**THE IMPACT OF FEDERAL CIVIL RIGHTS POLICY ON BLACK ECONOMIC PROGRESS:
EVIDENCE FROM THE EQUAL EMPLOYMENT OPPORTUNITY ACT OF 1972**

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A data appendix with additional results and copies of the computer programs used in the preparation of this paper are available from the author at the Industrial Relations Section, Firestone Library, Princeton University, Princeton, NJ 08544.

ABSTRACT

The Equal Employment Opportunity Act (EEOA) of 1972 extended civil rights coverage to employers with 15-24 employees, while leaving unaffected the civil rights protection for employees of larger firms. In conjunction with already existing state fair employment practice (FEP) laws, the EEOA provides a “natural experiment” in which the treatment and control groups are defined by differences across industries in the fraction of workers employed in the newly-covered establishments and across states in the scope of the FEP laws. Using data from the Current Population Surveys, the treatment and control group methodology is used to evaluate the impact of civil rights policy. This analysis shows that there were large shifts in the employment and pay practices of the industries most affected by the amendment. The timing of the relative gains and their concentration by industry and region provide evidence that the EEOA had a positive impact on the labor market status of African-Americans.

Affirmative action and equal employment opportunity policies have been and still are extremely controversial. In the economics literature, much of the controversy concerns the actual effectiveness of government legislation in improving the economic status of African-American workers. Over two decades of research on Title VII of the Civil Rights Act of 1964 and Executive Order 11246, which followed it in September 1965, have failed to reach a consensus on the effectiveness of these laws. Two problems confront any analyses of civil rights policies. On one hand, the timing of the legislation (in the mid-1960s) corresponds with the timing of many other significant changes in the U.S. labor market. On the other hand, the nature of these laws, and in particular their nearly universal coverage, makes it difficult to control for changes that would have occurred even in the absence of the legislation.¹

This paper presents new evidence on the effectiveness of federal antidiscrimination policy, focusing on an important but under-studied amendment of Title VII of the Civil Rights Act. The Equal Employment Opportunity Act (EEOA) of 1972 expanded civil rights coverage of Title VII statutes to employers with 15-24 employees, while leaving unaffected the civil rights protection for employees of larger establishments. In conjunction with already existing state fair employment practice (FEP) laws, which varied in employer coverage, the EEOA set up a useful "natural experiment" for measuring the impact of civil rights law. The effect of the legislation can be estimated by comparing changes in outcomes at newly-covered and previously covered (by Title VII or FEP laws) employers with respect to the timing of the amendment. The 1972 amendment should have most directly affected the relative status of blacks employed in the newly-covered small establishments in states where small employers were not covered by FEP laws. Many of the problems in the existing literature on the 1964 Civil Rights Act can be avoided by this simple treatment and control group evaluation methodology.

In the absence of a detailed establishment-level data set that would permit precise comparisons of labor market outcomes by employer size, the strategy in this paper is to use individual micro-data aggregated into region and industry cells. Specifically, variation across industries in the fraction of employees in small establishments and across states in the employer coverage of FEP laws is used to define

¹ See Brown (1982), Leonard (1986) and (1990), Jaynes and Williams (1989), and Donahue and Heckman (1991) for surveys of previous work.

treatment and control groups. Industries are aggregated into three groups with similar fractions of workers in small establishments in each group, and states are aggregated into the South, where FEP laws were virtually non-existent, and the Non-South, where most states already had FEP laws covering small employers. Using data from March and October Current Population Surveys (CPS) from 1968-80, movements in three measures of racial inequality (the share of blacks in industry employment, black-white relative annual earnings, and black-white relative occupational status) in each cell are analyzed to measure the impact of the 1972 EEOA on working age black men employed in the private sector. Comparisons are made between the relative gains experienced by blacks employed in the most affected industry group in the South (the treatment group) and relative gains for blacks in the other five cells (the control groups).

Controlling for a wide set of factors, including permanent differences across regions and industry groups, cyclical effects, the changing relative skills of black workers, and region and industry-specific trends, I find that black men in the high-impact industries in the South achieved large gains in employment share and relative earnings and more modest gains in relative occupational status after 1972. For blacks employed in the other cells, there are either no improvements or improvements which appear to be the continuation of trends that began some time before 1972. Most of the gains were concentrated among relatively unskilled black men employed in the construction and service sectors. It appears that the relative demand for less skilled blacks increased significantly among newly-covered employers after the implementation of the 1972 coverage amendment. The location and timing of these relative gains, along with other recent findings (Carrington, McCue, and Pierce 1995), provide evidence that civil rights policies had a positive impact on the labor market status of African-Americans.

LEGISLATIVE BACKGROUND

Federal Coverage Before 1972

Title VII of the 1964 Civil Rights Act (CRA) outlawed discrimination against black and female workers and established the Equal Employment Opportunity Commission (EEOC) to monitor compliance with Title VII and enforce its statutes. Coverage under the Title VII statutes was determined by establishment/firm size. Under the 1964 Act, employers with at least 100 employees were covered as of

July 2, 1965, employers with at least 75 employees were covered as of July 2, 1966, employers with at least 50 employees were covered as of July 2, 1967, and employers with at least 25 employees were covered effective July 2, 1968. A second piece of federal law, Executive Order 11246, signed by President Johnson on September 24, 1965, prohibited discrimination by federal contractors and created its enforcement arm, the Office of Federal Contract Compliance (OFCC), to monitor federal contractors. Affirmative action coverage, which required contractors to develop plans with goals and timetables for minority hiring and promotion, was extended to employers with 50 or more employees and government contracts worth at least \$50,000. Since 1966, all employers either covered by affirmative action or with 100 or more employees have been required to file annual reports (the so-called EEO-1 reports) with the EEOC containing information on employment by race and sex for each of nine occupational categories.

State FEP Laws Before 1972

By 1972, most states also had adopted their own fair employment practice (FEP) laws forbidding discrimination among employers, unions, and employment agencies located within the state. The FEP laws were, in general, very similar to Title VII and established state-level commissions to hear individual discrimination claims. The state-level commissions could enforce the laws via threats of public hearings and court actions if “guilty” parties failed to comply with the orders of the state agencies. Under Title VII, the EEOC was to defer the processing of charges of discrimination to states with FEP laws. In states where no FEP laws existed or where these laws were less encompassing than the federal law, employers meeting Title VII coverage requirements were under the jurisdiction of the EEOC. Thus, the Title VII statutes were the minimum restrictions imposed by the federal government on employers in all states, with states given the option to be more demanding via their FEP laws.

Appendix Table 1 presents information on the FEP laws of each state at the time of the signing of the 1972 EEOA. It is apparent that FEP laws varied widely across states. Some states had no laws at all prior to 1972 while even among states with laws, there was a great deal of variation in employer coverage and enforcement mechanisms. As of 1972, eight of the nine states with no FEP laws were located in the South (Alabama, Arkansas, Georgia, Louisiana, Mississippi, South Carolina, Tennessee, and Virginia). In addition, three states in the South (Florida, North Carolina, and Texas) had laws for public employment

only, and three others (Maryland, Oklahoma, and West Virginia) had laws extending coverage to employers with twenty-five or more employees, the federal minimum prior to the EEOA amendments. On the other hand, almost all of the states outside the South had FEP laws with more extensive coverage than that required by the 1972 EEOA.

The 1972 Equal Employment Opportunity Act

The 1972 EEOA amended Title VII in several substantial ways. The most fundamental change enhanced the enforcement power of the EEOC. Prior to the 1972 amendments, Title VII limited the EEOC to investigating complaints and serving as a conciliator between the disputing parties. With regard to enforcement, the EEOC could only recommend legal action to the Department of Justice. Under the 1972 amendments, however, the EEOC was empowered to initiate civil suits on behalf of employees if it was unable to obtain an acceptable conciliation agreement from the employers. This change dramatically increased the enforcement power of the EEOC.

The EEOA also expanded coverage of Title VII statutes and changed some exemptions. As noted, the 1964 Civil Rights Act only applied to employers with 25 or more employees. The 1972 amendments lowered the threshold for coverage to 15 employees.² In addition, previously uncovered state and local governments were now covered by Title VII, although the EEOC had to refer cases involving these employers to the Justice Department. The amendments also added a new section making it clear that the Federal Government was obligated to not discriminate and gave the Civil Service Commission enforcement power over federal agencies. Finally, the EEOA eliminated the exemption status of educational institutions with respect to individuals working in educational activities and broadened the exemption status of religious institutions to include all of their activities, not only their religious ones.

The EEOA was signed by President Nixon on March 24, 1972, with the changes in the EEOC's enforcement power and the inclusion of state and local governments and educational institutions under the purview of the law effective immediately. However, the amendment reducing the size threshold for coverage from 25 to 15 employees went into effect on March 24, 1973, a year after the signing. The

² The 1964 Act also applied to unions with 25 or more members. The 1972 amendments also lowered this threshold to 15 members (see Bureau of National Affairs, Inc. 1973:33-35 for more details).

definition of a single employer is especially important for understanding the impact of the law on multi-establishment firms. The law was ambiguous with respect to nominally separate establishments which met the coverage requirements of Title VII when combined but not when treated separately. The criteria used to determine coverage in this case included common ownership and management and interrelation of operations. In practice, however, it was often unclear whether multiple establishments exhibited enough commonality to be classified as a single employer (see Bureau of National Affairs, Inc. 1973:31-32).

WHY STUDY THE 1972 EEOA?

Many civil rights researchers believe that the 1972 EEOA enabled the EEOC to substantially increase its enforcement powers and coverage. From 1970 to 1975 the budget and staff size of the EEOC tripled (see Bloch 1994:92), while the number of Title VII cases filed in federal court increased tenfold (see Smith and Welch 1984:273). At the same time, the number of EEOC actionable charges alleging racial discrimination doubled from 15,394 in 1971 to 27,468 in 1972 (see Smith and Welch 1984:274), while the number of EEOC incoming charges concerning racial discrimination in employment practices also doubled from 12,660 in 1971 to 23,754 in 1973 (see Benokraitis and Feagin 1978:105). Not only were employers with 15-24 employees subject to Title VII statutes after March 1973, but their inclusion under the law came at the same time that EEOC activities and powers were dramatically expanded. This "double-whammy" effect represented a potentially large shock to previously uncovered employers.³

The political pressure which led to the passage of the employer coverage amendment shows the importance of the previously uncovered private sector to the House and Senate. The House Labor Committee Report stated:

The committee feels that discrimination in employment is ... equally invidious whether practiced by small or large employers. Because of the existing limitation in the bill proscribing the coverage of Title VII to 25 or more employees or members, a large segment of the Nation's work force is excluded from an effective Federal remedy to redress employment discrimination. ... With the

³ Although employers with less than 25 employees were not covered by Title VII before 1972, employers of all sizes were covered by the Civil Rights Acts of 1866 and 1870. Since suits were filed under the 1866 and 1870 CRA's around 1970 and 1971, small employers may have been subject to some litigious pressure before the 1972 EEOA was passed. However, only five court cases from 1970-71 were filed under these Acts, and all involved large employers.

amendment proposed by the bill ... equal employment protection will be assured to virtually every segment of the Nation's work force (see Bureau of National Affairs, Inc. 1973:174).

The Senate Labor Committee Report echoed similar sentiments:

The Committee agrees with the Chairman of (the) EEOC that discrimination should be attacked wherever it exists, and recognizes that small establishments have frequently been the most flagrant violators of equal employment opportunity. ... The absence of EEOC jurisdiction over these small employers ... has made it impossible for the Commission to compile sufficient information in this area to pinpoint those areas where patterns or practices of discrimination exist (see Bureau of National Affairs, Inc. 1973:232-33).

The Senate Committee also acknowledged that the extension of EEOC jurisdiction would affect a significant portion of the work force and agreed that the coverage amendment take place one year after the enactment of the EEOA so as to mitigate the burden of additional caseloads at the EEOC after the EEOA's signing. Both the House and Senate felt that previously uncovered small employers were a significant segment of the economy, probably guilty of "flagrant" discrimination,⁴ and likely to be the focus of EEOC litigation if any illegal behavior persisted a year after the signing of the EEOA.

Clearly, the legislative record suggests that there is good reason to focus on the impact of the 1972 EEOA on small employers. Although existing research provides a mixed assessment of the overall effects of the 1972 amendments, it is more likely that the laws had a large effect on those employers who were not even covered by the EEOC before 1973.⁵ In addition, some researchers have argued that Title VII resulted in shifts in minority employment from small to large employers instead of net economy-wide employment gains since large employers were presumably under more direct pressure (e.g., filing EEO-1 reports) from the EEOC (see Bloch 1994, for example). The coverage amendment provides an excellent opportunity for evaluating the impact of a government intervention aimed solely at small employers.

Finally, the imposition of a federally mandated employer coverage amendment and its interaction with pre-existing state laws provide a credible basis for evaluating the effectiveness of federal antidiscrimination laws. Previous cross-sectional studies of the impact of Title VII have used potentially

⁴ Some economic studies have found that discrimination may be pervasive among small employers. See Mellow (1981), Smith and Welch (1984), Baldwin and Johnson (1992), Carrington and Troske (1992), and Bloch (1994).

⁵ Smith and Welch (1984) find that the bulk of minority gains from 1966 to 1980 occurred before 1974 and interpret this as evidence that the increased enforcement power of the EEOC (and the OFCC) after 1972 was ineffective. Beller (1982), on the other hand, finds some evidence of stronger Title VII effects after 1972 when examining data from 1967-74.

endogenous “policy” variation to identify an effect of the law, and, as a result, may suffer from simultaneity between the outcome of interest and the measure of the law’s incidence.⁶ By comparison, the effects of the 1972 employer coverage amendment can be identified by comparing changes in outcomes at small employers in the South (i.e., states in which small employers were not previously covered) with changes at small employers in the Non-South and large employers in both regions. In principle, this simple treatment and control group methodology controls for changes that would have occurred even in the absence of the intervention since the process which culminated in the intervention was presumably orthogonal to both state and employer-specific economic conditions.⁷ Thus, one can more easily parse out competing explanations for observed changes in outcomes.

DATA AND EVALUATION STRATEGY

An “ideal” data source for examining the impact of the 1972 employer coverage amendment might include detailed longitudinal information on individual employers and their workers through the time period in question. These data would permit precise comparisons of changes in relative labor market outcomes for black workers across employers of different sizes in different states. In the absence of such data, the strategy in this paper is to use individual micro-data from a random sample of all workers aggregated into industry by region cells.⁸ Variation across industries in the fraction of employees in small establishments (i.e., less than twenty-five employees) and across states in the employer coverage of FEP laws is used to define treatment and control groups.

⁶ For example, Beller (1978) and Leonard (1984b) use state variation in EEOC activity and state by industry variation in Title VII litigation, respectively. It should be noted that studies examining the impact of affirmative action (i.e., Executive Order 11246) on the practices of government contractors are also prone to endogeneity problems, among other things.

⁷ For example, extensive FEP laws are more likely to be passed in states where prejudice is relatively low. Therefore, it must be true that states with minimal FEP laws (i.e., the South) are the most resistant to government intervention. In any event, the analysis in this paper controls for other variables proxying for both region and industry-specific shocks that coincided with the timing of the coverage amendment.

⁸ Although the Quality of Employment Survey (QES), which contains work experience and employer size data, administered surveys to a panel of workers in 1973 and 1977, it does not allow me to control for previous trends which is an important consideration in this paper. Also, its sample size is much smaller than the CPS data used in this study. In addition, the EE0-1 data files, which contain longitudinal information at the establishment-level, only survey large employers (i.e., either covered by affirmative action or with 100 or more employees).

This approach has some advantages over an analysis based on employer-level data. First, the analysis is comprehensive since it is based on a random sample of all employees and employers where the concept of employer is expanded to the industry-level. As a result, the overall scope and effect of the policy can be measured at this broader level. Broad generalizations about program effects would not be possible with the employer-level data on only a small fraction of all firms which is typically used in case studies. In addition, using industry-level aggregation to define relevant “employers” finesses the problems that any exit and entry of firms during this time-period would pose in a firm-level analysis. Extensive entry and exit has been found in the manufacturing sector from 1963-82, especially among small firms (Dunne, Roberts, and Samuelson 1988). Entry and exit rates may have been even greater among the smaller firms located in the construction and service sectors, and these rates may have been particularly sensitive to the large cyclical shocks that occurred in the early 70’s.

Defining the Treatment and Control Groups

The first step in the empirical analysis in this paper is the identification of the set of narrowly-defined industries most heavily affected by the 1972 employer coverage amendment. To accomplish this task, I use data on the distribution of employer sizes across industries from the May 1979 CPS. Individuals in this survey were asked about the number of persons employed by their employer at their location of work (establishment size) and at all locations (firm size). These questions were asked of individuals age 14 or older who were either employed or temporarily absent from work in the survey week and not self-employed.

Table 1 summarizes the May 1979 data for working age (16-65 years old) black and white men. The upper panel of the table shows the distribution of employment by firm/establishment size, region, and race. More than 35% of all workers were employed in establishments with less than 25 employees while over 25% were employed in firms with less than 25 employees. Over 40% of black workers in the South were employed by small establishments while about 30% were employed by small firms. Therefore, a large segment of the work force may not have been covered by Title VII before the passage of the 1972 EEOA.

The lower panel of Table 1 presents information on worker education and wages by establishment size, region, and race. In 1979, the average black male employed by establishments with less than twenty-

five employees had only ten years of completed education and received an hourly wage of only \$4.40.⁹ Black men employed by small employers in the South were relatively unskilled, low paid workers. This finding also holds when looking at education and wages across firm size categories. Thus, the employer coverage amendment, if effective, would probably have impacted blacks at the low end of both the skills and earnings distributions.¹⁰

From the May 1979 data, 48 two-digit industry cells were constructed, and the fraction of workers in each industry employed in establishments with less than twenty-five employees was calculated by region.¹¹ This variable measures the vulnerability of each industry to the employer coverage amendment. Appendix Table 2 presents estimates of this variable (referred to as the “fraction affected”) by region.¹² The approach in this study aggregates industries into three groups with similar fractions of affected workers in each group. The groupings were determined by the following criteria being met in both the South and the Non-South: industries with high (fraction affected > 0.5), medium ($0.2 < \text{fraction affected} < 0.5$), and low (fraction affected < 0.2) fractions of workers employed in “treated” establishments.¹³

The first (H-Group) and third (L-Group) groups consist of industries that were the most and least impacted by the employer coverage amendment. The middle group (M-Group) consists of the remaining industries which were moderately affected by the 1972 laws.¹⁴ Appendix Table 2 shows that the H-Group is composed entirely of construction and service sector industries, including retail and wholesale trade,

⁹ The hourly wage rate for individuals not paid by the hour is constructed by dividing their reported usual weekly earnings by the usual weekly hours they worked.

¹⁰ Data presented below confirm that the education and earnings of black men in industries composed primarily of small establishments were consistently the lowest.

¹¹ The establishment is used as the relevant employer due to the ambiguity of the EEOA with respect to multiple establishment firms. In addition, there is probably less reporting error associated with the establishment size data. Using the firm as the relevant employer has little effect on the results since there is an extremely high correlation between the two measures.

¹² The estimates in the table do not change when looking at men employed only in the private sector but the sampling errors are larger (the public sector makes up about 15% of total employment).

¹³ Since this study uses regional variation in state FEP laws, consistent selection criteria across regions is preferable. In addition, the criteria used avoid potential sample size problems by keeping the number of men in each of the six industry by region cells used in the analysis comparable. In any event, the results are insensitive to different choices of aggregation since almost all of the industries near the “boundaries” are very small.

¹⁴ Public sector industries (i.e., postal services and federal, state and local governments), educational and religious services, and agriculture are not included in any of the three groups. Many of the individuals in these industries who were not covered by federal laws were covered by state laws before the 1972 EEOA. Carrington, McCue, and Pierce (1994) find no evidence of any narrowing in the black-white wage gap in the public sector after 1972.

while the L-Group contains mostly manufacturing industries.¹⁵ The H-Group represents a substantial sector of the economy, with its largest industries being construction and retail trade. In fact, construction and retail trade are by far the largest two-digit industries with respect to employment in the entire economy.

Before proceeding, it is worth underscoring several shortcomings of the measure of industry impact based on the 1979 CPS data. First, workers employed in establishments with less than 15 employees cannot be distinguished from those in establishments with 15-24 employees. Therefore, this study relies on comparisons between industries which were more and less covered before the EEOA. This may not be a serious issue, however. Using comparisons between the newly-covered and uncovered sectors (i.e., industries with establishments with less than 15 employees) to measure the effects of the amendment could be problematic. Employers in the covered sector could have hired blacks away from employers in the uncovered sector (see Donahue and Heckman 1991:1633-35 for an example of a 2-sector model); relying on such detailed definitions of the treatment and control groups would lead to more serious measurement problems; and the inevitably small sample sizes for the uncovered sector would make precise inference unlikely.¹⁶ To some degree, the use of impact measures based on the proportion of employment at establishments with less than 25 workers circumvents these difficulties. Also, since the treatment used is likely to be highly correlated with the "true" treatment (i.e., fraction employed in establishments with 15-24 employees), a treatment group (i.e., H-Group) can be meaningfully separated from the control group(s).

Two other potential problems are that establishment size may be misreported by CPS respondents; and the fraction of workers employed in small establishments may not have been stable in each industry during the relevant time frame. These are also not serious problems. The 1979 May CPS is only used to divide the industries into groups which are more and less affected by the new coverage requirement. The actual estimates of the fraction of employees in each industry employed by small establishments are never

¹⁵ The method of aggregation used in this study is consistent with the EEO-1 reporting coverage rates and the federal contractor status rates by industry shown in Table 4 of Smith and Welch (1984:275). Thus, the H-Group consists of industries which were the least covered by either the EEOC or the OFCC.

¹⁶ Also, small employers, given a year to comply after the 1972 signing, could select out of the treatment group by downsizing. In addition, establishments with less than 15 employees could be composed mostly of family businesses. Before passing the 1972 EEOA, Congress changed the employer size requirement for coverage from eight or more employees to fifteen or more for precisely this reason.

directly used in econometric analyses. Thus, any individual reporting errors are effectively averaged out by aggregation. The only condition necessary for "consistency" is that the relative ranking of industries with respect to the fraction measure did not change during the time period examined. Evidence from the 1967-1977 Census of Manufactures suggests that the establishment size distribution is relatively stable within industries over time.¹⁷

Identifying the Policy Effects

In a simple model of employer discrimination with competitive labor and product markets and heterogeneous "tastes for discrimination" across employers, the market equilibrium level of employer discrimination is determined by the mean and dispersion of employer tastes and the minority proportion of total employment (see Becker 1971:43-45 and Ashenfelter 1970:408-10). Thus, the relative demand curve for black workers maps out an inverse relationship between relative black-white labor earnings and the share of blacks in total employment. As the relative number of "discriminating" employers decreases in response to a federal mandate outlawing discrimination, the market level of discrimination decreases and the relative demand curve for blacks shifts out. This increase in relative demand leads to increases in both the relative earnings and employment share of blacks with magnitudes which depend on the elasticity of the relative supply of blacks. Such a model provides the basis for the outcome variables examined below.

Twenty-six March and October CPS's from 1968-80, with information on both the individual's current job (March and October CPS's) and on the job held for the longest period of time the previous year (March CPS's only), are used to measure the impact of the 1972 coverage amendment. The CPS data are divided into six industry group by region cells. Industries are aggregated into the three groups described in the previous section, and states are aggregated into the South, where FEP laws were virtually non-existent, and the Non-South, where most states already had laws covering small employers.¹⁸ Movements in three measures of racial inequality in each cell are analyzed: blacks' share of industry employment, black-white

¹⁷ For example, using published data from the 1967, 1972, and 1977 Census of Manufactures, I regressed the proportion of all establishments with less than 20 employees on its lagged value for twenty 2-digit manufacturing industries (using total number of establishments as industry weights). The fitted equation is: $\text{Fraction}_{it} = \text{Constant}_{67} + \text{Constant}_{72} + 0.934 * \text{Fraction}_{it-1}$, with an R-squared of 0.97.

¹⁸ Although state FEP laws also varied within the South and Non-South, the CPS's did not identify all states separately during the time-frame examined, and the method of state grouping changed in 1972.

relative annual earnings, and black-white relative occupational status. Although the relationship between discrimination and relative occupational position is not described in the model above, changes in black-white relative occupational distributions provide an alternative measure of changes in permanent economic status (see Ashenfelter 1970:425-28 and Bound and Freeman 1989:40-41).

To evaluate the program effects, comparisons are made between the relative gains of black men employed in the South H-Group (the treatment group) and the relative gains of blacks in the other five cells (the control groups) with respect to the timing of the amendment. In principle, this identification strategy controls for changes that would have occurred in the absence of the 1972 law. For unbiased estimation of a “policy parameter”, however, it is also necessary to control for any systematic shocks to relative outcomes in each cell that coincided with the timing of the intervention. To do this, an equation of the following form is estimated for all three outcome variables:

$$(1) \quad B_{irjt} = \alpha_{rj} + \rho_{rj} \text{Cycle}_{rt} + X_{rjt}'\beta_t + \theta_{rj} \text{TREND} + \gamma_{rj} \text{POST72} + \varepsilon_{irjt},$$

where B_{irjt} is the black-white relative outcome of interest for industry i in industry group j ($j = h, m, \text{ and } l$) in region r ($r = s \text{ and } n$) at time t , α_{rj} are region-specific industry effects, Cycle_{rt} is a measure of region-specific cyclical/time shocks (e.g., growth and unemployment rates) which are allowed to have differential effects on each cell (ρ_{rj}), X_{rjt} is a vector consisting of the black-white relative demographic characteristics (e.g., education and age) in each cell, and β_t are their returns at time t . TREND is a time trend for the entire period which allows for different underlying pre-policy labor market trends in the six industry by region groups (θ_{rj}), POST72 is a policy variable representing the post-policy time-effects of each group (γ_{rj}) which cannot be explained by pre-policy trends, and ε_{irjt} is the stochastic error term. Thus, the γ_{rj} 's are the coefficients of interest since they measure “unexplained” changes in black-white inequality after the implementation of the coverage amendment.

The dynamic effects of the policy can be examined using a partial equilibrium model with limited intersectoral shifting of employment between the newly-covered and previously covered sectors.¹⁹ If the relative supply of blacks within each sector is more inelastic in the short-run than in the long-run (e.g., due

¹⁹ Evidence presented below suggests that the intersectoral elasticities between the newly-covered and previously covered sectors are small due to large permanent differences in worker skills and earnings between the two sectors.

to adjustment costs), then as the relative demand for blacks increases in the newly-covered sector, black relative wages/earnings will be immediately bid up to attract blacks from the “non-market” sector (e.g., men out of the labor force, self-employed, or in agriculture). In the long-run, blacks’ share of employment in the newly-covered sector will increase gradually to its long-run equilibrium level, and black relative earnings will fall as relative employment increases. This model’s predictions of the dynamic responses of relative employment and earnings to the government intervention are the basis for the functional form of the post-policy time-effects used in the empirical analysis below.

Differences between the estimated γ ’s of the South-H-Group and the control groups provide estimates of the impact of the government intervention. Since the industries in the M-Group (i.e., medium-sized employers) in the South were more affected by the amendment than the L-Group but less affected than the H-Group, the analysis in the next section focuses on the more “accurate” comparisons between the H-Group and L-Group in both regions. Specifically, both a detrended “difference-in-differences” estimator, measuring unexplained post-policy changes in outcomes for the South H-Group relative to the corresponding changes for the South L-Group ($\gamma_{sh} - \gamma_{sl}$), and a detrended “difference-in-differences-in-differences” estimator, measuring the difference-in-differences for the H-Group and L-Group in the South relative to their difference-in-differences in the Non-South ($[\gamma_{sh} - \gamma_{sl}] - [\gamma_{nh} - \gamma_{nl}]$), are calculated.²⁰ The former estimator, which compares changes at small and large employers in the South, assumes that there were no unmeasured industry-specific shocks to relative black-white status that coincided with the 1972 policy shift. The latter estimator, on the other hand, does account for both unobserved industry-specific shocks, by comparing the H-Groups in the South and Non-South (previously covered by FEP laws), and unobserved region-specific shocks, by comparing the H-Group to the L-Group in each region. For identification, this estimator requires the weaker assumption of no unmeasured region-specific industry shocks to relative black-white outcomes coinciding with the amendment.

²⁰ Other evaluation studies which have used simple difference-in-differences estimators have implicitly assumed that underlying labor market trends were the same in the treatment and control groups. For example, the policy effects found in the affirmative action literature (see Ashenfelter and Heckman 1976 and Leonard 1984a) may be biased by the presence of different trends in the contractor and non-contractor sectors unrelated to the intervention.

By controlling for permanent differences across regions and industry groups, cyclical shocks, the changing relative skills of black workers, region-specific industry trends, and region and industry-specific time effects, the approach in this paper eliminates many popular competing explanations for observed changes in the economic status of blacks. Other supply-side and demand-side hypotheses which can be accounted for in equation (1) include the selective withdrawal of low income blacks from the labor force (Butler and Heckman 1977), improvements in the relative quantity and quality of human capital of employed blacks (Smith and Welch 1989), and changes in the “costs of discrimination” due to cyclical fluctuations in aggregate labor demand (Heckman and Payner 1989). It should be noted that the increased enforcement power of the EEOC after 1972 may have had some effect on the relative outcomes of blacks in some of the control groups as well (particularly, the South L-Group and M-Group).

Table 2 presents descriptive information on all working age black and white men from the CPS samples from 1968 to 1980.²¹ The upper panel contains information from the pooled March and October data each year on the demographic characteristics of the population by region and race. The lower panel has summary statistics on the relative position of blacks in employment and pay (blacks' share of male employment and the ratio of black-white mean annual earnings) by region calculated from the March data on the job held longest the previous year. Of interest are the facts that a disproportionately large number of blacks live in the South and as a result blacks' share of employment is higher in the South; education levels for both white and black men are trending up over the sample period, with a greater trend for blacks; the educational attainment of black men is particularly low in the South; the relative earnings of blacks are much lower in the South than in the Non-South but black relative gains are higher in the South over the time period examined. Finally, the proportion of the population that is black is relatively stable in both the South and Non-South resulting in stable employment shares in both regions. Therefore, black migration

²¹ The sample used in the empirical analysis includes working age (16-65 years old) men in the non-agricultural private sector. Men who are self-employed or in a family business are excluded for obvious reasons. In addition, to get a more precise estimate of the impact of the employer coverage amendment, men in the public sector or in the educational or religious services are also dropped due to changes in their coverage or exemption status, respectively. Excluding these individuals has little effect on the results. Unless otherwise specified, all analyses using data on the job held longest the previous year keep all men who were employed for any amount of time during that year. All analyses using information on the current job keep all labor force participants.

patterns cannot explain the movements in racial inequality found in the next section (see Donahue and Heckman 1991).

THE IMPACT OF THE 1972 EEOA

The Effects of the Coverage Amendment on Blacks' Share of Employment

Figures 1A and 1B plot the share of black men in employment for the H-Group and L-Group, by region, from March 1968 to October 1980 using CPS information on the current job held by the individual.²² The figures provide some evidence of the impact of the 1972 employer coverage amendment.²³ In the pre-policy period from March 1968 to March 1973, there was a strong downward trend in blacks' share of employment in the South H-Group which led to a 4 point decrease from 18% in 1968 to 14% in 1973. In the post-policy period from October 1973 to October 1980, black employment share in the South H-Group remained very stable with the exception of four points (March 1975, March and October 1976, and March 1977). In fact, blacks' share of employment was approximately the same in October 1980 as it had been in March 1973. For the other three cells there appear to be no significant movements in blacks' share of employment either before or after March 1973 with the possible exception of the slight upward trend in the South L-Group, obscured by its "seasonality" (i.e., CPS survey month to month variation), during the entire time period.

These patterns suggest that government intervention may have had an immediate impact on the previously uncovered sector. There appears to have been a noticeable break in trend in the South H-Group after March 1973 and no apparent breaks in the other three groups which were already covered by either Title VII or FEP laws. Also, the date of the break in the South H-Group black employment share coincided exactly with the implementation of increased employer coverage in March 1973, a year after the signing of the EEOA. The downward trend in the South H-Group from March 1968 to March 1973 and the upward

²² All labor force participants are used in the calculations of blacks' share of employment. Although the results change little when looking only at employed individuals, using labor force participants allows for the possibility that employment in many of the industries, especially those in the H-Group, is seasonal and the seasonality varies by race. This is discussed in more detail below.

²³ The standard errors of the graphs range from 0.0055-0.0065 for the South H-Group, 0.0075-0.0085 for the South L-Group, and are roughly 0.0025-0.0035 for both groups in the Non-South.

trend in the South L-Group are consistent with other studies (see Ashenfelter and Heckman 1976, Leonard 1984a, and Heckman and Payner 1989) which find that the 1964 Civil Rights Act and Executive Order 11246 increased the relative demand for blacks in the most impacted sector (i.e., large employers in the South). Although the relative employment of black men was higher (by 4.5 points) in the South H-Group at the start of the period, it was much lower (by 3.5 points) at the end. Finally, due to the cyclical sensitivity of the industries in the H-Group, especially construction, and the fact that employment is a lag indicator of the cycle, the March and October 1976 decline in black employment share for the South H-Group can possibly be attributed to the large 1974-75 recession caused by the oil supply shock.²⁴

To summarize these time-series movements and get a concise measure of the impact of the EEOA on relative employment, I estimated equation (1) using the black employment shares by industry cell as the outcome measure and weighting by the cell sample sizes in each month-year. $Cycle_{rt}$ is the region-specific lagged log difference of real earnings (i.e., deflated earnings growth lagged one year) based on state-level data published in the Bureau of Economic Analysis' "State Personal Income: 1929-82."²⁵ This variable accounts for the effects of cyclical fluctuations in demand on each cell, especially those resulting from the productivity slowdown in the 70s. A dummy variable equal to one if the sample month is October is used to control for different seasonality in each cell. The policy variable (POST72) is a dummy equal to one if the date is after March 1973 interacted with a post-policy time trend equal to $(t - \text{March } 1973)$. Thus, the γ_{rt} 's measure the slope changes in employment share trends that occurred in each cell after the implementation of the employer coverage amendment. Given the patterns illustrated in Figures 1A and 1B and the fixity of labor in the short-run, this empirical specification, while restrictive, will provide both an accurate and precise depiction of the effects of the intervention. It is worth noting that controlling for the

²⁴ "State Personal Income: 1929-82," published by the Bureau of Economic Analysis, reports that the drop in real earnings growth was particularly sharp in the construction industry during the 1974-75 recession. Both last hired, first fired and "tight labor markets" views of the sensitivity of black employment share to aggregate cyclical shocks would be consistent with the 1976 "outliers."

²⁵ Gross State Product data are unavailable for the years 1964-66 and 1968-71. As a result, I use the Bureau of Economic Analysis' estimates of state level earnings (deflated by the implicit consumer expenditures price deflator) as a proxy for production in the South and Non-South. Taking first differences eliminates the stochastic trend in log-earnings, and, as a result, the collinearity between the cyclical variable and the time trend variables. Quarterly state-level earnings data are unavailable for the time period examined.

black-white relative demographic characteristics in each cell leads to results which are virtually identical to the “unadjusted” results presented here.²⁶

Table 3 presents the pooled least squares regression results.²⁷ The regressions confirm the visual impression of Figures 1A and 1B. Columns 1-3 show that although black employment share in the South H-Group fell at a rate of nearly 0.3 points per month-year in the pre-policy period, there was a positive break in trend of almost 0.25 points per month-year after the increase in employer coverage in March 1973. This finding changes little when cyclical indicators (i.e., growth) are included as controls. Blacks’ share of employment in the South H-Group was 3.5 points higher at the end of the period than it would have been if the pre-policy trend had continued. There was a small positive pre-policy trend in employment share in the South L-Group (0.15 points per month-year) which diminished slightly after March 1973. In the Non-South, there were no significant trends in relative employment in the L-Group. For the Non-South H-Group there were economically small, though marginally significant, movements which fall by twenty-five percent when the effects of economic growth in the region are accounted for. In addition, this group’s positive post-policy break in trend (0.1 points per month-year) was driven by the upward trend after October 1976 exhibited in Figure 1B and not by shifts immediately after the Act. Finally, there are no strong trends in the M-Group in either region.

It is worth noting that growth is an important covariate in the Non-South, especially for the H-Group (construction and service industries) and the L-Group (mostly manufacturing industries). The coefficient on GROWTH in column 2 implies that a 10% increase in annual earnings growth would result in more than a point gain in blacks’ share of employment. Moreover, employment shares would increase 1.1 and 1.5 points in the Non-South H-Group and L-Group, respectively. Thus, tight labor markets may have led to black employment gains in the Non-South during the period of growth experienced in the late

²⁶ For example, I calculated the regression adjusted probability (controlling for education and a quadratic in age) that an employed person is black for each cell using linear probability models. The adjusted probabilities are almost identical to the unadjusted ones due to the low explanatory power of the control variables.

²⁷ Potential issues arise in the estimation of the standard errors for the least squares regressions. First, there could exist systematic correlation between the residuals of the industries in each group due to common shocks, etc. Using a seemingly unrelated regression framework, I find very little correlation in the error terms of the industries in the three aggregate groups (correlations were 0.108, 0.015, and 0.063). In addition, Durbin-Watson tests easily “reject” the presence of serial correlation. Thus, the inferences made in this paper are appropriate.

60s. It is difficult to draw inferences on the effect of cyclical shocks on relative employment in the South, however, due to the imprecision in the point estimates.

Based on the post-1972 trend shift term, it appears that the employer coverage amendment had a large positive impact on the relative employment of black men in the previously uncovered sector. Figure 2 graphs actual employment share and predicted shares with and without the policy intervention variable (i.e., the post-policy trend break) for the South H-Group using the regression estimates in column 3 (the vertical line marks the date of the intervention). The “piece-wise linear” empirical model provides a good fit for actual relative employment levels. More importantly, there is remarkable divergence after March 1973 between the two graphs predicted with and without a break in trend. In addition, comparing the estimated γ 's of the South H-Group and L-Group in Table 3 yields a detrended difference-in-differences estimate of 0.32. The potentially more “robust” detrended difference-in-differences-in-differences estimate for the South and Non-South H-Groups and L-Groups, which, in addition to unobserved region-specific shocks, accounts for unobserved industry-specific shocks such as industrial factor price fluctuations, is 0.25. Thus, detrended black employment shares grew 0.25-0.30 points more per month-year at newly-covered employers than at previously covered (by Title VII or FEP laws) employers in the post-policy period.

In the above analyses, using all labor force participants crudely controls for the possibility that individuals with low probabilities of employment will be under-represented in a sample of employed people relative to the population of individuals who held a job at any time the previous year.²⁸ To examine this issue directly, I repeated the previous analyses using industry data from the March CPS's for the job held longest by an individual the previous year. The results of this exercise are available from the author on request, and confirm all of the conclusions drawn from Figures 1A and 1B and Table 3. For example, I find a larger break in trend for the South H-Group after 1972 (0.65 points per year) and a stronger positive trend for the South L-Group before 1972 (also 0.65 points per year). In addition, the detrended difference-

²⁸ From the March CPS's, I calculated that about 50% and 60% of the black and white men in the H-Group, respectively, were employed in full-time, full year jobs. In the L-Group, however, almost 70% and 80% of blacks and whites were in “full-full” jobs.

in-differences and difference-in-differences-in-differences estimates for the H-Group and L-Group are 1.16 (0.35 standard error) and 1.12 (0.42 standard error), respectively.

There are several other points worth noting about the employment share analysis. First, the effects of antidiscrimination policies on the employment share of black men found in this study are about ten times larger than those typically found in the affirmative action literature (see Leonard 1990:50-52 and Donahue and Heckman 1991:1630-32), which rely on comparisons of employment share growth across contractor and non-contractor establishments in the 1960s and 1970s (difference-in-differences estimates of about 0.08 points per year). Also, although, as other studies have found (see Leonard 1984b, for example), blacks achieved relative employment gains mostly in the manufacturing sector (i.e., L-Group) during the period examined, the trend of relative employment losses in the previously uncovered construction and service sectors in the South (i.e., H-Group) stopped after the expansion in federal coverage.²⁹ When examining whether the positive trend break in relative employment after 1972 in the South H-Group resulted from a decline in the number of white employees, I found that both the number of blacks and whites employed in the South H-Group increased after 1972. Finally, the similarity of the difference-in-differences and difference-in-differences-in-differences estimates implies that there are minimal biases in the estimated intervention effects resulting from failing to account for unobserved industry-specific shocks to relative employment.

Characteristics of the Employees in the South H-Group

To get information on changes in the demographic characteristics of black and white men employed in the South H-Group, I examine movements in the mean education (highest grade completed) and age of employees, by race. When taken as a crude skills index, workers' education levels and ages offer another way of measuring shifts in employer behavior (e.g., employers may have hired less skilled blacks) that may

²⁹ In the CPS samples used in this study, the H-Group accounts for 45-50% of all black employment in the South while the L-Group accounts for 25-30% (conditional on being employed in one of the three industry groups). In the Non-South, the H-Group accounts for less black employment (35-40%) while the L-Group accounts for more (40%), presumably because of the greater unionization of the manufacturing sector in the Non-South.

have occurred after the government intervention. The results presented use the job held longest the previous year as the basis for identifying industry.³⁰

Figure 3 shows the mean education levels of black men and the ratio of black-white education levels in the South and Non-South H-Groups.³¹ The Non-South H-Group is chosen as the comparison group for the South H-Group since the education levels of blacks in both of these cells are the lowest in their respective regions.³² One point of interest is that both black education levels and relative black-white education levels were trending up for both groups from 1967-79. The increase in educational attainment for black men in both of these cells was nearly two years. These gains led to 10 point and 7 point increases in the black-white ratio of mean education in the South and Non-South, respectively. In addition, the average education of black men employed in the South H-Group was more than a full year less than the average education of blacks in the Non-South H-Group. This result is even more striking when one considers the fact that, as noted above, blacks employed in the Non-South H-Group had by far the lowest average education in that region.

Figure 3 suggests that there was also a break in the relative education of black workers in the South H-Group after 1972. While the black-white education ratio in the Non-South H-Group continued to increase from 1972 to 1973, it dropped more than 3 points in the South H-Group before continuing its upward trend after 1973. The break in the relative education levels of blacks in the South H-Group coincided with the South H-Group's post-policy break in black employment share trend. It appears that the EEOA may have caused affected employers to hire black men from the low end of the education distribution and with lower levels of education, on average, than those already employed.

When examining the mean ages of black and white workers by industry and region, I find that the average age of blacks in the South H-Group fell by about two years from 1973-75 after having been very stable during the pre-policy period. This fall led to a corresponding decline in the ratio of black-white ages

³⁰ A disadvantage of using the job held longest the previous year is that I am matching the individual's characteristics this year to his job held last year. When using the current job as the basis for identifying industry, however, I find the exact same shifts in mean education and age described above.

³¹ The standard errors for mean black education in the South and Non-South H-Groups range from 0.125 to 0.155.

³² For example, the average black man in the South and Non-South H-Groups has half a year less education than his counterparts in the South L-Group and the Non-South M-Group, respectively.

from 1973-75. It seems that most of the post-policy gains in black relative employment in the South H-Group may have been concentrated among younger, less educated black men. In addition, the H-Group sector may represent a secondary labor market composed predominantly of part-time, part-year jobs requiring relatively little human capital. Thus, many of the black men who became newly-employed in the South H-Group after 1972 were probably either out of the labor force or employed in informal sectors before 1972. It is very unlikely that workers would leave jobs in the high wage manufacturing sector for jobs in the service sector with few prospects for advancement.³³

Trends in Relative Annual Earnings and Occupational Status, 1967-79

When examining trends in aggregate measures of earnings disparity, it is not clear whether the employer coverage amendment led to black economic progress in the South H-Group after 1972.³⁴ Appendix Table 3 presents mean black and white earnings for each industry group by region cell and summarizes trends in relative mean and median earnings in those cells.³⁵ Throughout the period, both blacks and whites in the South and Non-South H-Groups earned much less than their counterparts in the other sectors (partially the result of a smaller proportion of men in the H-Group being employed in full-time, full year jobs). Black men in the South H-Group had, on average, the lowest annual earnings by far. In the South H-Group, relative black-white mean earnings increased more than 2.5 points from 1967-72, but rose another 5.5 points by the end of the decade. Relative median earnings, on the other hand, fell one

³³ Cross-tabulations, by industry group, between current job and job held longest last year show that although about 90% of the respondents report being in the same sector this year as last year for all 3 groups, the amount of black employment coming from men outside of the labor force the previous year was consistently highest for the H-Group (usually by a factor of 2-3). Thus, sectoral shifting of minority employment is not an issue in this paper.

³⁴ The annual earnings data used is based on the job held longest the previous year and deflated to \$1972 by the personal consumption expenditure deflator from the "National Income and Product Accounts." I focus on annual earnings instead of average weekly earnings for two reasons. First, since the CPS reported weeks worked last year in broad categories before 1976, calculations of average weekly earnings are subject to severe measurement problems. In addition, since employers might discriminate by not allowing blacks into full-time, full year jobs, examining changes in annual earnings gives a more accurate picture of changing discrimination over time. In any case, the results change little when using only men employed in full-time, full year jobs.

³⁵ The sample excludes all men either with non-positive potential experience (defined to be age-education-6) or earning less than \$100 (in 1972 dollars). The first sample restriction has no effect on my results. The second restriction truncates about 2-3% of the black men in the South H-Group. This truncation leads to an even more negative (by about 20%) regression adjusted black-white log earnings gap in the South H-Group in 1972. This results from the fact that there were about five more blacks in the South H-Group earning less than \$50 in the 1973 CPS than in the other CPS's. Finally, I keep all observations with allocated earnings for sample-size reasons. Dropping the allocated observations does not affect the results.

point in the pre-policy period and increased more than 6.5 points after 1972. Although it seems that relative gains for blacks in the South H-Group were concentrated in the post-policy period, it is not clear whether the upward trend started after 1971-72 or after 1969-70. In addition, there were improvements in black economic status after 1972 in some of the other cells as well (e.g., the M-Group in both regions).

Time-series studies of Title VII have relied on comparisons of pre-policy and post-policy trends in black-white relative aggregate earnings to evaluate its impact.³⁶ Since this approach cannot explicitly account for coincidental changes in the composition (with respect to skills, etc.) of black and white workers with the macro data used, it is difficult to infer what would have happened to relative earnings in the absence of the law. Thus, separating the impact of the government intervention from the effects of supply-side shifts, unrelated to the policy, on changes in the black-white earnings gap becomes nearly impossible.³⁷ It was shown above that there were dramatic movements in the observed relative characteristics of blacks in the South H-Group during the time-period examined, especially immediately after 1972. It follows that regression adjusted estimates of "unexplained" black-white earnings differences will provide a more precise description of shifts in employer discrimination after 1972.

To obtain estimates of the black-white earnings gap while controlling for observed heterogeneity across individuals in each of the six industry group by region cells, the following reduced-form earnings equation is estimated using the pooled CPS data for men:

$$(2) \quad y_{irjt} = \mu_{rjt} + X_{irjt}'\beta_t + \delta_{rjt}D_{irjt} + \eta_{irjt},$$

where y_{irjt} is the logarithm of annual earnings for individual i in region r and industry group j at time (i.e., CPS year) t , μ_{rjt} are the industry by region log earnings of white men in year t , X_{irjt} is a vector consisting of education, potential labor market experience and its square, a dummy equal to one if the individual is a full-time, full year worker, a marital status dummy, a veteran status dummy, and dummies for central city and metropolitan residence, and β_t are their returns at time t . D_{irjt} is an indicator for whether the individual

³⁶ See Freeman (1973) and (1981), Vroman (1974) and (1990), Brown (1984), and Card and Krueger (1993).

³⁷ Two popular supply-side explanations for the improvements in the economic status of blacks from the mid-1960s to the mid-1970s are the selective withdrawal from the labor force of black men at the low end of the earnings distribution (Butler and Heckman (1977)), and increases in the relative quantity and quality of education received by blacks during the 1940s and 1950s (Smith and Welch (1989)). Heckman (1989) examines the former hypothesis while Card and Krueger (1992) examine the latter explicitly.

is black, the δ_{ijt} 's are the residual black-white log earnings differentials in the six cells in each year, and η_{ijt} is a stochastic error term.³⁸

Figures 4A and 4B graph the least squares estimates of the δ_{ijt} 's for the South and Non-South H-Groups and L-Groups.³⁹ The patterns illustrated in the figures suggest that the employer coverage amendment improved the economic status of black men in the previously uncovered sector (i.e., South H-Group) in the post-policy period. From 1967-72 the black-white earnings gap in the South H-Group remained relatively stable at about -0.30 log points. However, in 1973, this gap narrowed a remarkable 0.15 log points and remained relatively constant until widening again in 1976.⁴⁰ It is unlikely that this jump is the result of sampling error given the preciseness of the coefficient estimates (0.03 standard errors). This decline in the regression adjusted differential is not surprising considering the fall in black-white relative education levels shown in Figure 3. For the other 3 cells, there appear to be no systematic movements in the log earnings gap either before or after 1972, although there is a great deal of year to year variability in the point estimates for the Non-South H-Group.

Consistent with other studies, the economic position of blacks in the South H-Group and L-Group started to erode after 1975. Black men in the South H-Group experienced a substantial decline in relative earnings (more than 0.10 points) in 1976. However, the corresponding losses for blacks in the South L-Group and Non-South H-Group in the late 70s suggest that the South H-Group's increase in racial inequality after 1975 may have been caused by both unobserved region-specific and industry-specific shocks to relative earnings resulting from the 1974-75 economic downturn. In addition, since there was black progress in the South H-Group but not in the other three cells after 1972, it is unlikely that these

³⁸ This equation allows the "price" of observable skills, β_t , to vary over the time period examined. In addition, when eight occupation dummies are included in the equation, the time-series patterns in each cell are nearly identical to the results presented above, although the magnitude of the coefficient estimates decreases uniformly.

³⁹ The Eicker-White consistent estimates of the standard errors of the graphs range from 0.028-0.032 for the South H-Group, 0.034-0.042 for the South L-Group, 0.031-0.035 for the Non-South H-Group, and 0.030-0.034 for the Non-South L-Group.

⁴⁰ Examining changes in black-white earnings differentials among young men is interesting since their economic status may be more sensitive to current labor market conditions (see Bound and Freeman 1989 and 1992). Estimates for equation (3) using a pooled sample of men aged 16-29 show substantial gains for young black men in the South H-Group from 1972 to 1973 (from a gap of -0.34 log points in 1972 to a gap of -0.08 in 1973). However, the smaller sample size results in large sampling errors.

patterns can be explained by changes in unobserved differences between blacks and whites in quality of education, family background, and other “productive” traits. In fact, if omitted skills are positively correlated with observed skills (i.e., education), then Figure 3 implies that the unobserved skill gap between blacks and whites, if anything, increased in the South H-Group from 1972-73.⁴¹

To get a more informative and concise measure of the effect of the amendment on relative earnings while accounting for changing market conditions in each cell, a more restrictive empirical model is estimated using a two-step procedure. First, I estimated the residual black-white log earnings differentials in the 41 industry cells in each region from 1967-79 (1066 $\hat{\delta}$ ’s) using regression equation (2). In the second step, I estimated equation (1) using the industry by region differentials from the first stage as the outcome measure and weighting by the inverse sampling variances of the estimated differentials.⁴² $Cycle_t$ is the logarithm of the black-white relative unemployment rate based on tables published in the “Economic Report of the President.” The coefficients on the policy variable (POST72) measure the detrended post-policy black-white differentials in each group for every year after 1972. This empirical specification uses an unrestricted functional form for the post-policy time effects since the partial equilibrium model described above predicts that relative earnings will have a more complex dynamic response to the intervention than relative employment.

Table 4 provides simple estimates of the amendment’s impact. Column 1 of Table 4 contains the weighted averages of the detrended post-policy earnings differentials shown in Table 5 (with weights equal to the inverse of their standard errors). Positive estimates imply that post-policy differentials are smaller than expected given pre-policy trends and shifts in other observable factors. The earnings gap in the South H-Group narrowed, on average, more than 0.08 log points in the post-policy period. Accounting for

⁴¹ To crudely control for omitted variables, I estimated equation (3) for a single large cohort, aged 16-49 in 1967. The within cohort movements were identical to the results presented above. Also, if returns to education are allowed to vary by industry group, region, and race (for the full sample), the ratio of black-white returns to education is by far smallest for the South H-Group, and the estimates of the δ_{ijt} ’s for the South H-Group become positive, although the time-series patterns do not change. Thus, in the presence of labor market discrimination, differences in the returns to education across race are not always strong evidence of differences in school quality.

⁴² The weighting scheme used in the second stage regression is close to optimal since the estimated industry by region differentials are almost orthogonal and the coefficients (β_t ’s) on the “nuisance” variables (X ’s) from the first stage regression are estimated very precisely.

unobserved shocks to the South, the difference-in-differences comparison implies that black gains were, on average, 0.11 points greater in the South H-Group than in the South L-Group. The difference-in-differences-in-differences estimator, which additionally controls for unmeasured industry-specific fluctuations, yields an average policy impact of 0.18 points. Although there also appear to be improvements in black economic status in the South M-Group, the difference-in-differences-in-differences comparison between the M-Group and L-Group results in an imprecisely estimated average policy impact of 0.11 points (0.084 standard error). Thus, the detrended black-white earnings gap narrowed, on average, 0.11-0.18 points more at newly-covered than at previously covered employers after 1972.

To examine the dynamic effects of the policy on relative earnings, Table 5 presents the annual estimates of the detrended post-policy differentials. After rising 0.14 log points in 1973, relative earnings in the South H-Group fell gradually until rising again from 1977-79. The difference-in-differences and difference-in-differences-in-differences estimates exhibit similar patterns. With the exception of the 1977-79 period, the post-policy differentials, although imprecisely estimated, are consistent with a model in which the relative demand for blacks in the newly-covered sector increases and the relative supply of blacks is more elastic in the long-run than in the short-run.

Differences between the black and white occupational distributions may provide a better measure of black economic status in each cell than relative earnings. Appendix Table 4 presents the ratio of the proportion of black men in a occupation group to the proportion of white men in those occupations for each cell. Occupations are aggregated into three groups determined by their “earnings capacity” (i.e., the coefficient estimates on nine occupation dummies in a regression of earnings equation (2)).⁴³ The two highest paying occupation groups contain professional and managerial jobs (ProfMan) and clerical, sales, craft, and operative jobs (SalCraft). Nonfarm labor and low end service jobs constitute the omitted group. The upper and lower panels use data on the job held longest the previous year (from the March CPS's) and the current job (from both the March and October CPS's), respectively.

⁴³ The CPS codes for occupation categories changed slightly at the two-digit level in the March 1972 CPS. Although there were no apparent changes at the one-digit level, I still aggregated the two-digit occupations into mutually consistent one-digit occupations for all of the CPS's.

It appears that black men in the South H-Group achieved relative gains in both the ProfMan and SalCraft occupations in the post-policy period. For example, in the top panel, the relative proportion of blacks in the ProfMan occupations increased only 1.1 percentage points before and 6.7 percentage points after 1972 while in the SalCraft occupations black representation actually fell by 4.4 percentage points before rising 11 points after 1972. Since similar patterns are exhibited in some of the other cells, however, it is difficult to measure the contribution of the federal mandate to these improvements.

To account for shifts in other relevant factors while obtaining more informative measures of the policy's impact, I use the same two-step estimation procedure described above to calculate regression adjusted estimates of the post-policy occupational status of blacks. Specifically, the first stage equation is a linear probability model similar to equation (2) where y is an occupation group (ProfMan or SalCraft) dummy variable, X consists of education and age and its square, and the estimated δ 's measure residual differences between blacks and whites in the probability of being in the occupation group. The second step is the same as the one used in the relative earnings analysis. The coefficients on the policy variable measure unexplained (by pre-policy trends or shifts in other observable variables) changes in black-white probability differences after the intervention (positive values imply that blacks have a higher than expected relative probability of being in the occupation group).

Columns 2 and 3 of Table 4 contain the weighted averages of the detrended probability differences shown in Table 6 for the ProfMan and SalCraft occupation groups, respectively.⁴⁴ There were no significant post-policy changes in the relative probability of blacks being in the ProfMan group in any cell. Both the difference-in-differences and the difference-in-differences-in-differences estimates are not significant in either an economic or statistical sense. However, blacks in the South H-Group made substantial inroads into the SalCraft occupations after 1972 having, on average, a 13 percent higher than expected probability of being in this occupation group than whites. In addition, the difference-in-differences and difference-in-differences-in-differences estimates imply that the relative representation of blacks in the SalCraft occupations increased, on average, 11-13 percent more at newly-covered than at

⁴⁴ Using data on the current job from the March and October CPS's yields estimates of the policy effects which are similar to the ones presented and slightly more precise due to the larger sample size (650,756 individuals).

previously covered employers after the intervention. The similarity of these estimates again implies that any biases caused by not controlling for unmeasured industry-specific shocks are small. Also, these relative gains are much larger than those found in the affirmative action literature, and their patterns in Table 6 are similar to the post-policy relative earnings patterns depicted in Table 5.

Final Comments

Two final observations are noteworthy. First, more than twenty-five percent of all men in the South H-Group were employed in the construction industry. Since many studies have found that craft unions, especially in the building trades, were discriminatory during the 1960s and early 1970s (see Blumrosen 1971 and Ashenfelter 1972 and 1973), it is conceivable that the shifts found for the South H-Group in this study might have been the result of the increase in EEOC enforcement power and the extension of Title VII coverage to small unions after 1972. When examining the extent of unionization using the March 1971 CPS data on the job held longest last year and the May 1973-75 CPS data on the current job, however, I find that only 11-14% of all black men and 11-12% of all white men in the South H-Group were in unions during the early 1970s. I conclude from this that union controlled hiring halls in the construction industry were not a major focus of EEOC antidiscrimination efforts after 1972.

Second, the fraction of self-employed black men in the South H-Group dropped substantially after 1973. Self-employment rates for blacks were 7.5% from 1967-73 and 4.5% from 1974-80 while "entrepreneurial" rates for whites in the South H-Group were relatively stable from 1967-80 (14.0-15.5%). Although some of these shifts might have been the result of the 1974-75 recession, it is possible that improving labor market opportunities might have encouraged many black entrepreneurs to move to the private wage and salary sector after the implementation of the coverage amendment.

CONCLUSION

Previous studies concerning the impact of antidiscrimination legislation on the economic status of African-Americans have been controversial due to their inability to control for changes that would have occurred even in the absence of the intervention. This paper, on the other hand, uses the natural experiment provided by the employer coverage amendment of the 1972 Equal Employment Opportunity Act (EEOA) to

measure the effects of civil rights law. Specifically, the federal expansion of civil rights coverage to small employers allows one to define treatment and control groups using variation across industries in the fraction of employees in small establishments and across states in the employer coverage of pre-existing fair employment practice (FEP) laws. The previously uncovered sector (i.e., small employers in the South) appears to have been a large segment of the economy.

The evaluation strategy in this paper aggregates individual micro-data into industry by region cells, with industries aggregated into three groups with similar fractions of workers in small establishments and states aggregated into the South, where FEP laws were non-existent, and the Non-South, where most states already had laws covering small employers. Movements in three measures of racial inequality (blacks' share in industry employment, black-white relative annual earnings, and black-white relative occupational status) in each cell are examined. To identify the intervention effects, comparisons of the economic progress of black men at newly-covered (South H-Group) and previously covered (the other five cells) employers are made.

Controlling for permanent differences across the industry by region cells, cyclical effects, the changing relative skills of black workers, pre-policy trends in each cell, and unobserved region and industry-specific shocks, this study finds that black men in the high-impact industries in the South achieved large improvements in economic status after 1972. Black employment shares grew 0.5-1.1 points more per year and the black-white earnings gap narrowed, on average, 0.11-0.18 log points more at newly-covered than at previously covered employers after the federal mandate. Also, black men in the South H-Group made significant inroads into clerical, sales, craft, and operative occupations. Most of these gains were concentrated among relatively unskilled, low paid blacks employed in the construction and service sectors. Finally, this study finds larger policy effects than those found in the previous literature (with the exception of Heckman and Payner 1989), and it also provides evidence that some government interventions have had a positive impact on the relative employment of minorities at small employers (Bloch 1994). The location and timing of the relative gains strongly support the story that the EEOA increased the relative demand for blacks among small employers in the South after 1972.

Recently, both a heated public debate on the desirability and efficacy of affirmative action programs and a debate in the economics literature on competing explanations for the growing racial wage inequality in the U.S. over the last fifteen years have developed. As a result, it seems that additional studies attempting to obtain a "structural" estimate of the impact of antidiscrimination legislation would provide a very useful source of information. Such research would involve separately identifying the effects of shifts in both black-white skill differences (observed and unobserved) and the return to skill and changing discrimination on black-white inequality. If federal efforts in the 1960s and 1970s contributed a substantial amount to black economic gains, then weakened efforts must also be a partial explanation for losses experienced in the 1980s.

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Figure 1
Blacks' Share of Employment for Current Job

A. South

B. Non-South

Figure 2
Actual and Predicted Blacks' Share of Employment

Figure 3
Mean and Relative Education of Black Men

Figure 4
Residual Black-White Annual Earnings Gap

A. South

B. Non-South

Table 1: Characteristics of Working Age Men by Employer Size, 1979

	South		Non-South	
	Blacks	Whites	Blacks	Whites
<u>Distribution of Men by Employer Size (Percent of Employed)</u>				
Establishment Size				
Under 25	40.9	40.4	27.3	35.8
25 to 99	22.6	22.0	20.1	23.5
100 to 499	18.2	18.4	20.9	19.4
500-999	5.5	7.1	8.4	5.6
1000+	12.8	12.1	20.9	15.7
Firm Size				
Under 25	31.6	27.6	18.0	25.5
25 to 99	16.5	14.1	9.3	14.4
100 to 499	12.5	11.5	9.9	12.9
500-999	4.8	4.4	6.3	4.9
1000+	34.7	42.4	56.5	42.4
<u>Worker and Pay Characteristics of Men by Establishment Size</u>				
Mean Education (standard errors in parentheses)				
Under 25	10.0 (0.26)	12.1 (0.09)	11.2 (0.26)	12.6 (0.05)
25 to 99	11.2 (0.36)	12.5 (0.12)	12.3 (0.31)	12.7 (0.07)
100 to 499	11.3 (0.39)	12.6 (0.13)	12.6 (0.36)	12.8 (0.07)
500-999	12.2 (0.50)	13.1 (0.21)	13.2 (0.43)	13.0 (0.13)
1000+	12.3 (0.37)	13.3 (0.15)	12.3 (0.26)	13.4 (0.08)
Ratio: Under 25 to 1000+	0.81	0.91	0.91	0.94
Hourly Wages (standard errors in parentheses)				
Under 25	4.40 (0.17)	5.83 (0.11)	6.17 (0.35)	6.55 (0.07)
25 to 99	5.12 (0.26)	6.69 (0.13)	6.34 (0.30)	7.19 (0.08)
100 to 499	5.66 (0.31)	7.51 (0.15)	7.53 (0.47)	8.06 (0.09)
500-999	5.70 (0.46)	7.97 (0.23)	7.12 (0.51)	8.47 (0.18)
1000+	7.55 (0.50)	9.14 (0.23)	7.74 (0.28)	9.27 (0.12)
Ratio: Under 25 to 1000+	0.58	0.64	0.80	0.71

Notes: Data are taken from the May 1979 Current Population Survey. The sample is 13,106 men aged 16-65 in the outgoing rotation groups, either employed last week or temporarily absent from work, and not self-employed. All calculations use the Pension Plan Supplement weights.

Table 2: Characteristics of Working Age Men, 1968-80 CPS's

Mean Demographic Characteristics of Men by Race and Region													
	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
Percent Black (South)	17.3	17.0	17.1	16.9	16.5	16.1	16.4	16.5	16.8	17.1	16.9	16.3	16.3
Percent Black (Non-South)	6.4	6.7	6.6	6.7	6.9	7.1	7.1	7.0	7.0	6.9	7.2	7.5	7.6
Black Education (South)	8.6	8.9	9.1	9.3	9.5	9.7	9.7	9.8	10.0	10.2	10.4	10.4	10.6
White Education (South)	11.1	11.1	11.3	11.4	11.4	11.5	11.7	11.8	11.9	11.9	12.0	12.1	12.1
Black Education (Non-South)	10.3	10.5	10.6	10.7	10.7	10.9	11.0	11.2	11.2	11.3	11.4	11.4	11.5
White Education (Non-South)	11.7	11.7	11.8	11.9	12.0	12.1	12.1	12.2	12.3	12.4	12.4	12.5	12.6
Black Age	36.2	35.9	35.6	35.4	35.3	35.1	35.3	35.2	35.1	34.9	35.0	35.0	34.9
White Age	38.2	38.1	37.9	37.6	37.4	37.3	37.2	37.0	36.9	36.9	36.9	36.8	36.8
Sample Size	83380	82248	81550	81221	80617	78468	77333	76237	78330	93274	91554	90300	106336

Relative Employment and Earnings of Black Men by Region													
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Blacks' Share of Employment													
South	0.167	0.159	0.167	0.165	0.161	0.154	0.159	0.154	0.161	0.169	0.163	0.157	0.154
Non-South	0.063	0.066	0.063	0.059	0.059	0.060	0.062	0.058	0.063	0.062	0.064	0.068	0.070
Black-White Mean Earnings Ratio													
South	0.531	0.567	0.572	0.573	0.588	0.622	0.614	0.617	0.595	0.611	0.609	0.620	0.652
Non-South	0.763	0.788	0.764	0.800	0.795	0.787	0.814	0.837	0.773	0.757	0.742	0.756	0.721
Sample Size	38470	38891	36854	37370	35956	35376	34867	33939	37033	44659	43726	43497	51675

Notes: Data are taken from the March and October Current Population Surveys from 1968-80. "Mean Demographic Characteristics of Men" use the pooled March and October data. "Relative Employment and Earnings of Black Men" use the March data on the job held longest the previous year. All calculations are for men aged 16-65 and use the CPS sample weights.

Table 3: Estimated Regression Equations for Black Employment Share for Current Job, 1968-80
(estimated standard errors in parentheses)

Explanatory Variable	(1)	(2)	(3)
<u>Growth*100</u>			
<u>South</u>		3.47 (3.55)	
H-Group			6.21 (5.19)
M-Group			-3.26 (6.93)
L-Group			5.28 (6.83)
<u>Non-South</u>		5.42 (2.26)	
H-Group			5.68 (3.47)
M-Group			2.43 (4.38)
L-Group			7.64 (4.07)
<u>Trend*100</u>			
<u>South</u>			
H-Group	-0.295 (0.051)	-0.284 (0.052)	-0.276 (0.053)
M-Group	-0.119 (0.068)	-0.108 (0.069)	-0.129 (0.071)
L-Group	0.129 (0.063)	0.140 (0.064)	0.145 (0.066)
<u>Non-South</u>			
H-Group	-0.095 (0.034)	-0.072 (0.036)	-0.071 (0.037)
M-Group	0.027 (0.042)	0.049 (0.043)	0.037 (0.046)
L-Group	-0.041 (0.037)	-0.020 (0.038)	-0.011 (0.040)
<u>Trend Break*100^a</u>			
<u>South</u>			
H-Group (γ_{sh})	0.245 (0.073)	0.233 (0.073)	0.223 (0.075)
M-Group (γ_{sm})	0.098 (0.097)	0.085 (0.098)	0.109 (0.100)
L-Group (γ_{sl})	-0.074 (0.092)	-0.085 (0.093)	-0.091 (0.095)
Diff-in-Diff ($\gamma_{sh} - \gamma_{sl}$)	0.318 (0.117)	0.318 (0.117)	0.315 (0.121)
<u>Non-South</u>			
H-Group (γ_{nh})	0.127 (0.049)	0.097 (0.051)	0.095 (0.053)
M-Group (γ_{nm})	0.012 (0.061)	-0.018 (0.062)	-0.002 (0.065)
L-Group (γ_{nl})	0.068 (0.054)	0.041 (0.055)	0.029 (0.058)
Diff-in-Diff ($\gamma_{nh} - \gamma_{nl}$)	0.059 (0.073)	0.056 (0.073)	0.066 (0.078)
Diff-in-Diff-in-Diff [($\gamma_{sh} - \gamma_{sl}$) - ($\gamma_{nh} - \gamma_{nl}$)]	0.260 (0.138)	0.262 (0.138)	0.248 (0.144)

Notes: Estimated on a sample of 41 industries in each region over 26 month-years (2132 cell observations). Regressions are weighted by the industry by region cell sample sizes in each month-year. All regressions also include industry group by region intercepts and CPS sample month effects. The R-squared of all of the regressions is 0.894.

^a The date of the trend break is March 1973.

Table 4: Average Detrended Post-Policy Relative Earnings and Occupational Status, 1973-79
(estimated standard errors in parentheses)

Group	Black-White Log Earnings Differentials ^a	Black-White Differences in Probability ^b	
		Professional and Managerial	Clerical, Sales, Craft, and Operative
<u>South</u>			
H-Group (γ_{sh})	0.084 (0.034)	-0.013 (0.019)	0.133 (0.024)
M-Group (γ_{sm})	0.105 (0.045)	-0.037 (0.026)	-0.074 (0.033)
L-Group (γ_{sl})	-0.028 (0.041)	0.036 (0.023)	0.023 (0.030)
Diff-in-Diff ($\gamma_{sh} - \gamma_{sl}$)	0.113 (0.053)	-0.049 (0.030)	0.111 (0.038)
<u>Non-South</u>			
H-Group (γ_{nh})	0.034 (0.037)	-0.015 (0.020)	0.010 (0.026)
M-Group (γ_{nm})	0.122 (0.045)	-0.047 (0.025)	-0.050 (0.033)
L-Group (γ_{nl})	0.100 (0.035)	0.002 (0.020)	0.025 (0.026)
Diff-in-Diff ($\gamma_{nh} - \gamma_{nl}$)	-0.067 (0.051)	-0.018 (0.029)	-0.015 (0.037)
<hr/>			
Diff-in-Diff-in-Diff [($\gamma_{sh} - \gamma_{sl}$) - ($\gamma_{nh} - \gamma_{nl}$)]	0.180 (0.073)	-0.032 (0.041)	0.127 (0.053)

Notes: See notes to Tables 5 and 6

^a Entries are a weighted average of the time effects in Table 5 with weights equal to the inverse of their standard errors.

^b Entries are a weighted average of the time effects in Table 6 with weights equal to the inverse of their standard errors.

Table 5: Detrended Post-Policy Residual Black-White Log Earnings Differentials, 1973-79
(estimated standard errors in parentheses)

Group	1973	1974	1975	1976	1977	1978	1979
<u>South</u>							
H-Group (γ_{sh})	0.138 (0.048)	0.098 (0.052)	0.102 (0.055)	0.002 (0.060)	0.044 (0.073)	0.105 (0.091)	0.084 (0.104)
L-Group (γ_{sl})	-0.052 (0.060)	-0.026 (0.065)	0.079 (0.066)	0.020 (0.074)	-0.075 (0.090)	-0.127 (0.112)	-0.098 (0.131)
Diff-in-Diff ($\gamma_{sh} - \gamma_{sl}$)	0.190 (0.075)	0.124 (0.080)	0.023 (0.085)	-0.018 (0.093)	0.119 (0.110)	0.232 (0.137)	0.182 (0.160)
<u>Non-South</u>							
H-Group (γ_{nh})	0.054 (0.052)	0.103 (0.056)	0.046 (0.060)	0.003 (0.065)	0.007 (0.076)	-0.031 (0.092)	0.007 (0.107)
L-Group (γ_{nl})	0.045 (0.049)	0.100 (0.054)	0.092 (0.058)	0.051 (0.062)	0.212 (0.074)	0.164 (0.089)	0.079 (0.102)
Diff-in-Diff ($\gamma_{nh} - \gamma_{nl}$)	0.008 (0.068)	0.003 (0.075)	-0.047 (0.081)	-0.048 (0.087)	-0.205 (0.099)	-0.195 (0.119)	-0.072 (0.139)
Diff-in-Diff-in-Diff [($\gamma_{sh} - \gamma_{sl}$) - ($\gamma_{nh} - \gamma_{nl}$)]	0.182 (0.101)	0.120 (0.110)	0.070 (0.118)	0.030 (0.127)	0.324 (0.148)	0.428 (0.181)	0.254 (0.212)

Notes: The two-step estimation procedure and the control variables used for the sample of 328,893 individuals are described in the text. The first step of the estimation procedure uses the CPS sample weights. The second step uses a sample of 41 industries in each region over 13 years (1066 cell observations). The second stage regressions are weighted by the inverse sampling variances of the estimated black-white earnings differentials for each industry by region cell in each year.

Table 6: Detrended Post-Policy Residual Black-White Differences in Probability of Being in Occupation, 1973-79
(estimated standard errors in parentheses)

	1973	1974	1975	1976	1977	1978	1979
<u>Professional and Managerial</u>							
<u>South</u>							
H-Group (γ_{sh})	-0.005 (0.027)	-0.008 (0.029)	0.012 (0.031)	0.002 (0.034)	-0.040 (0.041)	-0.038 (0.051)	-0.046 (0.059)
L-Group (γ_{sl})	0.012 (0.034)	0.054 (0.037)	0.023 (0.038)	0.023 (0.042)	0.045 (0.052)	0.053 (0.064)	0.072 (0.075)
Diff-in-Diff ($\gamma_{sh} - \gamma_{sl}$)	-0.017 (0.042)	-0.061 (0.045)	-0.011 (0.048)	-0.021 (0.052)	-0.085 (0.062)	-0.091 (0.077)	-0.118 (0.090)
<u>Non-South</u>							
H-Group (γ_{nh})	0.002 (0.029)	-0.007 (0.031)	-0.043 (0.033)	0.008 (0.036)	-0.011 (0.043)	-0.019 (0.052)	-0.059 (0.060)
L-Group (γ_{nl})	-0.005 (0.028)	0.004 (0.031)	0.018 (0.033)	-0.001 (0.036)	-0.022 (0.043)	0.007 (0.051)	0.021 (0.059)
Diff-in-Diff ($\gamma_{nh} - \gamma_{nl}$)	0.007 (0.038)	-0.011 (0.042)	-0.061 (0.046)	0.009 (0.049)	0.011 (0.056)	-0.026 (0.067)	-0.079 (0.078)
Diff-in-Diff-in-Diff [($\gamma_{sh} - \gamma_{sl}$) - ($\gamma_{nh} - \gamma_{nl}$)]	-0.024 (0.057)	-0.051 (0.062)	0.049 (0.066)	-0.030 (0.072)	-0.096 (0.083)	-0.065 (0.102)	-0.039 (0.119)
<u>Clerical, Sales, Craft, and Operative</u>							
<u>South</u>							
H-Group (γ_{sh})	0.136 (0.035)	0.111 (0.037)	0.091 (0.039)	0.086 (0.043)	0.201 (0.053)	0.174 (0.066)	0.196 (0.076)
L-Group (γ_{sl})	0.041 (0.044)	0.020 (0.047)	0.064 (0.049)	0.036 (0.054)	-0.038 (0.067)	-0.004 (0.083)	0.011 (0.096)
Diff-in-Diff ($\gamma_{sh} - \gamma_{sl}$)	0.095 (0.054)	0.092 (0.058)	0.028 (0.062)	0.050 (0.068)	0.239 (0.080)	0.178 (0.099)	0.184 (0.116)
<u>Non-South</u>							
H-Group (γ_{nh})	-0.026 (0.037)	0.019 (0.040)	0.054 (0.043)	-0.009 (0.047)	-0.013 (0.055)	0.009 (0.067)	0.052 (0.077)
L-Group (γ_{nl})	0.010 (0.036)	0.035 (0.040)	0.026 (0.042)	0.025 (0.046)	0.058 (0.055)	0.025 (0.066)	-0.010 (0.076)
Diff-in-Diff ($\gamma_{nh} - \gamma_{nl}$)	-0.036 (0.050)	-0.015 (0.054)	0.028 (0.059)	-0.035 (0.063)	-0.072 (0.072)	-0.016 (0.086)	0.062 (0.101)
Diff-in-Diff-in-Diff [($\gamma_{sh} - \gamma_{sl}$) - ($\gamma_{nh} - \gamma_{nl}$)]	0.132 (0.074)	0.107 (0.080)	-0.001 (0.085)	0.084 (0.093)	0.311 (0.108)	0.194 (0.131)	0.123 (0.154)

Notes: The two-step estimation procedure and the control variables used for the sample of 351,134 individuals are described in the text. The first step of the estimation procedure uses the CPS sample weights. The second step uses a sample of 41 industries in each region over 13 years (1066 cell observations). The second stage regressions are weighted by the inverse sampling variances of the estimated black-white difference in probability of being in the occupation for each industry by region cell in each year. The third occupation group consists of nonfarm laborers, private household workers, and other low end service workers.

Appendix Table 1: State Fair Employment Practice Laws on Employer Discrimination Before 1972

	FEP Law	Employer Coverage *	Enforcement		
			Commission	Fine/Jail	Voluntary
<u>South</u>					
Alabama					
Arkansas					
D.C.	X	X(1)	X	X	
Delaware	X	X(4)	X	X	
Florida	X(c)				
Georgia					
Kentucky	X	X(8)	X	X	
Louisiana					
Maryland	X	X(25)	X		
Mississippi					
North Carolina	X(c)				
Oklahoma	X	X(25)	X		
South Carolina					
Tennessee			X(d)		X
Texas	X(c)				X
Virginia					
West Virginia	X	X(25)	X	X	
<u>Non-South</u>					
Alaska	X	X(1)	X		
Arizona	X	X(20)	X	X	X(a)
California	X	X(5)	X	X	
Colorado	X	X(6)	X		
Connecticut	X	X(3)	X		
Hawaii	X	X(1)	X	X	
Idaho	X	X(4)	X	X	
Illinois	X	X(25)	X		
Indiana	X	X(6)	X		
Iowa	X	X(4)	X		
Kansas	X	X(4)	X	X	
Maine	X	X(b)		X	
Massachusetts	X	X(6)	X	X	
Michigan	X	X(8)	X		
Minnesota	X	X(8)	X	X	
Missouri	X	X(6)	X	X	
Montana	X	X(b)		X	
Nebraska	X	X(25)	X	X	
Nevada	X	X(15)	X		
New Hampshire	X	X(6)	X	X	
New Jersey	X	X(b)	X	X	
New Mexico	X	X(4)	X		
New York	X	X(4)	X	X	
North Dakota					
Ohio	X	X(4)	X	X	
Oregon	X	X(1)	X	X	
Pennsylvania	X	X(4)	X	X	
Rhode Island	X	X(4)	X		
South Dakota	X	X(b)	X		
Utah	X	X(25)	X		
Vermont	X	X(b)		X	
Washington	X	X(8)	X	X	
Wisconsin	X	X(b)	X	X	
Wyoming	X	X(2)	X		

Notes: * The numbers in parentheses indicate the minimum number of employees an employer must have for coverage.

(a) First offense only.

(b) No minimum number of employees specified.

(c) Public employment only.

(d) No FEP law but a commission to promote equal opportunity.

Source: The Bureau of National Affairs, Inc. (1973:82-83).

Appendix Table 2: Fraction of Men Employed in Small Establishments by Industry, 1979

Two-Digit Industry Name	Fraction Affected ^a			Cell Sample Sizes for
	Both Regions	South	Non-South	Both Regions
<u>H-Group</u>				
Private Household Services	0.95	0.89	1.00	104
Repair Services	0.83	0.85	0.83	825
Forestry and Fisheries	0.67	0.58	0.71	151
Construction	0.66	0.63	0.68	4220
Insurance and Real Estate	0.61	0.59	0.61	1078
Business Services	0.56	0.61	0.54	744
Other Retail Trade	0.56	0.61	0.53	4162
Eating and Drinking Places	0.55	0.58	0.54	1158
Wholesale Trade	0.52	0.54	0.52	1857
Personal Services	0.52	0.59	0.50	596
<u>M-Group</u>				
Medical and Health Services	0.48	0.42	0.50	466
Other Professional Services	0.47	0.50	0.44	865
Entertainment Services	0.47	0.38	0.50	442
Lumber and Wood	0.41	0.38	0.43	480
Other Transportation	0.39	0.42	0.38	1639
Durables Manufacturing	0.29	0.33	0.29	287
Printing and Publishing	0.29	0.25	0.30	538
Banking and Other Finance	0.27	0.31	0.25	442
Mining	0.23	0.26	0.18	638
Communications	0.21	0.23	0.21	513
Utilities and Sanitary Services	0.21	0.16	0.23	714
Fabricated Metal	0.19	0.20	0.19	710
Apparel and Other	0.16	0.07	0.22	184
Stone, Clay, and Glass	0.16	0.26	0.13	348
Prof. and Photo Equipment	0.11	0.59	0.04	201
<u>L-Group</u>				
Tobacco Manufactures	0.17	0.19	0.00	28
Railroads and Railway	0.16	0.06	0.19	426
Machinery	0.14	0.13	0.14	1356
Food and Kindred	0.14	0.13	0.14	867
Furniture and Fixtures	0.14	0.00	0.19	241
Chemicals and Allied Products	0.10	0.09	0.11	597
Leather Products	0.08	0.10	0.06	103
Transportation Equipment	0.07	0.09	0.07	530
Rubber and Plastic	0.07	0.00	0.08	300
Textile Mill Products	0.06	0.04	0.11	274
Electrical Machinery, etc.	0.06	0.10	0.05	812
Primary Metal	0.05	0.09	0.04	690
Hospitals	0.05	0.06	0.04	556
Automobiles	0.02	0.00	0.03	666
Petroleum and Coal Products	0.02	0.06	0.00	112
Paper and Allied Products	0.02	0.05	0.01	385
<u>Other</u>				
Agriculture	0.79	0.84	0.76	1988
Welfare and Religious Services	0.68	0.78	0.64	416
Local Government	0.38	0.52	0.32	833
State Government	0.35	0.35	0.35	383
Postal Service	0.21	0.17	0.23	349
Educational Services	0.18	0.23	0.16	1942
Federal Government	0.15	0.15	0.15	739

Notes: Data are taken from the May 1979 Current Population Survey. The sample is 13,106 men aged 16-65 in the outgoing rotation groups, either employed last week or temporarily absent from work, and not self-employed. All calculations use the Pension Plan Supplement weights.

^a Fraction Affected is the fraction of workers employed in establishments with less than twenty-five employees.

Appendix Table 3: Mean Earnings for Black and White Men and Measures of Black-White Relative Earnings, 1967-79^a

	1967-68	1969-70	1971-72	1973-74	1975-76	1977-79
<u>Mean Earnings of Black Men</u>						
South						
H-Group	3737	4013	4291	4561	4396	4694
M-Group	4575	4553	5146	5503	5434	6284
L-Group	4846	5319	5588	5848	6087	6492
Non-South						
H-Group	5546	5902	6017	6282	5533	5909
M-Group	6373	6902	6516	7144	7624	7667
L-Group	7136	7108	7763	8140	8115	8426
<u>Mean Earnings of White Men</u>						
South						
H-Group	7319	7891	7986	8220	7841	7951
M-Group	8632	9537	9872	9931	9634	10278
L-Group	8378	9014	9126	9424	9369	9900
Non-South						
H-Group	8575	9069	9035	8888	8339	8459
M-Group	9949	10513	10682	10697	10521	10835
L-Group	9693	10219	10313	10502	10353	10829
<u>Relative Black-White Mean Earnings</u>						
South						
H-Group	0.511	0.509	0.537	0.555	0.561	0.590
M-Group	0.530	0.477	0.521	0.554	0.564	0.611
L-Group	0.578	0.590	0.612	0.620	0.650	0.656
Non-South						
H-Group	0.647	0.651	0.666	0.707	0.664	0.699
M-Group	0.641	0.657	0.610	0.668	0.725	0.708
L-Group	0.736	0.696	0.753	0.775	0.784	0.778
<u>Relative Black-White Median Earnings</u>						
South						
H-Group	0.582	0.563	0.571	0.583	0.579	0.638
M-Group	0.495	0.500	0.532	0.540	0.575	0.597
L-Group	0.627	0.618	0.624	0.666	0.667	0.674
Non-South						
H-Group	0.721	0.692	0.766	0.729	0.688	0.718
M-Group	0.700	0.724	0.682	0.694	0.776	0.715
L-Group	0.806	0.796	0.796	0.833	0.846	0.828

Notes: Data are taken from the March 1968-80 Current Population Surveys. Calculations are made for the sample of working age men employed in the private sector with positive potential experience and at least \$100 in annual earnings (in \$1972). CPS sample weights are used in all calculations.

^a Earnings data are deflated by the personal consumption expenditure deflator from the National Income and Product Accounts and are in 1972 dollars.

Appendix Table 4: Relative Occupational Status of Black Men, 1968-80 CPS's^a

Job Last Year ^b	1967-68	1969-70	1971-72	1973-74	1975-76	1977-79	
<u>Professional, Managerial</u>							
South							
H-Group	0.127	0.120	0.138	0.155	0.221	0.205	
M-Group	0.107	0.096	0.160	0.198	0.153	0.232	
L-Group	0.081	0.057	0.162	0.142	0.203	0.277	
Non-South							
H-Group	0.307	0.320	0.396	0.504	0.419	0.477	
M-Group	0.296	0.373	0.373	0.472	0.575	0.456	
L-Group	0.204	0.229	0.232	0.258	0.272	0.396	
<u>Clerical, Sales, Craft, and Operative</u>							
South							
H-Group	0.779	0.752	0.735	0.814	0.770	0.844	
M-Group	0.805	0.966	0.975	1.034	1.061	1.084	
L-Group	0.941	0.932	0.934	1.014	1.031	0.962	
Non-South							
H-Group	0.792	0.883	0.838	0.842	0.955	0.940	
M-Group	1.048	1.095	1.149	1.102	1.073	1.157	
L-Group	1.039	1.075	1.050	1.100	1.099	1.095	
Current Job ^c	M68-069	M70-071	M72-M73	O73-O74	M75-076	M77-078	M79-O80
<u>Professional, Managerial</u>							
South							
H-Group	0.117	0.137	0.159	0.181	0.193	0.226	0.272
M-Group	0.118	0.086	0.127	0.126	0.152	0.187	0.264
L-Group	0.098	0.125	0.214	0.205	0.233	0.216	0.259
Non-South							
H-Group	0.296	0.391	0.358	0.361	0.448	0.515	0.490
M-Group	0.286	0.418	0.392	0.337	0.427	0.473	0.456
L-Group	0.176	0.222	0.239	0.242	0.297	0.286	0.412
<u>Clerical, Sales, Craft, and Operative</u>							
South							
H-Group	0.777	0.802	0.782	0.802	0.831	0.842	0.841
M-Group	0.869	1.010	0.973	1.083	1.056	1.087	1.069
L-Group	0.926	0.941	0.928	0.978	1.019	0.976	1.013
Non-South							
H-Group	0.826	0.877	0.835	0.867	0.918	0.882	0.899
M-Group	1.096	1.117	1.133	1.166	1.131	1.115	1.174
L-Group	1.073	1.095	1.053	1.119	1.085	1.109	1.097

Notes: Data are taken from the March and October Current Population Surveys from 1968-80. The sample used is all working age men participating in the private sector. CPS sample weights are used in all calculations. The third occupation group consists of nonfarm laborers, private household workers, and other low end service workers.

^a Entries are the ratios of the proportion of black men in each occupation group to the proportion of white men in that group.

^b Data from the March Current Population Surveys only.

^c Data from both the March and October Current Population Surveys.