

THE EFFECTIVENESS OF EQUAL  
EMPLOYMENT  
OPPORTUNITY POLICIES

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# THE EFFECTIVENESS OF EQUAL EMPLOYMENT OPPORTUNITY POLICIES

Although issues related to the civil rights of women and people of color have concerned decision makers in the United States for over 200 years, federal policy did not clearly codify a principle of equal employment opportunity until the passage of the Civil Rights Act of 1964. Title VII of this act specifically forbade employers to discriminate against individuals because of their race, color, religion, sex, or national origin in decisions regarding hiring, firing, compensation, or other terms of employment. President Johnson's 1965 Executive Order 11246 went further to require federal contractors to take affirmative action to remove discriminatory practices. The existence of an official policy does not, however, ensure its effectiveness. This report focuses on the effects of federal equal employment opportunity (EEO) policies, including affirmative action, on two overlapping groups, African Americans and women, by reviewing econometric evidence of the effects of policy on labor market outcomes, particularly wages and employment.<sup>1</sup> In the few cases in which studies have also examined other racial or ethnic groups, those results are also included.

Many other surveys of the econometric literature have been written by economists actively engaged in this research (see Table 1). Conducted at different stages of the research in this area and at different stages of policy structure and enforcement, these surveys reach moderately different conclusions about the effectiveness of federal EEO efforts but often raise issues addressed in later research. In addition to reviewing much of the same literature, this report attempts to match criticisms to responses, interpretations to reinterpretations, and new answers to old questions in an effort to identify what we know about the effects of federal EEO policy. This report also considers these studies in a broader

context than some other surveys, both with respect to groups covered (e.g., John H. Donohue and James Heckman's focus on men [1991]) and to the questions that need to be answered (e.g., the effect of institutions).

Uncertainty in results and ambiguity in interpretation characterize much of this research literature. The uncertainty stems partly from the imperfections of available data and the need to patch together variables to measure enforcement or policy change. We have detailed personal, income, and employment data on representative samples of individuals from the monthly Current Population Survey (CPS) and the decennial census but know virtually nothing about individuals' employers; we have unrepresentative employer-level data from EEO-1 forms with little information about the firm and its employees beyond totals by race, sex, and occupation. This report reviews the major quantitative studies that have pieced data together to measure the effects of policy using some direct policy measurement, such as Equal Employment Opportunity Commission (EEOC) expenditures or the presence of a government contract. And although case studies often provide more subtle detail on the impact of EEO policies, studies of one or only a few employers may not be representative of the average employer's response. Those studies, therefore, are not included in this report.

The remainder of this study is divided into 10 sections. The first section previews its basic findings. The second section reviews federal policy and legal requirements for firms. The third section reviews the economic models that drive research methodology and hypotheses. The fourth and fifth sections review the literature on Title VII, while the sixth covers EEOC class-action suits. The seventh and eighth sections cover the federal contractor compliance program. In some cases, studies combine the effects of Title VII and the contractor requirements, and those studies are classified according to the emphasis on one or the other. The ninth section discusses two papers that examine how EEO programs affect firms' performance and profits. The final section suggests questions for further research.

## PREVIEW OF FINDINGS

Although statistical studies usually leave room for doubt, both in interpretation and even in the results, this report finds some clear patterns in the empirical economic literature. At the broadest level,

measures of activity related to both Title VII and the federal contract compliance programs are consistently correlated with labor market outcomes (e.g., wages, employment, occupational status, and quits) after removing the effect of other labor market influences. In most cases, these effects are consistent with the policies' intended outcomes, i.e., the improvement of wages and employment among people of color and white women, with improvement usually measured relative to the effects on white men.

The effects of Title VII variables are small and not always statistically significant, but the measurements of enforcement pressure are not precise and are applied at highly aggregated levels. That variations in these imprecise policy measures can help explain wages or employment at such aggregate levels supports the belief that the effects of equal employment opportunity policy are indeed widespread and significant.

The effects of the federal contract compliance program are also small and subject to different interpretations. Putting the evidence of wage and employment effects together, however, suggests that the affirmative action requirement has led to an increase in demand, most clearly for black men and black women. In the 1970s, gains were made across the range of occupations. Other doubts about the demand-shift interpretation arising from concerns about data and contractor selection actually push in the other direction, i.e., toward the possibility that noncontractor firms also reduced discrimination so that the measured contractor impact is a *conservative* measure of policy effects. These employment effects persist until the 1980s. The timing of this reversal of contractor effects coincides with a dramatic shift in the enforcement philosophy under President Reagan, providing further evidence that policy affects employer behavior.

Bits and pieces of evidence show that the effects of these policies have not come at the expense of either competitiveness or fairness of employment practices. Looking at a large sample of closely monitored firms reveals no pattern of strict adherence to goals in a way that would suggest the enforcement of quotas. In practice, affirmative action appears to mean greater efforts in hiring protected groups in growing firms without sacrificing quality.

## EEO AND AFFIRMATIVE ACTION LEGAL REQUIREMENTS

The legal history of affirmative action involves legislation, presidential orders, and court decisions that together have defined EEO and affirmative action requirements. Antidiscrimination policies developed teeth in the 1960s when legal sanctions and institutionalized enforcement agencies were developed to back up the policy goals. Since 1964, the various agencies and guidelines that originally directed the federal government's antidiscrimination efforts have been condensed and combined into two agencies, the Office of Federal Contract Compliance Programs (OFCCP) and the EEOC, with the Department of Justice taking the responsibility for enforcing Title VII for nonfederal public employers.

Johnson's 1965 Executive Order 11246 extended previous presidential directives against employment discrimination by establishing the Office of Federal Contract Compliance. The order required the following of federal contractors with 50 or more employees and contracts over \$50,000:

... take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

The order was amended to include gender in 1967. The various enforcement agencies from different departments were consolidated in 1979 into the OFCCP within the Department of Labor. The OFCCP now enforces the rules for all federal contractors; sanctions include cancellation of contracts, debarment from future contracts, and recommendations that the EEOC take further legal action.

**Title VII.** Title VII of the Civil Rights Act of 1964, which prohibits employment discrimination, applies to private firms with 15 or more employees, educational institutions, state and local governments, employment agencies, and unions. The EEOC enforces Title VII through conciliation, if possible, or through the courts, if necessary. In amendments to the Civil Rights Act in 1972, the EEOC was given the authority to initiate lawsuits.

In practice, Title VII allows but does not require affirmative action programs unless court-imposed after a finding of discrimination. The EEOC encourages firms to develop voluntary affirmative action plans. The EEOC also cooperates with state and local agencies set up to enforce state and local equal employment opportunity laws. All firms with 100 or more employees must file annual EEO-1 reports on the race and gender composition of their workforce.

**The Role of the Courts.** The judicial branch of government has interpreted and enforced the requirements set up by Congress, presidents, and the enforcement agencies. Court decisions also set up a feedback mechanism whereby judicial interpretations are incorporated in new legislation and agency guidelines.

Definitions of illegal discrimination come from judicial interpretations. This includes the removal of overtly discriminatory practices that result in "disparate treatment" of individuals because of their race, color, religion, sex, or national origin. One exception allows discrimination by sex if sex is a "bona fide occupational qualification," that is, "reasonably necessary to the normal operation of that particular business or enterprise." Discrimination also includes other aspects of employment systems that appear to be neutral with regard to different groups of workers but in fact result in an "adverse impact" on minorities or women. The criterion for judging whether this sort of discrimination has taken place is the outcome—the result of a firm's practices, not simply its intent. These practices are not always illegal, however. Practices having an adverse impact may be allowed if firms can prove that they serve a "business necessity." This exception will be discussed further below.

**Affirmative Action Plans.** In principle, affirmative action is concerned with active removal of all possible discriminatory practices. In practice, the formal policy requirements vary, depending on the source of the affirmative action plan. An affirmative action plan for federal contractors formally requires them to find and correct employment practices that have an adverse impact. This includes self-analysis of the effects of their employment practices as well as monitoring to evaluate the plan's results, particularly with respect to statistics about its workforce and the local labor force.

Self-analysis by firms and evaluation by the EEOC and OFCCP are guided by the development of case law and administrative guidelines



limited impact on EEOC and OFCCP guidelines. The philosophical and formal base of affirmative action in employment remained relatively intact despite the many statements by presidential appointees challenging the validity of the enterprise. Surprisingly, despite pressure from inside and outside his administration, Reagan never rescinded Johnson's executive order.

The day-to-day enforcement of the rules and guidelines clearly changed during the Reagan years. Severe budget cuts caused a significant OFCCP personnel reduction of more than 50 percent between 1979 and 1985 (DuRivage 1985). Although the number of compliance reviews increased during the same period, other indicators of OFCCP vigilance, such as the number and amount of back pay awards, show a marked decline. During the first six years of the Reagan administration, only two contractors were debarred from bidding on a federal contract, compared to thirteen such debarments during Carter's four-year term. Informal policy changes ended contractor requirements for multiyear goals and timetables and left only one-year goals.<sup>3</sup>

EEOC shifted its focus to cases involving individuals rather than companies or industries (Burbridge 1986). In the first few Reagan years, fewer discrimination charges resulted in settlements or litigation, and more cases were determined "no cause." Some significant but informal rule changes did occur; for example, during a brief period field agents received oral instructions not to include goals and timetables in consent decrees or settlement agreements. Thus, the periods of agency enforcement and legal authority activity can be roughly divided into 1964 to 1972, 1972 to 1980, and post-1980.

### ECONOMIC THEORIES OF DISCRIMINATION

Since the 1957 publication of Gary S. Becker's *The Economics of Discrimination*, economists have been developing and refining theories of employment discrimination. The proliferation of theories stems from academic processing as well as the need to understand the basis of discrimination in order to design appropriate policies. This proliferation has occurred mainly with respect to theories of race and, to a lesser extent, with gender. In this section, we will not review and critique all such theories,<sup>4</sup> but rather will fit the theories used in the empirical literature into a general framework. This is a relatively straightforward

that constitute a set of quasi-regulations regarding employment decisions, including selection, promotion, and compensation decisions. No clear set of actual regulations exists for employers to follow, and even the generally accepted practices and administrative guidelines cannot be considered as fixed rules.<sup>2</sup>

Some of the basic criteria enabling employers to detect and avoid the subtler form of discrimination, that which results in "adverse impact," have been incorporated into the Uniform Guidelines on Employee Selection Procedures used by both the EEOC and OFCCP in monitoring and enforcement. (A series of Supreme Court decisions in 1989 threatened to change these substantially, but the 1991 Civil Rights Act restored most of the old principles.) Establishing goals and timetables provides a target for firms and a means of judging progress. The OFCCP may evaluate a contractor's affirmative action plan and its results, as well as actual employment practices, in a compliance review.

Voluntary plans vary in their form and ambition (as do contract-required plans in practice), but the most rigorous plans resemble the kind enforced by the OFCCP. Noncontractor firms that have not had an externally imposed affirmative action plan have only the monitoring requirement mentioned earlier. The two main elements of a voluntary or federal contractor affirmative action plan, self-analysis and correction, may be supplemented when a plan is court-ordered after a finding of discrimination or is agreed to in conciliation of complaints. Within the context of this sort of plan, the general goal of eliminating discriminatory practices is the same. But in this case, remedies such as hiring quotas, back pay, and legal costs may be imposed (Schlei and Grossman 1985).

The changing basic structure of requirements provides one way that studies can attempt to measure variations in the effect of EEO policies over time, especially with respect to the 1972 amendments to the Civil Rights Act. The other sort of "natural experiment" concerns the quantity and quality of actions by the enforcement agencies. Jonathan Leonard (1989 and 1990) reviews the history of EEO enforcement and concludes that, although effort and effectiveness increased in the 1970s, the overall effort was not large.

**The Decline of Federal Enforcement in the 1980s.** The most notable shift in enforcement occurred with the Reagan administration's attempts to revise formal policies radically, even though these efforts had a

task; although the theories tend to be elaborate, the data available for empirical work allow only rough approximations of tests suggested by such theories.

**The Neoclassical Model.** Most economists conducting these studies base their work on the mainstream or "neoclassical" model, which treats labor like any commodity bought and sold in a market, with wages serving as its price. In the simplest neoclassical model, a firm makes employment decisions in a way that maximizes the firm's profits (revenues minus costs): if hiring an additional worker increases profits, the firm will hire the worker. As long as the extra revenue brought in from selling what the worker produces is greater than the wage paid to the worker, the firm's profits will increase by hiring more labor.

As hiring increases, two conflicting forces push the market wage toward a stable level, or equilibrium: (1) inducing qualified workers to work more hours requires higher wages, generating a supply curve, and (2) increasing employment reduces each new worker's productivity while other production factors, such as equipment, do not increase right away, generating a demand curve. At this equilibrium, each worker is paid the amount that he or she contributes to the firm's revenue, i.e., according to her productivity. Each person who wants a job will end up with the job that represents her best position in the labor market.<sup>5</sup>

In this general model, differences in wages and employment levels by race or gender will be generated by differences either in labor supply (reflecting workers' choices of work hours and acquisition of skills that generally increase productivity) or labor demand (reflecting the productivity of the firm's workers and the market for its products). Some economists, e.g., Finis Welch (1981), have developed theories about the effects of affirmative action programs that ascribe initial group differences in wages and employment purely to supply, i.e., differences in skills acquired by workers in different groups. More common (especially in the empirical work reviewed here) are theories that result in lower demand for women or for minorities because of discrimination. Various reasons have been offered to explain differential demand: firm owners might indulge in a "taste" for discrimination by paying white workers more than black workers, for example. Alternatively, customers or employees might practice discrimination in such a way that productivity declines, in turn lowering the demand for women and people of color.

The basic effects of an enforced antidiscrimination program are easily predicted from the model: demand for women or for minorities will increase, resulting in higher wages and employment for that group.<sup>6</sup> In some policy models, changes in the wage and employment relative to the white or male group depend on other factors (e.g., Johnson and Welch 1976), but most of the empirical models predict greater wage and employment equality between groups as the result of policy.

Other effects of policy depend on the extent to which the model assumes differential productivity of workers. For instance, in developing a convenient model, Leonard (1984c) starts with a firm with a taste for discrimination but also implicitly assumes that white men are more productive. Thus his finding that affirmative action programs have increased the employment of black and female labor also implies some efficiency loss for the firm. Because he does not directly test this assumption (although he indirectly tests it in Leonard [1984a]), he draws no conclusions about efficiency loss.

When different parts of the economy face different requirements, the outcomes produced by policy become more complicated. This complication is particularly important in the interpretation of federal contractor requirement studies (discussed below), when federal contractors face stronger affirmative action requirements than noncontractors do. If female or minority workers can and do move from jobs with noncontractors to jobs in contractor firms because they expect less discrimination, then wages or employment may change *without* any direct changes in demand for those workers. In general, the papers reviewed in this report implicitly or explicitly assume that wages adjust to "clear" the labor market, i.e., everyone who wants a job at the going wage has one, and there are no unemployed people willing to work for a lower wage. But, if the wage does not adjust and if there are more workers than job openings, then the movement of workers from the applicant pool of noncontractors to the applicant pool of contractors may not affect the relative wages or employment of women or minorities.

**Alternative Economic Models.** Other kinds of economic models of labor markets drop the strict neoclassical analogy of workers to commodities. Institutional and radical models focus on the social nature of work and the role of power in the relationship between workers and managers. These models commonly revolve around the concept of an

internal labor market in which firms create their own labor supply by training and promoting workers. While market forces (such as the changes in product market or in labor supply) might push wages and employment in one direction or another, many other social and political forces also influence wages and employment, preventing either a neat determination of a market wage that results in no unemployment or a clear prediction of the effects of antidiscrimination policy. The effects of policy will also depend on how it alters the norms and institutional structures that guide the behavior of firms and of white and male workers, as well as the interaction of firms and majority workers with minority and female workers.

Research on policy effectiveness drawn from these non-neoclassical models of the labor market have largely focused on case studies, which are not reviewed in this report. One exception, discussed below, is Paul Osterman's 1982 analysis of female quit rates within the context of an internal labor market. As a result of the selection process of both this report and of mainstream economists, the questions that might be asked by institutional or radical labor economists can only be partially answered. Through what channels does enforcement pressure influence firms' employment decisions? Within what kind of firm is pressure most effective? What effect do macroeconomic conditions have? What effect does a change in the funding of enforcement agencies or in the enforcement tools used have on employment outcomes? Is there evidence of competition among workers for jobs? Aggregated and highly quantitative data cannot answer many of these questions, but results from such studies should be consistent with evidence from other sources, i.e., case studies, and vice versa. The studies reviewed here offer evaluations of the usefulness of some of the most important enforcement tools, such as class-action lawsuits, compliance reviews, and goals and timetables.

### **TITLE VII ENFORCEMENT: EFFECTS ON EMPLOYEES, MEASURED OVER TIME**

One way of estimating the effects of policy would be to compare the behavior of employers subject to Title VII requirements with that of employers not subject to them. But as was previously noted, using this method is difficult because of the widespread coverage of the law. As a result, studies of enforcement effects either compare labor market

outcomes—mainly wages and employment—over time (those studies are reviewed below) or take advantage of geographic variations in enforcement through a cross-sectional examination (reviewed later). The study findings are summarized in Table 2.

The variables used to measure the enforcement of Title VII in these studies are less than ideal. Some of the variables are based on measures from the EEOC budget and are good indicators of federal effort and attention. However, other variables, such as the number or rate of complaints or lawsuits, reflect not only enforcement effort but the degree of discrimination as well. Because Title VII enforcement is complaint-driven (unlike enforcement of Executive Order 11246), complaint-related variables inevitably mix changes in the incidence of discrimination with changes in enforcement agency effort and resources. Variables based simply on the complaints filed therefore have the least value in identifying enforcement effort, while those based on settlements or investigations have much more value in this regard. That EEOC investigates a complaint should have more impact on employers than the mere filing of a complaint by one of their workers. In other words, if discrimination increases and EEOC investigations increase by the same amount, employers' future actions should be influenced by the investigations, giving the variable an enforcement interpretation.

An important related issue for these studies concerns the possibility that changes in the outcomes, such as relative levels of black employment or wages, might also be determined by the degree of discrimination. This would change the causal direction assumed by those using statistical models: instead of the number of complaints influencing the economic outcome (assumed when using multiple regression techniques), the unequal economic outcomes themselves may lead to more complaints. Careful researchers adjust for this possibility.

Richard Freeman (1973) began a continuing debate about the role of Title VII in the observed improvement from 1948 to 1972 in nonwhite workers' incomes relative to those of white workers.<sup>7</sup> Freeman measures antidiscrimination policy efforts as cumulative expenditures by the EEOC per nonwhite worker, a measure that he emphasizes is "an index of activity, not a measure of effectiveness." He uses multiple regression analysis, a common method for finding economic relationships in data, to separate out and quantify the factors thought to determine the variable to be explained (known as the "dependent variable").



In this 1973 study, Freeman attempts to explain why the relative income and occupational status of black workers have changed over time by estimating the effects of the business cycle, relative education, and the policy variable. After accounting for and removing the effects of other important factors, Freeman finds that EEOC activity has a positive and generally significant effect<sup>8</sup> on many measures of black workers' economic situation. For most of those measures, the EEOC effect was greater for black women than for black men. Freeman's findings suggest that EEOC enforcement increased the demand for black workers, resulting in the improvement in their economic position observed in the 1960s.

Richard Butler and James Heckman (1977) show that Freeman's result holds up even during the recession of the mid-1970s. They criticize Freeman's general conclusion that the demand for nonwhite workers had increased, however, arguing that relative incomes could have risen from a drop in the black labor supply, a drop they attribute to low-income black workers leaving the labor force in response to welfare programs whose benefits were more attractive than the wages they had been earning. Adding variables for relative labor force participation and estimating Freeman's model using a different statistical procedure<sup>9</sup> makes the EEOC effect disappear for both black men and black women. Using Freeman's original method, they also find that the EEOC variable affects outcomes for black workers only in the South.

In response to Butler and Heckman, Freeman (1981) uses their method with a slightly different policy measure<sup>10</sup> and corrected Butler-Heckman data. Freeman again finds a positive and significant effect of EEOC expenditures on nonwhite workers' income relative to that of white workers.

Without comment on the corrected data, Charles Brown (1982) notes that a falling black labor supply would have been unlikely to account for the observed trend, since the relative decline in labor force participation among both men and women would have been offset by the rising black share of the population. He also suggests that looking at aggregated data over time does not allow for a convincing statistical separation of the supply-and-demand effects.

This controversy over the effect of the withdrawal of low wage-earning black men from the labor force has since moved into the realm of more detailed individual-level studies. As reviewed in James Heckman (1989),

these studies indicate that the effects of this withdrawal could account for some of the improvement in relative black male incomes in the 1960s and 1970s, but could not account for all of it.

### TITLE VII ENFORCEMENT: EFFECTS ON EMPLOYEES, MEASURED BY LOCAL VARIATION

In an ambitious series of articles, Andrea Beller (1977, 1978, 1979, 1982) argues for a more complex understanding of the consequences of antidiscrimination policy, suggesting that Title VII could have conflicting effects on wages and employment of black workers. For instance, if firms are forced to pay black and white workers the same wage, the employers can still accommodate their desire to discriminate by simply hiring fewer black workers. If discrimination in hiring is forbidden, firms can simply pay black workers a lower wage.

But Title VII forbids both kinds of discrimination, eliminating a firm's usual adjustment mechanism and leading to either higher labor costs or unhappiness with the racial mix of the firm's workforce. Given imperfect enforcement, firms will weigh the costs of compliance against the costs of avoidance, which depend on possible penalties and the likelihood of being caught. Firms can also avoid the employment requirements through migration to predominantly white areas or changes in production techniques that could reduce relative black employment and wages. Emphasizing the enforcement of the equal wage requirement could therefore lead to declines in relative black employment, as firms adjust by shrinking in size or by substituting white workers. Thus the wage and employment provisions of Title VII could have perverse and conflicting results.

**Effects on Black Wages and Employment.** In an attempt to separate these effects with the imperfect data available, Beller (1978) focuses on differences between states in relative black male employment (for the economy as a whole and for firms filing EEO-1 reports) and wages from 1950 to 1970. Enforcement pressure is measured as the number of racial discrimination charges filed (separately categorized as either employment-related or wage-related) and accepted by the EEOC between 1968 and 1970, divided by a proxy for the number of workers in covered firms. Standard multiple regression analysis presumes that the various factors to be separated out determine the dependent variable, not the other way around. Because in this case the causal determination could easily go

in the other direction, i.e., low levels of black male employment could lead to more discrimination complaints, Beller also uses a more sophisticated technique (two-stage least squares) to highlight the effect of enforcement pressure on wages and employment.

Beller finds that the total effect of Title VII on employment was positive for black officials, managers, and craftsmen and negative for professionals and office and clerical workers. To examine the effect of Title VII on wages, Beller uses census data on the percentage change in the ratio of nonwhite to white male wages (1959 to 1969) and income (1959 to 1969 and 1949 to 1959). The combined effect of the two provisions reduced black men's wages.

Curiously, the 1968 to 1970 complaint variables have a significant effect on relative incomes in the 1949 to 1959 equation, that is, *before* passage of the Civil Rights Act. Charges of employment discrimination are associated with lower relative black incomes and charges of wage discrimination with higher black incomes in the earlier period. This suggests that either complaints in the late 1960s are related to some influence present before the Act was passed or reverse causation is a legitimate concern requiring the more sophisticated statistical procedure. In sum, Beller finds support for the hypothesis that Title VII enforcement has conflicting effects for black men, affecting their wages negatively and their employment positively.

Other commentators (Brown 1982; Butler and Heckman 1977) have criticized Beller's choice of variables and use of state-level data. More important, her results regarding the separate effects of Title VII are very sensitive to the statistical technique used. Beller reports her "best" results, but as she herself points out, even these are not always statistically significant at standard levels, especially those using the most appropriate procedures. Overall, the evidence for conflicts between the effect of the wage and employment provisions of Title VII on black men must be regarded as weak.

**Effects on the Male-Female Earnings Gap.** Beller extends her work in three other papers that use similar data and methodologies.<sup>11</sup> In Beller (1979), she attempts to measure the effect of EEO laws on the male-female earnings gap. Again, she takes advantage of variations in the earnings gap by state, using the Current Population Survey for 1968, 1972, and 1975. One measure of Title VII enforcement is the ratio, in

1970, of completed EEOC investigations into sex discrimination charges to the number of women employed in the private or public sector in each state group. A second measure, the ratio of successful settlements to attempted settlements, is intended to capture the probability of paying a penalty if caught. Beller accounts for the effects of the federal contract compliance program with the ratio of federal purchases to net output in 50 industry groups.

Beller concludes that Title VII investigations tend to increase both male and female earnings, but successful settlements usually decrease them (although the significance varies somewhat over the two time periods investigated; two periods were chosen to try to pick up the effect of the 1972 amendments giving the EEOC the right to initiate lawsuits). The significance also varies over the public/private sector distinction. Beller suggests that the positive effect on men's earnings reflects an increase in firms' hiring of men when required to pay women more. In most cases, the enforcement effect tends to be stronger for women, reducing the earnings gap, but the difference in effects is not statistically distinguishable from zero. This means her conclusion, that Title VII reduced the wage gap by 7 percent overall (14 percent in the private sector), is overstated, and Title VII may have had no impact on the wage gap. (The federal purchases variable had no impact on the differential.) In a related paper (1977), Beller shows that both investigations and settlements had a net positive effect on changes in earnings for both white and black women over the same time period.

**Effects on Women's Job Opportunity.** In a later paper (1982), Beller seeks to determine whether EEO programs increased women's access to jobs usually held by men in 1967, 1971, and 1974. She investigates changes in the probability of a woman's holding a "male" occupation, defined as one where the share of male employment exceeds the share of men in the labor force by more than five percentage points. Applying the same enforcement variables as used in her 1979 study, Beller finds that enforcement does improve women's probability of being in a male occupation in the latest year, 1974.<sup>12</sup> Contract compliance improves the probability for women in all three years studied.

Beller finds that the combined effect of Title VII and the contract compliance program between 1967 and 1974 narrowed by 6.6 percent the difference between men's and women's probability of being employed in a male occupation. Although the policy effect is small and

the estimated models do not explain occupational position very well, the effects of EEO programs are greater than the effects of changes in women's labor supply.

### EEOC COMPLAINTS AND CLASS-ACTION SUITS: EFFECTS ON EMPLOYEES

Steven Shulman (1987), who also divides up racial discrimination complaints received by the EEOC into wage and employment complaints, examines the relationship between complaints and employment-to-population ratios across metropolitan areas in 1980. Shulman's policy variable is similar to one of Beller's, with the number of complaints in 1980 being divided by the size of the black labor force, although he does not interpret this as an enforcement measurement.<sup>13</sup> His hypothesis—that more employment discrimination complaints reflect more discrimination which, in turn, reduces employment for black workers—is corroborated by his statistical analysis, which shows a significant inverse correlation between complaints and employment-to-population ratios. Unfortunately, Shulman does not use the proper statistical technique to account for the issue raised by Beller, namely, that a low employment-to-population ratio for black workers could itself increase the number of complaints filed. This last possibility would reverse the causal link assumed in Shulman's analysis.

At first glance, Shulman's findings might seem to contradict other studies showing that greater enforcement activity leads to higher employment of black workers. Since complaints can reflect both the degree of discrimination in an area *and* the extent of enforcement, the construction and interpretation of the statistical analysis require some care. Beller's interpretation of the frequency of complaints as an enforcement measure is appropriate since she is comparing black employment before and after the complaints were filed. Shulman looks at the contemporaneous relationship of discrimination complaints to employment, making his interpretation of complaints as discrimination justifiable and his conclusion plausible—discrimination is likely to reduce black employment.<sup>14</sup> (Shulman's study is included in this review because of the apparent similarity with Beller's analysis, although Shulman's empirical project and interpretations differ from Beller's.)

Leonard (1984a), in contrast, argues that discrimination complaints are not a good measure of enforcement because of the time lag involved, the low probability of a negotiated settlement or a favorable court decision, and the lack of follow-up to monitor compliance. Instead, Leonard measures enforcement by the number of Title VII class action suits (decided between 1964 and 1981) per corporation in each industry in each state. In addition to the direct effects such litigation has, Leonard notes that it can also establish wide-ranging legal precedents that would have spillover effects on other industries or geographical areas.

He concludes that this litigation pressure did increase black workers' proportion of the labor force in EEO-1-reporting establishments between 1966 and 1978. This positive effect, which is separate from the effect of federal contract compliance pressure, is particularly strong in white-collar occupations. Leonard also reports that the effects for white women are sometimes negative but usually statistically insignificant.

**Summary of Title VII Studies.** All of these measures of Title VII enforcement pressure are indirect and imperfect, especially as firms adapt institutionally to EEO requirements—a complaint that may have once provoked a crisis response may later be dealt with bureaucratically and systematically. Ideally, we would want to measure the effects of complaints and litigation on firms more directly, but the necessary data do not exist. Even if they did, it would be difficult to measure the impact of legal precedents, such as *Griggs v. Duke Power*,<sup>15</sup> that might alter firms' behavior even when firms are not subjected to direct enforcement pressure. Given the imperfection of the measures, however, the fact that these variables are usually found to be systematically related to the wages and employment of black workers (and, to a lesser extent, of white women) is somewhat remarkable and difficult to dismiss even though the benefits of EEO policy at historical levels of enforcement are clearly small.

### FEDERAL CONTRACT COMPLIANCE: EFFECTS OF EEO REQUIREMENTS

In contrast to the studies of Title VII effectiveness, research into the effects of the federal contract compliance programs has been able to measure pressure on firms more directly. The EEO-1 forms required of firms with more than 100 employees have been a rich data source for



assessing the effect of the affirmative action requirement. Since all firms filing EEO-1 forms are covered by Title VII, differences in minority and female employment between contractor firms and noncontractor firms that are otherwise similar should reflect only the effect of the affirmative action plan. If noncontractor firms voluntarily or by court order adopt such plans, however, their minority and female employment levels may be higher, in which case the *estimated* contractor effect would be lower than the *actual* effect of affirmative action programs. None of the studies below make direct allowances for this possibility, probably as a result of data limitations.

As discussed earlier (see "Economic Theories of Discrimination"), according to neoclassical economic theory, changes in black or female employment can be the result of either changes in the firm's demand for their labor or changes in the number of black or female workers offering to work for the firm. Sorting out which forces are at work requires data on both wages and employment. If demand increases, then both wages and employment will increase because firms are competing to attract new employees. If supply increases, workers are more plentiful and must offer to work for a lower wage to attract a job offer, so wages fall and employment increases.

Unfortunately, the EEO-1 forms ask employers only to identify race, gender, and occupation, so the effect of affirmative action on wages must be measured indirectly. This has generally been approached in two ways: (1) by investigating changes in the relative occupational status of people of color or of white women within a firm, as measured by the average wage or income of people in each occupation, and (2) by using national data on individuals and matching some measure of federal pressure on contractors. The major studies have used similar strategies and models for investigating the effects of employment and occupational position on affirmative action (described in more technical detail in the Appendix).

**Effects on Employment.** Table 3 and Appendix Table A2 present the relative employment effects found in the studies, which cover the time period from 1966 to 1980. The effects of contractor status and of OFCCP compliance review are seen in the annual percentage change in the ratio of protected-group employment to white male employment. In most cases, the effects are not large. For instance, Orley Ashenfelter and James Heckman (1976) find that, on average, contractors increase the employ-

ment of black men relative to white men by 0.83 percent per year in the short run. The form of the variables is also clearly important; Jonathan Leonard finds larger effects in his 1984c study than in his 1984b study, using the same data but slightly different measures of firm growth and size.

No systematic pattern is clear over time, perhaps because of those differences in form and method. The most consistent employment benefits of affirmative action are for black men. Ashenfelter and Heckman (1976) find positive effects of affirmative action among federal contractors in the earliest study, but Morris Goldstein and Robert S. Smith (1976) do not find any in the next period and even find negative effects on white women. Goldstein and Smith's only other statistically significant effect is the positive impact compliance reviews have on black male employment. Leonard finds that black women and "other" men (mostly Asian and Latino) benefit the most in one study (1984b) while black men and women fare best according to the other study (1984c). A study not included in Table 2, by James Heckman and Kenneth Wolpin (1976), finds positive contractor effects in Chicago over the 1970-to-1973 period for the employment of black men and other minorities but negative effects for women (although statistically insignificant) and for white men. In an unpublished study of national data from 1980 to 1984, Leonard (1990) finds negative effects: "... both male and female black employment grew more slowly among contractors than noncontractors" (p. 58).

It is not clear why the findings differ. Aside from the differences noted above, different time periods could clearly be a reason. As noted earlier, the quantity and quality of OFCCP enforcement have varied over the years. If OFCCP enforcement is responsible for reducing discrimination and increasing employers' demand for people of color and for white women, generating the positive contractor effects measured, then variations either in enforcement or in firms' desire to discriminate might be responsible for variations in the contractor effect. Leonard, for instance, suggests a rough correlation with enforcement intensity. Enforcement effort was low during the earliest and most recent periods studied, resulting in small or negative effects, and it was relatively strong in the 1974-to-1980 period when the largest measured impacts occur.

Goldstein and Smith (1976) suggest that different macroeconomic conditions could account for at least some of the differences between the studies' findings, while Brown argues that higher unemployment should not be related to OFCCP enforcement efforts. While Brown may

be correct, in a world of imperfect enforcement macroeconomic conditions might overwhelm other considerations in firms' compliance decisions and could result in layoffs that reverse firms' previous affirmative action efforts.

Although the studies generally find that having a federal contract is related to relatively higher levels of black employment, if not of white female employment, some researchers doubt that this association necessarily reflects an increased demand caused by the affirmative action requirement. As many economists have pointed out (e.g., Brown 1982; or Donohue and Heckman 1991), relative increases in black employment levels in the contractor sector could be the result of the voluntary movement of workers between contractor employment and noncontractor employment. Further investigations into this possibility will likely be limited by the quality of available data, however.

**Effects on Occupational Status.** The lack of matching wage data is one important obstruction to the future of affirmative action research. If both wages and employment were observed to rise, it would make a strong case that affirmative action leads firms to increase demand for protected workers. An alternative way to measure wage changes stemming from the contractor requirement is to use changes in occupational status as a proxy. The contract compliance program studies typically either (1) construct some index of occupational status by weighting employment in occupations by the median or mean earnings of the occupation, as found in CPS or census data, or (2) look at changes in employment within the different occupational categories defined by the EEO-1 reporting firms.

Those studies using the first approach apply a statistical method similar to that used for studying relative employment changes. Ashenfelter and Heckman (1976) find a small (and statistically insignificant) positive effect on occupational status of working for a contractor; Goldstein and Smith (1976) find a negative effect for white women and an insignificant positive effect for black women and black men; Leonard (1984b) finds that both contractor status and compliance reviews raise occupational status for *all* race-gender groups.

Studies taking the second approach reveal some other patterns of interest. Ashenfelter and Heckman's study shows that the largest significant positive effect on black men's employment was in the

operatives category, while their employment actually declined in service, managerial, and professional categories. Heckman and Wolpin (1976) use just two categories, blue-collar and white-collar, and find that only in blue-collar occupations was there a higher proportion of black males in contractor firms, although even this effect was not statistically significant. In the blue-collar occupations, they find significantly higher employment in contractor establishments only for "other" men who, along with white men, also had significantly higher white-collar employment in contractor establishments. The effect of working for a contractor was negative and significant among blue-collar workers for white men and black women, and among white-collar workers for white women and black men and women.

These two studies led to the early conclusion that affirmative action mainly improves employment opportunities in the less-skilled occupations. For the 1974-to-1980 period, Leonard (1984b) uses more detailed categories and finds positive contractor and review effects on black men, black women, white women, and "other" men in many of the highest occupational categories, most consistently for managerial and professional jobs. As he suggests, perhaps his more positive results for this period are due to heightened enforcement.

**Effects on Wages.** In another study, Leonard (1986) attempts to estimate the effects of the affirmative action requirement on wages more directly. He measures policy pressure as the proportion of employment in an individual's metropolitan area and industry that is in federal contractor establishments. Leonard estimates the policy effect separately for 1973 and 1978 with CPS data and finds that the policy variable has a positive effect on both white *and* nonwhite men in both years, with a relatively larger impact on nonwhite men. He interprets this finding as evidence that the employment effects of the federal contract compliance program were caused by rising demand for black and other minority men rather than as evidence that these workers shifted from noncontractor into contractor firms.

Leonard also tests a second affirmative action "bifurcation" hypothesis, that of Welch (1981), who suggests that low-skilled black workers have been hurt by affirmative action. Contrary to this hypothesis, Leonard finds an even larger contractor effect on wages for nonwhite men with little education. Leonard's 1984b study also refutes the bifurcation hypothesis by showing that employment in low-skilled occupations

usually benefits from the total impact of both contractor status and compliance reviews.

**Effects on Quit Rates.** Osterman (1982) presents evidence that the contract compliance program's effects extend beyond hiring to improvements in opportunities within firms. He finds that the probability of quitting a job for a nationally representative sample of women was lower for women in industries with high levels of enforcement.<sup>16</sup> Osterman measures two different enforcement variables over the 1977-to-1979 period: (1) the share of federal government purchases in the industry and (2) that share times total OFCCP compliance reviews in the industry divided by industry employment. Using either measure, Osterman's results show that policy pressure significantly reduces the rate at which female workers quit their jobs, with stronger effects found among women age 30 and under.

### FEDERAL CONTRACT COMPLIANCE EFFECTS: EXAMINING THE CAUSAL MECHANISMS AT WORK

**Job Reclassification.** Several other issues have been raised throughout this literature that deserve comment. Smith and Welch (1984) compared occupational data from the CPS with data from EEO-1 forms and found discrepancies in the patterns of change in the race and gender composition of the same occupational categories over the 1966-to-1980 period. They interpret this as evidence that firms have responded to federal pressure by reclassifying the occupations of people of color and white women rather than actually hiring more into certain occupational categories. Smith and Welch's finding seems less insidious when one notes that the discrepancies they point out in the managerial and professional categories balance each other out: the shifts seem to be mainly *within* two high-skilled categories rather than from below.

**Selection of Firms for Contracts.** A second issue concerning the accuracy of the apparent positive effect of contractor status is what economists call "selection bias." Heckman and Wolpin (1976) question whether the observed difference in relative black employment in contractor firms results from the contractor selection process. If firms are rewarded with federal contracts for having high levels of protected-group employment, then observing higher levels of minority and female

employment among contractors does not necessarily reflect affirmative action pressure.

In their investigation of this possibility, Heckman and Wolpin find that employing higher proportions of black men does improve a firm's probability of getting a contract, but the effect is statistically insignificant. Leonard (1984c) presents results with a much stronger conclusion refuting this potential bias: the probability of being a contractor rises as the proportion of white men in an establishment rises, but falls as the level and percentage of women or people of color rises. Thus higher relative employment of black workers in contractor establishments is not simply the result of the government awarding contracts to the "better" firms to begin with.

**Selection of Contractors for Review.** Further questions about the regulatory mechanisms at work have been raised by Charles Brown (1982). Leonard (1985a) finds a systematic process at work in reviews. Rather than targeting establishments that are likely to be practicing discrimination, such as establishments with all white male employees, the OFCCP seems to target large establishments with higher proportions of professional and managerial workers. Leonard infers that this represents a policy goal of redistributing income: as enforcement leads to a wider distribution of the higher paying jobs, the incomes of formerly excluded groups will rise.

Leonard's work represents the most thorough examination of the tools of OFCCP pressure. Using data from compliance reviews conducted at establishments that had been reviewed more than once, Leonard (1985c) analyzes the effect of various measures of pressure on firms, e.g., hours expended by review officers and progress reports required. None of the measures has a consistent effect on the employment of different groups.

**Goal Setting.** Leonard finds that employment goals set by firms during the reviews to correct underutilization provide the best predictions about future race-gender proportions in the workforce even though firms consistently overestimate how many people in *all* groups they will hire. Also, firms do not seem to view these goals as quotas: Leonard (1985c) finds that "goals are not being fulfilled with the rigidity one would expect of quotas."<sup>17</sup> Black women constitute the one exception to this conclusion—their employment grows faster than predicted by the goals.



Overall, then, compliance reviews themselves must have some shock effect on firms since other components of regulatory pressure are not found to have any systematic effect on later employment outcomes. Further, firms take their goals seriously but not as rigid quotas.

**Growing Versus Shrinking Contractors.** Studies comparing contractors with noncontractors reveal other factors influencing the employment of black workers, factors that are important in understanding the influence of policy. One finding concerns the differential effect of policy on growing versus shrinking contractor firms. Both Heckman and Wolpin (1976) and Leonard (1984c) find that growing contractors have higher proportions of employment of certain groups. The Heckman and Wolpin finding is stronger for white men, however, so growth results in no relative improvement for black workers.

Nevertheless, Leonard shows that not only do black men, black women, white women, and "other" men benefit more than white men from growth regardless of contractor status, but the contractor effect is significantly higher in growing establishments. This suggests that affirmative action has not meant displacement of white male workers but an increasing share of *new* jobs for people of color and white women.

**Regional Effects.** Another important finding from some of these studies is the improvement in the status of black workers in the South, regardless of contractor status (Ashenfelter and Heckman 1976; Leonard 1984c; Goldstein and Smith 1976). James Heckman and Brook Payner (1989) look more closely at federal policy in the South. They analyze employment and wage data for South Carolina to argue for what Heckman and Donohue (1991) call a "more refined view of federal policy." Although the enforcement mechanism that Heckman and Payner point to was the EEOC's targeting of the Southern textile industry in 1966 and 1967, their most direct measure of federal pressure is the value of defense contracts per county. This policy variable does have a positive and significant effect on the level of black employment (at the county level), but it does not have as large an effect on black status as an as-yet unexplained post-1964 trend.

## EFFECTS ON FIRM PERFORMANCE

As discussed above ("Economic Theories of Discrimination"), discrimination theorists have hypothesized that EEO policies that force firms to

change their hiring practices could lead to reduced worker productivity, and therefore, lower firm profits. Evidence presented in the preceding sections of this paper suggests that firms' behavior did change in response to EEO policies, but far less evidence exists on the effect of those employment changes on profitability.

Leonard (1984a) uses a highly aggregated approach to measure changes in the industry-level productivities of women and nonwhite men relative to white men for manufacturing industries in 1966 and 1977. He admits that his estimates of productivity are somewhat imprecise, but he does find increases in relative productivity of women and nonwhite men that cannot be completely attributed to their entry into more highly skilled occupations or to relative increases in education. He concludes that firms are not hiring less qualified black or female workers as a result of affirmative action pressure, as the reverse discrimination hypothesis holds.

Joni Hersch (1991) measures the impact of announcements of EEO lawsuits, decisions, and settlements in the *Wall Street Journal* on the subject firm's stock price. She finds negative impacts of announcements on stock prices only in the short run, mainly the two days before and after the announcement. Over longer periods, Hersch does not find abnormal negative returns for those firms. Class action suits have a larger, somewhat longer effect, but even that disappears after 30 days. She suggests that investors respond to this news because of expectations of legal expenses, penalties, and possible increases in labor costs if firms must change their practices. She concludes that, over the longer run, the impact of announcements disappears because it is relatively unimportant compared to the other forces influencing a firm's equity value.

## QUESTIONS FOR FURTHER RESEARCH

After almost 20 years of careful study, questions and concerns remain. The pattern of gains is difficult to explain: black women and "other" men apparently gain the most from the contractor program, followed by black men, who show slightly smaller gains, and white women, who get a mixed effect from the program. Why does the contractor compliance program seem to have such a weak effect on white women's employment gains? The massive general increase in women's employment—in contractors *and* noncontractors—only answers part of that question.

Even more troubling, the general pattern of gains from affirmative action and equal employment opportunity enforcement is difficult to square with other measures of labor market position, especially unemployment rates. The largest gains measured in any of these studies occurred in the second half of the 1970s, a period of rising relative unemployment rates for black males and females and falling relative rates for white females (Badgett 1990). None of the contractor studies explicitly accounts for the effects of unemployment on the operation of labor markets and discrimination, either on firms' behavior or on differences between contractors and noncontractors.<sup>18</sup> The importance of this omission is evident if, for example, high unemployment makes the firm less likely to hire or more likely to lay off women or minority workers because of seniority systems or because of white or male workers' pressure on the firm. In that case, the failure to include unemployment in the empirical analysis means that any change in employment attributed to having a federal contract may be in fact a result of the unemployment situation. If we see little or no difference in the change in employment between contractors and noncontractors, this finding could result from the different cyclical sensitivities of contractors versus noncontractors. The Title VII studies do take into account differences in unemployment rates among the local labor markets studied, but only Shulman's (1987) study attempts to *explain* the enormous difference between black and white unemployment rates. The resolution of this apparent contradiction between progress at one level and deterioration at another—between gains in black employment resulting from affirmative action and EEOC policies on the one hand and the overall worsening of black unemployment on the other—awaits future researchers.

The other major weakness of the studies reviewed in this report concerns the actual mechanisms and institutions through which this policy pressure works. Studies using more detailed measures of particular enforcement instruments provide little insight into highly successful or efficient enforcement methods or into the institutional processes through which they work. We know little from these studies about how long it takes firms to react to changes in enforcement pressure from various directions (courts, agencies, etc.) and about how adaptation to such pressure is balanced against other market pressures.

Overall, these studies tell us that policy can improve the employment and wages of people of color and white women, but the effects so far

have been small. This may mean that either historical levels of enforcement have been inadequate or that other more powerful political and economic forces have counteracted the influence of policy.

# NOTES

1. Later legislation extended the policy of forbidding employers to discriminate on the basis of some other characteristics unrelated to job performance, e.g., to age and disability. This report will not take up these issues.
2. The Supreme Court has indicated that EEOC testing guidelines were entitled to "great deference" in *Griggs v. Duke Power Co.* The meaning of "deference" with respect to the more recent Uniform Guidelines on Employee Selection Procedures has been subject to different interpretations (Schlei and Grossman 1983, 96).
3. U.S. House of Representatives, Committee on Education and Labor, 1987.
4. For two different perspectives, see Cain (1986) and Reich (1981).
5. The neoclassical model also suggests that as long as wages can adjust in response to the two conflicting forces, unemployment should not exist. In the real world, of course, there are many barriers to the free movement of wages and workers, but one of the values of this theoretical approach is that the anticipated effects of such barriers, including discrimination, can be clearly identified.
6. More precisely, the demand curve for female or minority workers will shift out.
7. Until 1972, the racial categories in published data were "white" and "nonwhite." The vast majority in the "nonwhite" category were black workers.
8. As used in this paper, "statistical significance" means that the probability is very low (usually 5 percent or less) that the observed effect resulted simply by chance and therefore that no *true* effect exists in the population being studied. An "insignificant" effect is one that, although it might seem large, cannot be considered to be different from zero, since another study using a different sample is likely to result in a very different measured effect.
9. This technique, two-stage least squares, assumes a more complicated relationship between the variables than in a simple multiple regression.
10. The log of cumulative EEOC expenditures per nonwhite worker.
11. When possible, in all four papers Beller also takes into account other factors influencing wages and employment such as education and region.
12. Curiously, enforcement also improves men's probability of being in a male occupation, according to Beller; for both women and men to show increases

# THE EFFECTIVENESS OF EQUAL EMPLOYMENT OPPORTUNITY POLICIES

in the proportion working in such occupations, they must have been growing relative to the labor force as a whole.

13. Shulman does not mention the EEOC response to these complaints, i.e. whether the EEOC accepted or investigated these complaints.
14. Although this conclusion may seem obvious, it is also possible that discrimination reduces only wages or occupational status and *not* employment.
15. The U.S. Supreme Court's 1971 decision in *Griggs v. Duke Power* (401 U.S. 424) caused many employers to reexamine the mechanisms they were using to assess hiring eligibility, job performance, and promotions. *Griggs* set a new standard of compliance with Title VII of the Civil Rights Act. It ruled that employers could not use instruments (such as employment tests) that had a "disparate impact" on protected groups, even if the instruments appeared neutral on their face, unless they could be shown to "have a demonstrable relationship to performance on the job."
- As Welch (1981, 128) notes: "This places the burden of proof on employers for requirements like a high school degree or acceptable exam scores to demonstrate that those not satisfying the requirements are unable to perform adequately."
16. Osterman's data are from the University of Michigan's Panel Survey of Income Dynamics.
17. Leonard (1985c, 18).
18. Leonard (1984c) shows that contractors are more likely to be found in the cyclically sensitive manufacturing industries, for instance.



TABLE 1

## SURVEYS OF ECONOMIC LITERATURE RELATED TO AFFIRMATIVE ACTION

- Butler & Heckman (1977)**  
**Conclusion:** Affirmative action policy has ambiguous or negative effects on black workers' wages and employment.  
**Comment:** In own calculations, uses incorrect data.
- Brown (1982)**  
**Conclusion:** Time-series studies show that affirmative action policy contributes to improvement in blacks' labor market position. Some studies show that federal-contractor status has a positive effect for black men, but these studies are vulnerable to criticism.
- Leonard (1989)**  
**Conclusion:** Affirmative action policy has a negligible effect on white women's employment, possibly because of an increase in the supply of white female workers. Policy is more helpful for black women, though they gain no more from it than black men.
- Leonard (1990)**  
**Conclusion:** Federal contract compliance and Title VII have a positive impact on minorities.
- Donohue & Heckman (1991)**  
**Conclusion:** Federal civil rights enforcement (housing, education, and employment) in the South in the 1960s led to an improvement in blacks' overall economic status.  
**Comment:** Focus is on men.

TABLE 2

## SUMMARY OF STUDIES ON THE EFFECTS OF TITLE VII

- Freeman (1973)**  
**Period:** 1946-72  
**Policy Variable:** Cumulated real EEOC expenditures per nonwhite worker.  
**Conclusion:** Enforcement of Title VII leads to increases in black incomes relative to incomes of white workers (after separating out the effects of business cycles).
- Butler & Heckman (1977)**  
**Period:** 1948-74  
**Policy Variable:** Same as for Freeman 1973.  
**Conclusion:** The effect of Title VII enforcement (measured as expenditures) on labor force participation is negligible once the effect of other government programs is considered.  
**Comment:** Uses incorrect data.
- Beller (1977)**  
**Period:** 1967-74  
**Policy Variables:** (1) The number of completed EEOC investigations in 1974, divided by the number of women in the labor force, per state, by private or public sector.  
(2) The ratio of settlements to attempted settlements.  
**Conclusion:** The enforcement of Title VII, as measured by both policy variables, has a positive impact on the earnings of white and black women.
- Beller (1978)**  
**Period:** 1966-70 and 1950-70  
**Policy Variable:** The number of racial discrimination charges filed and accepted by EEOC, divided by the number of workers in covered firms, by state.  
**Conclusion:** The wage and employment provisions of Title VII may have contradictory effects; if wages are equalized, discrimination may appear in employment, and vice versa.  
**Comment:** Studies men only; many findings are not statistically significant.
- Beller (1979)**  
**Period:** 1967-74  
**Policy Variables:** Same as for Beller 1977.  
**Conclusion:** The enforcement of Title VII increases the demand for women workers and

*Continued*

Table 2 *Continued*

reduces the male-female earnings gap by 7 percent overall (and by 14 percent in the private sector).

**Freeman (1981)**

Period: 1948-75

Policy Variable: (Log of the variable used in Freeman 1973) + 1.

Conclusion: Title VII has a positive effect on the ratio of nonwhite to white earnings (using the same method as Butler and Heckman [1977] but with corrected data).

**Beller (1982)**

Period: 1967-74

Policy Variables: Same as for Beller 1977.

Conclusion: The enforcement of Title VII increases women's likelihood of entering male occupations.

**Leonard (1984a)**

Period: 1966-78

Policy Variable: The number of Title VII class-action lawsuits (decided between 1964 and 1981) per corporation, by industry and by state.

Conclusion: Title VII class-action litigation has a positive impact on black workers' employment rate.

**Shulman (1987)**

Period: 1980

Policy Variable: The number of EEOC wage and employment discrimination complaints, divided by the size of the black labor force.

Conclusion: Higher levels of EEOC discrimination complaints lead to lower employment-to-population ratios in metropolitan areas.

Comment: Measurements contained erroneous effects (not policy effects) of changes.

TABLE 3

## SUMMARY OF STUDIES ON THE EFFECTS OF THE FEDERAL CONTRACT COMPLIANCE PROGRAM

**Ashenfelter & Heckman (1976)**

Period: 1966-70

Conclusion: Federal-contractor status has a positive effect on the relative employment of black men and a positive, though insignificant, effect on their occupational status.

Comment: Only studied men; in part of paper, only studied firms with at least one black and one white worker.

**Goldstein & Smith (1976)**

Period: 1970-72

Conclusion: Federal-contractor status has a significant negative effect on white women and an insignificant negative effect on black men's and women's employment; compliance reviews have a positive effect on black men, so the overall effect of the contract compliance program is positive for black men's employment.

**Heckman & Wolpin (1976)**

Period: 1970-73

Conclusion: Federal-contractor status has a positive effect on black men's and "Other" men's employment rates but a negative effect on white women, black women, and white men. The positive effects are limited to blue-collar workers.

Comment: Chicago data only.

**Osterman (1982)**

Period: 1977-79

Conclusion: Two measures of compliance pressure lower the probability of women's quitting their jobs, suggesting greater opportunities within firms.

**Leonard (1984b)**

Period: 1974-80

Conclusion: Federal-contractor status and reviews have a significant positive effect on the employment of black men, black women, white women, and "Other" men, not only among blue-collar workers but in higher occupational categories as well. Contractor status also has a significant positive effect on occupational status for all groups.

Table 3 Continued

<b>Leonard (1984c)</b>	1974-80	Federal-contractor status has a significant positive effect on the employment of black men, black women, white women, and "Other" men.
Period:		
Conclusion:		
Comment:		Uses different variables from Leonard 1984b.
<b>Leonard (1985a)</b>	1975-79	The OFCCP is more likely to review establishments with higher proportions of nonclerical white-collar workers, suggesting it pursues a policy goal of redistribution of income.
Period:		
Conclusion:		
<b>Leonard (1985c)</b>	Late 1970s	Goals set by firms during OFCCP reviews are good predictors of those firms' future workforces even though they are not fulfilled rigidly.
Period:		
Conclusion:		
Comment:		Sample was of closely monitored contractors.
<b>Leonard (1986)</b>	1973 & 1978	Using the proportion of SWSA and industry employment in federal contractor firms as a measure of affirmative action pressure, Leonard finds that the greater the affirmative action pressure the larger the wage increases, for both white and nonwhite men. Wage effects were larger for nonwhite men than for white men, and among nonwhite men larger for those who were less educated. Leonard concludes that wages rose because demand for nonwhite men increased overall as a result of affirmative action requirements.
Period:		
Conclusion:		
<b>Heckman &amp; Payner (1989)</b>	1947-71	The value of defense contracts per county in South Carolina in the 1960s had a significant positive impact on the counties' black male employment.
Period:		
Conclusion:		

TABLE 4

## SUMMARY OF STUDIES ON AFFIRMATIVE ACTION'S EFFECTS ON FIRM PERFORMANCE

<b>Leonard (1984a)</b>	1966 & 1977	Affirmative action increases the productivity of women and nonwhite men, suggesting that it is not causing firms to hire less qualified black or female workers.
Period:		
Conclusion:		
Comment:		Leonard notes that productivity is not measured precisely.
<b>Hersch (1991)</b>		The announcement of EEO lawsuits has a negative impact on the stock prices of firms being sued, but only in the short run; the effect disappears over time.
Conclusion:		

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TABLE A1

SPECIFICATION OF EQUATIONS IN AFFIRMATIVE ACTION STUDIES

Number of Establishments	Estimating Method	Period Studied	VARIABLES	
24,535	Partial Adjustment	1966-70	employment	occupational
GOLDSTEIN & SMITH 74,563	Adjustment for serial correlation	1970-72	employment	occupational
			employment	occupational
HECKMAN & WOLPIN 3,677 (Chicago)	Weighted LS	1970-73	employment	occupational
			employment	occupational
LEONARD (1984b) —68,690 (employment); 13,936 (occupational)—	Weighted LS	1974-80	employment	occupational
			employment	occupational
LEONARD (1984c)	Weighted LS	1974-80	employment	occupational

Note: These represent the main specifications discussed in each paper. Actual definitions of variables differ among papers.

TABLE A2  
RELATIVE ANNUAL EMPLOYMENT EFFECTS ON AFFIRMATIVE ACTION

Author	Period Studied	Black Women	Black Men	White Women	Other Men
ASHENFELTER & HECKMAN	1966-70	0.8* SR	12.9 LR	NA	NA
GOLDSTEIN & SMITH	1970-72	-0.3	-0.1	-2.1*	NA
	1970-72	0.4	0.8*	-0.8*	NA
LEONARD (1984c)	1974-80	2.2*	0.8*	0.7*	1.5*
	1974-80	1.0*	1.3*	-0.5*	2.5*
LEONARD (1984b)	1974-80	0.8*	0.8*	0.3*	0.3
	1974-80	0.8*	0.8*	-0.1*	1.2*

\* Asterisk indicates significance at 5% level.

Note: Numbers in table represent percentage change in group employment relative to that of white men in firms that are federal contractors or have been reviewed.

In general, this is: 
$$\frac{(\hat{E}_i/E_{wm})_t - (\hat{E}_i/E_{wm})_{t-1}}{(\hat{E}_i/E_{wm})_{t-1}}$$

where  $\hat{E}_i$  is employment of group  $i$ .