203
Charlotte-Gastonia-Rock Hill, NC-SC MSA	0.199
Jacksonville, FL MSA	0.198
Little Rock-North Little Rock, AR MSA	0.198
Wilmington, NC MSA	0.193
Greensboro--Winston-Salem--High Point, NC	0.192
Killeen-Temple, TX MSA	0.190
Gainesville, FL MSA	0.188
Biloxi-Gulfport-Pascagoula, MS MSA	0.188
Chicago-Gary-Kenosha, IL-IN-WI CMSA	0.188
Huntsville, AL MSA	0.187
Anniston, AL MSA	0.186
Dover, DE MSA	0.183
Philadelphia-Wilmington-Atlantic City, P	0.181
Lynchburg, VA MSA	0.181
Houston-Galveston-Brazoria, TX CMSA	0.176
Lawton, OK MSA	0.176
Miami-Fort Lauderdale, FL CMSA	0.175
Myrtle Beach, SC MSA	0.174
Greenville-Spartanburg-Anderson, SC MSA	0.174
St. Louis, MO-IL MSA	0.169
New York-Northern New Jersey-Long Island	0.162
Pensacola, FL MSA	0.161
Waco, TX MSA	0.155
Cleveland-Akron, OH CMSA	0.154
Nashville, TN MSA	0.154
Benton Harbor, MI MSA	0.153
Houma, LA MSA	0.145
Charlottesville, VA MSA	0.145
Dallas-Fort Worth, TX CMSA	0.139
Gadsden, AL MSA	0.139
Chattanooga, TN-GA MSA	0.136
Milwaukee-Racine, WI CMSA	0.132
Lakeland-Winter Haven, FL MSA	0.132
Dayton-Springfield, OH MSA	0.132
Louisville, KY-IN MSA	0.128
Ocala, FL MSA	0.126
Indianapolis & Kokomo, IN MSAs	0.125
Florence, AL MSA	0.123
Kansas City & Lawrence, MO-KS MSA	0.122
Roanoke, VA MSA	0.121
Columbus, OH MSA	0.121
Fort Pierce-Port St. Lucie, FL MSA	0.120

Table A4.1 Continued. Metropolitan areas by population proportion Black

Metropolitan Area Name	*Proportion Black*
Decatur, IL MSA	0.120
West Palm Beach-Boca Raton, FL MSA	0.119
Orlando, FL MSA	0.117
Toledo, OH MSA	0.112
Decatur, AL MSA	0.112
Cincinnati-Hamilton, OH-KY-IN CMSA	0.112
Bryan-College Station, TX MSA	0.111
Panama City, FL MSA	0.104
Oklahoma City, OK MSA	0.104
Buffalo-Niagara Falls, NY MSA	0.101
Lexington, KY MSA	0.098
South Bend, IN MSA	0.096
Saginaw-Bay City-Midland, MI MSA	0.096
Champaign-Urbana, IL MSA	0.096
Youngstown-Warren, OH MSA	0.093
Austin-San Marcos, TX MSA	0.091
Kalamazoo-Battle Creek, MI MSA	0.089
Fort Walton Beach, FL MSA	0.089
Daytona Beach, FL MSA	0.088
Tampa-St. Petersburg-Clearwater, FL MSA	0.087
Rochester, NY MSA	0.087
Wichita Falls, TX MSA	0.084
San Francisco-Oakland-San Jose, CA CMSA	0.083
Las Vegas, NV-AZ MSA	0.082
Tulsa, OK MSA	0.081
Los Angeles-Riverside-Orange County, CA	0.081
Hartford, CT NECMA	0.081
Lima, OH MSA	0.079
Omaha, NE-IA MSA	0.079
Topeka, KS MSA	0.079
Jackson, MI MSA	0.079
Melbourne-Titusville-Palm Bay, FL MSA	0.077
Springfield, IL MSA	0.075
Pittsburgh, PA MSA	0.075
Wichita, KS MSA	0.075
Peoria-Pekin, IL MSA	0.074
Asheville, NC MSA	0.074
Columbia, MO MSA	0.074
Lubbock, TX MSA	0.073
Hickory-Morganton, NC MSA	0.073
Lansing-East Lansing, MI MSA	0.071
Rockford, IL MSA	0.070
Colorado Springs, CO MSA	0.069
Waterloo-Cedar Falls, IA MSA	0.069

Table A4.1 Continued. Metropolitan areas by population proportion Black

Metropolitan Area Name	*Proportion Black*
Sherman-Denison, TX MSA	0.068
Grand Rapids-Muskegon-Holland, MI MSA	0.067
Sacramento-Yolo, CA CMSA	0.067
Fort Wayne, IN MSA	0.066
Harrisburg-Lebanon-Carlisle, PA MSA	0.066
San Antonio, TX MSA	0.065
Victoria, TX MSA	0.065
Fort Myers-Cape Coral, FL MSA	0.064
Canton-Massillon, OH MSA	0.062
Anchorage, AK MSA	0.062
Abilene, TX MSA	0.061
Salinas, CA MSA	0.061
San Diego, CA MSA	0.060
Odessa-Midland, TX MSA	0.060
Knoxville, TN MSA	0.060
Springfield, MA NECMA	0.058
Evansville-Henderson, IN-KY MSA	0.057
Muncie, IN MSA	0.057
Mansfield, OH MSA	0.057
Sarasota-Bradenton, FL MSA	0.057
Syracuse, NY MSA	0.055
Charleston, WV MSA	0.055
Bakersfield, CA MSA	0.053
Stockton-Lodi, CA MSA	0.053
Davenport-Moline-Rock Island, IA-IL MSA	0.053
Erie, PA MSA	0.051
Elmira, NY MSA	0.051
Amarillo, TX MSA	0.050
Sharon, PA MSA	0.048
Denver-Boulder-Greeley, CO CMSA	0.048
Merced, CA MSA	0.047
Janesville-Beloit, WI MSA	0.047
New London-Norwich, CT NECMA	0.046
Elkhart-Goshen, IN MSA	0.045
Fresno, CA MSA	0.045
Albany-Schenectady-Troy, NY MSA	0.045
Seattle-Tacoma-Bremerton, WA CMSA	0.043
Bloomington-Normal, IL MSA	0.042
Boston-Worcester-Lawrence-Lowell-Brockton	0.042
Utica-Rome, NY MSA	0.041
Terre Haute, IN MSA	0.041
Owensboro, KY MSA	0.039
Steubenville-Weirton, OH-WV MSA	0.039
San Angelo, TX MSA	0.039

Table A4.1 Continued. Metropolitan areas by population proportion Black

Metropolitan Area Name	*Proportion Black*
Naples, FL MSA	0.038
Fort Smith, AR-OK MSA	0.038
Corpus Christi, TX MSA	0.037
Des Moines, IA MSA	0.037
Punta Gorda, FL MSA	0.035
Enid, OK MSA	0.035
Minneapolis-St. Paul, MN-WI MSA	0.035
El Paso, TX MSA	0.034
Phoenix-Mesa, AZ MSA	0.034
Providence-Warwick-Pawtucket, RI NECMA	0.034
York, PA MSA	0.032
Tucson, AZ MSA	0.029
Honolulu, HI MSA	0.029
Cheyenne, WY MSA	0.028
Madison, WI MSA	0.028
St. Joseph, MO MSA	0.028
Reading, PA MSA	0.028
Yuba City, CA MSA	0.027
Bloomington, IN MSA	0.025
Santa Barbara-Santa Maria-Lompoc, CA MSA	0.025
Yuma, AZ MSA	0.024
Portland-Salem, OR-WA CMSA	0.024
San Luis Obispo-Atascadero-Paso Robles,	0.023
Cumberland, MD-WV MSA	0.023
Albuquerque, NM MSA	0.023
Williamsport, PA MSA	0.022
Lincoln, NE MSA	0.022
Reno, NV MSA	0.021
Lancaster, PA MSA	0.021
State College, PA MSA	0.021
Huntington-Ashland, WV-KY-OH MSA	0.021
Allentown-Bethlehem-Easton, PA MSA	0.019
Johnson City-Kingsport-Bristol, TN-VA MS	0.019
Cedar Rapids, IA MSA	0.019
Sioux City, IA-NE MSA	0.018
Wheeling, WV-OH MSA	0.018
Glens Falls, NY MSA	0.017
Pittsfield, MA NECMA	0.017
Modesto, CA MSA	0.016
Pueblo, CO MSA	0.016
Johnstown, PA MSA	0.016
Lafayette, IN MSA	0.016
Binghamton, NY MSA	0.015
Jamestown, NY MSA	0.015

Table A4.1 Continued. Metropolitan areas by population proportion Black

Metropolitan Area Name	*Proportion Black*
Barnstable-Yarmouth, MA NECMA	0.015
Rapid City, SD MSA	0.015
Las Cruces, NM MSA	0.014
Springfield, MO MSA	0.014
Visalia-Tulare-Porterville, CA MSA	0.014
Spokane, WA MSA	0.014
Richland-Kennewick-Pasco, WA MSA	0.013
Iowa City & Dubuque, IA MSAs	0.013
Great Falls, MT MSA	0.012
Chico-Paradise, CA MSA	0.011
Yakima, WA MSA	0.010
Parkersburg-Marietta, WV-OH MSA	0.010
Joplin, MO MSA	0.009
Scranton--Wilkes-Barre--Hazleton, PA MSA	0.009
Salt Lake City-Ogden, UT MSA	0.009
Grand Forks & Bismarck, ND MSAs	0.008
Altoona, PA MSA	0.008
Fayetteville-Springdale-Rogers, AR MSA	0.008
Redding, CA MSA	0.007
Rochester, MN MSA	0.007
Eugene-Springfield, OR MSA	0.007
Portland, ME NECMA	0.007
Burlington, VT NECMA	0.006
Casper, WY MSA	0.006
Sioux Falls, SD MSA	0.006
Duluth-Superior, MN-WI MSA	0.005
Fort Collins-Loveland, CO MSA	0.005
Green Bay & Sheboygan, WI MSAs	0.005
Bellingham, WA MSA	0.005
Bangor & Lewiston-Auburn, ME NECMAs	0.004
Boise City, ID MSA	0.004
Santa Fe, NM MSA	0.004
La Crosse, WI-MN MSA	0.004
St. Cloud, MN MSA	0.003
Billings, MT MSA	0.003
Eau Claire, WI MSA	0.003
Appleton-Oshkosh-Neenah, WI MSA	0.003
Fargo-Moorhead, ND-MN MSA	0.003
Brownsville-Harlingen-San Benito, TX MSA	0.002
McAllen-Edinburg-Mission, TX MSA	0.002
Medford-Ashland, OR MSA	0.002
Provo-Orem, UT MSA	0.001
Wausau, WI MSA	0.001
Laredo, TX MSA	0.0003

Table A4.2. Correlations between metro-area variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Proportion Black	--	--	--	--	--	--	--	--	--
(2) WW occ. integ.	-0.246 ***	--	--	--	--	--	--	--	--
(3) BM occ. integ.	-0.027	0.276 ***	--	--	--	--	--	--	--
(4) BW occ. integ.	-0.607 ***	0.482 ***	0.223 ***	--	--	--	--	--	--
(5) Manufacturing	-0.112 +	-0.329 ***	0.006	0.125 *	--	--	--	--	--
(6) Unemployment	0.045	-0.319 ***	-0.133 *	-0.223 ***	0.003	--	--	--	--
(7) Net migration	-0.071	0.179 **	0.043	0.147 *	-0.184 **	-0.353 ***	--	--	--
(8) AFDC max.	-0.422 ***	0.358 ***	0.423 ***	0.330 ***	0.088	0.045	-0.137 *	--	--
(9) WW demand	0.089	0.265 ***	0.022	0.018	-0.501 ***	-0.033	-0.169 **	-0.013	--
(10) BM demand	0.287 ***	-0.152 *	0.105 +	-0.088	0.334 ***	-0.147 *	0.076	-0.138 *	-0.641 ***
(11) BW demand	0.280 ***	0.198 ***	0.009	-0.029	-0.513 ***	-0.090	-0.130 *	-0.128 *	0.884 ***
(12) West	-0.443 ***	0.469 ***	0.295 ***	0.424 ***	-0.104 +	0.035	0.146 *	0.561 ***	-0.275 ***
(13) South	0.484 ***	-0.116 +	-0.283 ***	-0.396 ***	-0.292 ***	-0.063	0.297 ***	-0.693 ***	-0.097
(14) North Central	-0.014	-0.200 ***	-0.116 +	0.184 **	0.401 ***	0.012	-0.185 **	-0.093	-0.054
(15) Prop. Asian	-0.165 **	0.479 ***	0.303 ***	0.164 **	-0.140 *	-0.105 +	-0.095	0.522 ***	-0.049
(16) Prop. Hispanic	-0.234 ***	0.390 ***	0.127 *	-0.016	-0.217 ***	0.447 ***	-0.128 *	0.282 ***	-0.102
(17) Segregation	0.416 ***	-0.345 ***	0.221 ***	-0.401 ***	0.181 **	0.064	-0.268 ***	0.007	0.067
(18) Seg. missing	0.033	-0.010	-0.130 *	-0.025	-0.019	-0.001	0.117 +	-0.012	-0.034
(19) Travel time	0.369 ***	0.195 **	0.496 ***	-0.357 ***	-0.134 *	-0.033	-0.288 ***	0.261 ***	0.165 **
(20) Herfindahl	-0.183 **	-0.151 *	-0.306 ***	0.277 ***	0.496 ***	0.047	0.113 +	-0.125 *	-0.125 *

Note: Weighted by metro-area population size. + p <=.1; * p <=.05; ** p<=.01; ***p<=.001.

Table A4.2 continued. Correlations between metro-area variables

	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
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(11)	-0.325 ***	--	--	--	--	--	--	--	--	--
(12)	0.021	-0.328 ***	--	--	--	--	--	--	--	--
(13)	0.222 ***	0.085	-0.371 ***	--	--	--	--	--	--	--
(14)	0.021	-0.126 *	-0.290 ***	-0.364 ***	--	--	--	--	--	--
(15)	0.093	-0.061	0.536 ***	-0.246 ***	-0.198 ***	--	--	--	--	--
(16)	-0.060	-0.202 ***	0.454 ***	-0.049	-0.296 ***	0.285 ***	--	--	--	--
(17)	0.119 +	0.038	-0.447 ***	-0.183 **	0.372 ***	-0.155 *	-0.191 **	--	--	--
(18)	-0.018	-0.015	-0.002	0.044	-0.046	-0.042	-0.030	-0.066	--	--
(19)	0.153 *	0.154 *	-0.005	-0.143 *	-0.132 *	0.306 ***	0.214 ***	0.523 ***	-0.136 *	--
(20)	-0.064	-0.119 +	-0.202 ***	-0.040	0.381 ***	-0.235 ***	-0.303 ***	-0.110 +	0.096	-0.557 ***

Note: Weighted by metro-area population size. + p <=.1; * p <=.05; ** p<=.01; ***p<=.001.

Table A5.1. Metro area-level models for working 1+ weeks in 1989

White men	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
Intercept	3.814 ***	3.811 ***	3.712 ***	3.710 ***	3.700 ***
Proportion Black	-	0.199	0.596 *	0.792 **	0.996 ***
South	-	-	-0.123 +	-0.250 **	-0.280 ***
North Central	-	-	0.059	0.056	-0.056
West	-	-	-0.034	-0.170 +	-0.303 ***
Proportion Asian	-	-	0.394	0.394	-0.277
Proportion Hispanic	-	-	-0.399 *	-0.375 +	-0.894 ***
Population (ln)	-	-	0.052 +	0.090 *	0.096 **
Net in-migration	-	-	0.997 **	0.848 +	-0.034
White wom. demand	-	-	0.039	0.032	-0.131 **
Black men demand	-	-	0.277	0.184	-0.290
Black wom. demand	-	-	-0.215	-0.295	0.035
Manufacturing	-	-	0.192	-0.107	-0.331
Herfindahl	-	-	-3.165	-1.835	-5.419 *
AFDC4 (000's)	-	-	-0.027	-0.108	-0.226
Travel time	-	-	-0.020 *	-0.018	-0.028 **
Res. segregation	-	-	-	-0.708 **	-0.329 +
Res. seg. missing	-	-	-	0.280 +	0.234 +
WW occ integration	-	-	-	-	6.828 ***
BM occ integration	-	-	-	-	-0.453
BW occ integration	-	-	-	-	0.677
White women	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
Intercept	-1.704 ***	-1.645 ***	-1.592 ***	-1.597 ***	-1.597 ***
Proportion Black	-	-0.781 ***	-0.655 **	-0.776 **	-0.829 **
South	-	-	0.114 +	0.180 **	0.194 **
North Central	-	-	0.095 +	0.092 *	0.112 *
West	-	-	0.122 *	0.148 *	0.171 *
Proportion Asian	-	-	-0.370	-0.503	-0.256
Proportion Hispanic	-	-	-0.002	-0.106	-0.007
Population (ln)	-	-	-0.015	-0.019	-0.019
Net in-migration	-	-	-0.175	0.055	0.006
White wom. demand	-	-	0.106 *	0.085 +	0.102 *
Black men demand	-	-	0.237	0.273	0.288
Black wom. demand	-	-	-0.153	-0.033	-0.046
Manufacturing	-	-	0.688	0.737 +	0.746 +
Herfindahl	-	-	1.152	0.241	1.147
AFDC4 (000's)	-	-	0.213	0.238 +	0.274 *
Travel time	-	-	-0.005	-0.004	-0.003
Res. segregation	-	-	-	0.073	0.081
Res. seg. missing	-	-	-	-0.217	-0.209
WW occ integration	-	-	-	-	-0.762
BM occ integration	-	-	-	-	0.076
BW occ integration	-	-	-	-	-0.187

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).
Note: Coefficients for other groups represent differences from White men.

Table A5.1 continued. Metro area-level models for working 1+ weeks in 1989.

Black men	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
Intercept	-0.978 ***	-1.004 ***	-0.755 ***	-0.693 ***	-0.832 ***
Proportion Black	-	-0.152	-0.622	-0.926 +	-0.822
South	-	-	0.237	0.293 +	0.245
North Central	-	-	-0.085	-0.018	-0.042
West	-	-	0.075	-0.034	-0.072
Proportion Asian	-	-	2.144	1.066	1.480
Proportion Hispanic	-	-	-0.473	-0.711 +	-0.443
Population (ln)	-	-	-0.100	-0.075	-0.216 **
Net in-migration	-	-	0.853	1.276	0.705
White wom. demand	-	-	0.187 +	0.194 +	0.202 +
Black men demand	-	-	0.243	0.420	0.380
Black wom. demand	-	-	-0.583	-0.547	-0.724
Manufacturing	-	-	-0.535	-0.779	-0.472
Herfindahl	-	-	11.582 *	10.081 *	9.694 +
AFDC4 (000's)	-	-	0.058	0.182	0.102
Travel time	-	-	-0.002	0.012	0.022
Res. segregation	-	-	-	-1.013 *	-0.636
Res. seg. missing	-	-	-	0.260	0.145
WW occ integration	-	-	-	-	1.345
BM occ integration	-	-	-	-	4.613 ***
BW occ integration	-	-	-	-	-2.321
Black women	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
Intercept	-1.714 ***	-1.751 ***	-1.572 ***	-1.571 ***	-1.554 ***
Proportion Black	-	-0.032	-0.969 **	-1.228 **	-1.630 ***
South	-	-	0.185	0.267 +	0.248 +
North Central	-	-	-0.115	-0.138	-0.128
West	-	-	0.044	0.119	0.152
Proportion Asian	-	-	-0.717	-0.634	-0.984
Proportion Hispanic	-	-	0.079	-0.076	-0.219
Population (ln)	-	-	-0.089 +	-0.093 +	-0.140 *
Net in-migration	-	-	1.853 **	2.073 **	1.562 *
White wom. demand	-	-	0.036	-0.009	-0.003
Black men demand	-	-	0.102	0.016	0.150
Black wom. demand	-	-	-0.061	0.175	0.161
Manufacturing	-	-	0.212	0.350	0.835
Herfindahl	-	-	3.264	2.299	1.324
AFDC4 (000's)	-	-	-0.331	-0.365	-0.357
Travel time	-	-	0.022	0.021	0.022
Res. segregation	-	-	-	0.422	0.537
Res. seg. missing	-	-	-	-0.060	-0.084
WW occ integration	-	-	-	-	2.793
BM occ integration	-	-	-	-	1.320
BW occ integration	-	-	-	-	-3.033 +

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).
Note: Coefficients for other groups represent differences from White men.

Table A5.2. Metro area-level models for working full-time year-round in 1989.

White men	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
Intercept	1.304 ***	1.231 ***	1.224 ***	1.219 ***	1.214 ***
Proportion Black	-	0.710 ***	0.696 ***	0.767 ***	0.812 ***
South	-	-	-0.179 ***	-0.232 ***	-0.242 ***
North Central	-	-	-0.018	-0.023	-0.056
West	-	-	-0.267 ***	-0.323 ***	-0.368 ***
Proportion Asian	-	-	1.002 ***	1.006 **	0.822 *
Proportion Hispanic	-	-	0.095	0.077	-0.090
Population (ln)	-	-	0.030 +	0.045 *	0.038
Net in-migration	-	-	0.893 ***	0.866 **	0.481 +
White wom. demand	-	-	0.006	0.003	-0.050
Black men demand	-	-	0.239	0.230	0.057
Black wom. demand	-	-	0.170	0.149	0.243
Manufacturing	-	-	0.889 ***	0.772 *	0.662 *
Herfindahl	-	-	-2.529 *	-2.329	-3.403 *
AFDC4 (000's)	-	-	-0.152 +	-0.201 +	-0.243 *
Travel time	-	-	-0.010	-0.009	-0.013 +
Res. segregation	-	-	-	-0.281 *	-0.143
Res. seg. missing	-	-	-	0.047	0.032
WW occ integration	-	-	-	-	2.373 ***
BM occ integration	-	-	-	-	0.188
BW occ integration	-	-	-	-	0.095
White women	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
Intercept	-1.011 ***	-1.013 ***	-0.948 ***	-0.942 ***	-0.944 ***
Proportion Black	-	0.017	-0.444 **	-0.510 **	-0.499 **
South	-	-	0.228 ***	0.270 ***	0.270 ***
North Central	-	-	0.065 *	0.072 *	0.070 +
West	-	-	0.171 ***	0.198 ***	0.202 ***
Proportion Asian	-	-	-0.084	-0.126	-0.118
Proportion Hispanic	-	-	-0.131	-0.141	-0.148
Population (ln)	-	-	0.006	0.004	0.013
Net inmigration	-	-	-0.512 *	-0.487 +	-0.452
White wom. demand	-	-	0.039	0.031	0.027
Black men demand	-	-	-0.044	-0.065	-0.076
Black wom. demand	-	-	-0.124	-0.081	-0.056
Manufacturing	-	-	-0.542 +	-0.500 +	-0.473
Herfindahl	-	-	0.493	0.383	0.380
AFDC4 (000's)	-	-	-0.070	-0.042	-0.043
Travel time	-	-	-0.002	-0.003	-0.003
Res. segregation	-	-	-	0.093	0.104
Res. seg. missing	-	-	-	0.009	0.010
WW occ integration	-	-	-	-	0.019
BM occ integration	-	-	-	-	-0.267
BW occ integration	-	-	-	-	0.026

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).

Note: Coefficients for other groups represent differences from White men.

Table A5.2 continued. Metro area-level models for working full-time year-round.

Black men	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
Intercept	-0.374 ***	-0.316 ***	-0.231 ***	-0.209 **	-0.229 **
Proportion Black	-	-0.495 *	-0.876 **	-1.006 **	-0.810 *
South	-	-	0.115	0.164	0.162
North Central	-	-	-0.087	-0.039	-0.056
West	-	-	0.032	0.043	0.025
Proportion Asian	-	-	-0.777	-0.931	-0.713
Proportion Hispanic	-	-	0.193	0.096	0.278
Population (ln)	-	-	-0.029	-0.008	-0.007
Net inmigration	-	-	-0.055	-0.147	0.127
White wom. demand	-	-	-0.032	-0.047	-0.036
Black men demand	-	-	0.125	0.071	0.026
Black wom. demand	-	-	0.340	0.392	0.344
Manufacturing	-	-	0.382	0.287	0.296
Herfindahl	-	-	-1.704	-2.148	-1.821
AFDC4 (000's)	-	-	0.379 +	0.377 +	0.351
Travel time	-	-	0.000	-0.001	0.004
Res. segregation	-	-	-	-0.257	-0.284
Res. seg. missing	-	-	-	0.145	0.140
WW occ integration	-	-	-	-	-1.566
BM occ integration	-	-	-	-	-0.281
BW occ integration	-	-	-	-	1.329
Black women	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
Intercept	-0.862 ***	-0.719 ***	-0.749 ***	-0.758 ***	-0.711 ***
Proportion Black	-	-1.022 ***	-1.108 ***	-1.112 ***	-1.122 **
South	-	-	-0.124	-0.075	-0.071
North Central	-	-	-0.186 *	-0.192 *	-0.200 *
West	-	-	0.074	0.111	0.115
Proportion Asian	-	-	-1.609 *	-1.510 +	-1.575 +
Proportion Hispanic	-	-	-0.069	-0.039	-0.173
Population (ln)	-	-	0.025	0.004	0.051
Net inmigration	-	-	-0.874	-0.734	-0.672
White wom. demand	-	-	-0.088	-0.093	-0.113
Black men demand	-	-	-0.322	-0.332	-0.375
Black wom. demand	-	-	0.334	0.367	0.458
Manufacturing	-	-	-1.211 +	-1.017	-1.052 +
Herfindahl	-	-	4.486	3.908	3.446
AFDC4 (000's)	-	-	-0.165	-0.098	-0.070
Travel time	-	-	0.014	0.016	0.012
Res. segregation	-	-	-	0.232	0.154
Res. seg. missing	-	-	-	-0.165	-0.157
WW occ integration	-	-	-	-	0.175
BM occ integration	-	-	-	-	-1.737 *
BW occ integration	-	-	-	-	0.799

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).

Note: Coefficients for other groups represent differences from White men.

Table A5.3. Metro area-level models of occupational attainment

	No MA variables	PB only	Basic MA model	(3) + Res. seg	(4) + Occ. seg
WHITE MEN	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
A) No individual controls					
Intercept	6.031***	5.997***	6.002***	5.998***	6.004***
Proportion Black		.385***	.309***	.349***	.284***
Proportion Black squared		-.586**	-.278	-.342+	-.197
Residential segregation				-.045*	-.031
WW occup integration					.294**
BM occup integration					.111*
BW occup integration					.053
B) With individual controls					
Intercept	6.045***	6.008***	6.020***	6.019***	6.024***
Proportion Black		.436***	.275***	.292***	.230***
Proportion Black squared		-.660***	-.319*	-.338*	-.192
Residential segregation				-.018	-.021
WW occup integration					-.034
BM occup integration					.115**
BW occup integration					.019
WHITE WOMEN	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
A) No individual controls					
Intercept	-.245***	-.243***	-.246***	-.245***	-.242***
Proportion Black		-.014	-.007	-.030	-.069
Proportion Black squared		-.063	.089	.115	.182
Residential segregation				.025	.036*
WW occup integration					.322***
BM occup integration					.039
BW occup integration					-.039
B) With individual controls					
Intercept	-.240***	-.233***	-.235***	-.233***	-.232***
Proportion Black		-.082	-.089	-.108+	-.128*
Proportion Black squared		.118	.282*	.318*	.334*
Residential segregation				.020	.035*
WW occup integration					.375***
BM occup integration					.000
BW occup integration					-.050

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).

Note: Individual controls not shown; models 3-5 include basic MA controls not shown.

Table A5.3 Continued.

	No MA variables	PB only	Basic MA model	(3) + Res. seg	(4) + Occ. seg
BLACK MEN	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
A) No individual controls					
Intercept	-.203***	-.128***	-.159***	-.159***	-.172***
Proportion Black		-.780***	-.382**	-.368**	-.255+
Proportion Black squared		1.307***	.383	.372	.302
Residential segregation				-.069+	-.074*
WW occup integration					-.595**
BM occup integration					.033
BW occup integration					.479**
B) With individual controls					
Intercept	-.149***	-.106***	-.137***	-.137***	-.141***
Proportion Black		-.463***	-.078	-.062	-.044
Proportion Black squared		.847***	.153	.138	.158
Residential segregation				-.052	-.049
WW occup integration					-.141
BM occup integration					.060
BW occup integration					.146
BLACK WOMEN	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
A) No individual controls					
Intercept	-.385***	-.302***	-.312***	-.311***	-.342***
Proportion Black		-.833***	-.797***	-.810***	-.409**
Proportion Black squared		1.319***	1.287***	1.264***	.718*
Residential segregation				-.021	-.009
WW occup integration					-.388+
BM occup integration					-.363***
BW occup integration					1.175***
B) With individual controls					
Intercept	-.330***	-.268***	-.282***	-.281***	-.296***
Proportion Black		-.634***	-.544***	-.559***	-.314*
Proportion Black squared		.930**	1.021***	1.032***	.636*
Residential segregation				-.006	.008
WW occup integration					.192
BM occup integration					-.360***
BW occup integration					.664***

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).

Note: Individual controls not shown; models 3-5 include basic MA controls not shown.

Table A5.4. Metro area-level models of average weekly wage

WHITE MEN	No MA variables (1)	PB only (2)	Basic MA model (3)	(3) + Res. seg (4)	(4) + Occ. seg (5)
A) No individual controls					
Intercept	6.279***	6.240***	6.230***	6.233***	6.236***
Proportion Black		.545**	.524**	.491**	.448*
Proportion Black squared		-1.498**	-.534	-.432	-.263
Residential segregation				.038	.069
WW occup integration					.451+
BM occup integration					.177
BW occup integration					.361+
B) With individual controls					
Intercept	6.291***	6.242***	6.246***	6.251***	6.256***
Proportion Black		.667***	.492**	.437*	.363*
Proportion Black squared		-1.752***	-.625	-.492	-.251
Residential segregation				.063	.075+
WW occup integration					.095
BM occup integration					.238*
BW occup integration					.306+
C) Individual controls including occupation					
Intercept	6.245***	6.213***	6.211***	6.216***	6.219***
Proportion Black		.480**	.375*	.314+	.267
Proportion Black squared		-1.467**	-.487	-.349	-.172
Residential segregation				.069	.082+
WW occup integration					.114
BM occup integration					.186+
BW occup integration					.291+

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).

Note: Coefficients for other groups represent differences from White men. Basic MA-level controls and individual-level controls not shown. Proportion Black^2 is centered at .01.

Table A5.4. Continued.

	No MA variables	PB only	Basic MA model	(3) + Res. seg	(4) + Occ. seg
WHITE WOMEN	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
A) No individual controls					
Intercept	-.441***	-.451***	-.442***	-.448***	-.441***
Proportion Black		.140	.014	.072	-.013
Proportion Black squared		-.378	-.067	-.248	-.099
Residential segregation				-.071*	-.044
WW occup integration					.682***
BM occup integration					.089
BW occup integration					-.056
B) With individual controls					
Intercept	-.404***	-.404***	-.396***	-.402***	-.401***
Proportion Black		-.004	-.110	-.049	-.054
Proportion Black squared		.039	.258	.102	.083
Residential segregation				-.073**	-.045+
WW occup integration					.619***
BM occup integration					-.038
BW occup integration					-.008
C) Individual controls including occupation					
Intercept	-.302***	-.305***	-.296***	-.302***	-.303***
Proportion Black		.032	-.077	-.008	-.007
Proportion Black squared		-.024	.135	-.035	-.058
Residential segregation				-.080**	-.058*
WW occup integration					.470***
BM occup integration					-.036
BW occup integration					.013

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).

Note: Coefficients for other groups represent differences from White men. Basic MA-level controls and individual-level controls not shown. Proportion Black^2 is centered at .01.

Table A5.4. Continued.

BLACK MEN	No MA variables (1)	PB only (2)	Basic MA model (3)	(3) + Res. seg (4)	(4) + Occ. seg (5)
A) No individual controls					
Intercept	-.308***	-.203***	-.223***	-.224***	-.252***
Proportion Black		-.956***	-.630**	-.626**	-.362+
Proportion Black squared		1.038*	-.081	-.104	-.279
Residential segregation				-.003	-.026
WW occup integration					-1.587***
BM occup integration					.052
BW occup integration					1.105***
B) With individual controls					
Intercept	-.208***	-.140***	-.155***	-.155***	-.174***
Proportion Black		-.605***	-.337+	-.336+	-.166
Proportion Black squared		.605	-.178	-.176	-.272
Residential segregation				.016	.006
WW occup integration					-.939***
BM occup integration					.069
BW occup integration					.703**
C) Individual controls including occupation					
Intercept	-.147***	-.099***	-.099***	-.100***	-.116***
Proportion Black		-.382*	-.284+	-.282+	-.131
Proportion Black squared		.189	-.286	-.296	-.377
Residential segregation				.034	.025
WW occup integration					-.881***
BM occup integration					.019
BW occup integration					.694**

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).

Note: Coefficients for other groups represent differences from White men. Basic MA-level controls and individual-level controls not shown. Proportion Black^2 is centered at .01.

Table A5.4. Continued.

	No MA variables	PB only	Basic MA model	(3) + Res. seg	(4) + Occ. seg
BLACK WOMEN	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
A) No individual controls					
Intercept	-.549***	-.466***	-.456***	-.457***	-.484***
Proportion Black		-.693***	-.884***	-.853***	-.536**
Proportion Black squared		.569	.855+	.753+	.423
Residential segregation				-.129+	-.112*
WW occup integration					-.488
BM occup integration					-.130
BW occup integration					1.242***
B) With individual controls					
Intercept	-.449***	-.382***	-.373***	-.375***	-.386***
Proportion Black		-.529**	-.689***	-.640***	-.466*
Proportion Black squared		.344	.803*	.708+	.464
Residential segregation				-.123*	-.099*
WW occup integration					.212
BM occup integration					-.212
BW occup integration					.672**
C) Individual controls including occupation					
Intercept	-.303***	-.263***	-.247***	-.250***	-.259***
Proportion Black		-.273*	-.482**	-.432**	-.323+
Proportion Black squared		-.027	.407	.321	.163
Residential segregation				-.113*	-.093*
WW occup integration					.187
BM occup integration					-.031
BW occup integration					.321

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).

Note: Coefficients for other groups represent differences from White men. Basic MA-level controls and individual-level controls not shown. Proportion Black^2 is centered at .01.

Table A5.5. Metro area-level models of occupation and average weekly wage

White men	*Occupation*	*Wage*	*Wage controlling for occupation*
Intercept	6.020 ***	6.246 ***	6.211 ***
Proportion Black	0.275 ***	0.492 **	0.375 *
Proportion Black squared	-0.319 *	-0.625	-0.487
South	0.002	-0.113 ***	-0.112 ***
North Central	-0.017 ***	-0.033 *	-0.025 +
West	-0.019 **	-0.066 ***	-0.057 ***
Proportion Asian	0.019	0.238 *	0.237 *
Proportion Hispanic	0.071 ***	0.104 *	0.071 +
Population (ln)	0.010 ***	0.052 ***	0.047 ***
Unemployment	-0.369 ***	-0.557 +	-0.389
Net inmigration	-0.164 ***	0.006	0.073
White women demand	-0.018 ***	-0.040 ***	-0.032 **
Black men demand	-0.057 *	-0.190 **	-0.169 **
Black women demand	0.053 **	0.074	0.048
Manufacturing	0.030	-0.051	-0.065
Herfindahl	-0.122	-0.097	-0.064
White women			
Intercept	-0.235 ***	-0.396 ***	-0.296 ***
Proportion Black	-0.089	-0.110	-0.077
Proportion Black squared	0.282 *	0.258	0.135
South	-0.013 *	0.000	0.008
North Central	0.001	-0.023 **	-0.022 **
West	0.002	-0.003	-0.002
Proportion Asian	0.026	0.106	0.089
Proportion Hispanic	0.066 ***	0.104 ***	0.075 **
Population (ln)	0.005 **	0.005 +	0.003
Unemployment	-0.165	-0.539 **	-0.487 **
Net inmigration	0.198 ***	0.261 ***	0.172 ***
White women demand	0.015 ***	-0.007	-0.012 +
Black men demand	0.059 *	-0.031	-0.053
Black women demand	-0.030 +	0.090 **	0.102 ***
Manufacturing	0.034	-0.098	-0.112 +
Herfindahl	-0.009	0.343	0.349

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).

Note: Coefficients for other groups represent differences from White men. Individual-level controls not shown. Proportion Black^2 is centered at .01.

Table A5.5 Continued.

Black men	*Occupation*	*Wage*	*Wage controlling for occupation*
Intercept	-0.137 ***	-0.155 ***	-0.099 ***
Proportion Black	-0.078	-0.337 +	-0.284 +
Proportion Black squared	0.153	-0.178	-0.286
South	-0.052 ***	-0.057 **	-0.035 *
North Central	-0.013	-0.024	-0.018
West	-0.027 *	-0.029	-0.019
Proportion Asian	0.076	-0.116	-0.149
Proportion Hispanic	0.038	-0.267 ***	-0.278 ***
Population (ln)	-0.010 **	-0.012 *	-0.007
Unemployment	-0.032	1.600 ***	1.545 ***
Net inmigration	-0.088	0.059	0.091
White women demand	0.008	0.014	0.008
Black men demand	0.132 **	0.184 **	0.123 +
Black women demand	-0.040	-0.026	0.003
Manufacturing	-0.106	0.018	0.043
Herfindahl	0.828 *	1.291 *	0.970 +
Black women			
Intercept	-0.282 ***	-0.373 ***	-0.247 ***
Proportion Black	-0.544 ***	-0.689 ***	-0.482 **
Proportion Black squared	1.021 ***	0.803 *	0.407
South	-0.039 **	-0.048 **	-0.028 +
North Central	0.013	-0.009	-0.015
West	0.002	-0.030	-0.026
Proportion Asian	-0.097	-0.400 **	-0.352 **
Proportion Hispanic	0.026	0.012	-0.002
Population (ln)	0.011 **	0.014 **	0.009 +
Unemployment	-0.153	-0.047	-0.036
Net inmigration	0.121	0.390 ***	0.324 **
White women demand	0.020 *	0.005	-0.003
Black men demand	0.133 **	0.083	0.027
Black women demand	-0.045	0.096 +	0.117 *
Manufacturing	0.019	0.037	0.048
Herfindahl	0.582	1.313 *	1.077 *

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).

Note: Coefficients for other groups represent differences from White men. Individual-level controls not shown. Proportion Black^2 is centered at .01.

Table A5.6. Metro area-level models of earnings by class status

		With individual controls			
	No controls	No MA variables	PB only	Basic MA controls	*Basic MA controls only*
Not working class	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
White men	6.461***	6.368***	6.308***	6.322***	6.415 ***
Proportion Black			0.814***	0.480**	0.487 **
PB^2			-2.100***	-0.587	-0.563
White women	-0.398***	-0.349***	-0.331***	-0.336***	-0.394 ***
Proportion Black			-0.224*	-0.117	0.002
PB^2			0.447+	0.064	-0.216
Black men	-0.277***	-0.188***	-0.101***	-0.098***	-0.163 ***
Proportion Black			-0.803***	-0.677**	-0.879 ***
PB^2			1.024*	0.359	0.489
Black women	-0.471***	-0.390***	-0.354***	-0.343***	-0.433 ***
Proportion Black			-0.321+	-0.459*	-0.422
PB^2			0.153	0.272	0.106
Working class	*(1)*	*(2)*	*(3)*	*(4)*	*(5)*
White men	-0.379***	-0.169***	-0.141***	-0.169***	-0.374 ***
Proportion Black			-0.348**	0.045	0.000
PB^2			0.735*	-0.236	-0.230
White women	-0.824***	-0.622***	-0.606***	-0.612***	-0.818 ***
Proportion Black			-0.206*	-0.121	-0.080
PB^2			0.509*	0.335	0.254
Black men	-0.585***	-0.347***	-0.281***	-0.317***	-0.545 ***
Proportion Black			-0.637**	-0.146	-0.234
PB^2			0.738	-0.576	-0.738
Black women	-0.861***	-0.620***	-0.525***	-0.540***	-0.777 ***
Proportion Black			-0.825***	-0.685**	-0.708 **
PB^2			0.847+	0.717	0.548

+ p <= .10; * p <+ .05; ** p <= .01; *** p <=.001 (two-tailed tests).

Note: Individual controls not shown; basic MA controls not shown.

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