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The Impact of Affirmative Action on Employment and Turnover

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Affirmative action, mandated by Executive Order 11246 in 1965, is one of the most controversial government interventions in the labor market since abolition.¹ While much has been said concerning the propriety of affirmative action in theory, little is known about the impact of affirmative action in practice. If affirmative action has not changed the employment patterns of non-whites and females, then much of the discussion since 1965 of its philosophical merits amounts to shadow-boxing. The goal of affirmative action is to increase employment opportunities for females and minorities. Has affirmative action been successful in achieving this goal? This paper will use two new and comprehensive sets of rich establishment level data to examine the effects of being a federal contractor subject to the affirmative action obligation, and of undergoing a compliance review, on the employment and turnover of minorities and females.

The evidence to be presented in this paper indicates that affirmative action under the contract compliance program has led to improved employment opportunities for females and minorities. This result is based on a statistical comparison of the change in demographics at more than sixty-eight thousand establishments with more than 16 million employees between 1974 and 1980. I shall argue that minorities' and females' share of employment has increased more at establishments that are federal contractors, and so subject to affirmative action, than at non-contractors. Compliance reviews, while questionably targetted, will be shown to have been an effective regulatory tool in increasing black and female employment. Turnover data from a new source which has not previously been analyzed, will be marshalled to demonstrate that these employment gains have not been transitory, and that blacks and women have experienced relatively stable employment. I shall also draw implications for the relative wages of members of protected groups.

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Section 1 presents cross-tabulations and log-odds equations with multiple control variables comparing changes in the employment share of detailed demographic groups across contractor and non-contractor establishments. Have compliance reviews been

a useful tool in the affirmative action effort? Many in private business and in advocacy groups argue that compliance reviews generate a lot of paper, but little real change. To determine the efficacy of compliance reviews this section also compares changes in the representation of minorities and females across reviewed and non-reviewed contractor establishments.

The channels of adjustment to affirmative action are examined in Section 2. Have employers been most successful in changing hiring, termination or promotion policies? Some would argue that affirmative action has caused excessive churning in labor markets, with few permanent employment gains for members of protected groups. This section examines previously unavailable data on turnover at 2000 establishments and develops flow/stock models of employment change to judge the consistency of this new independently derived turnover data with observed stock change data. This stock/flow model also shows that affirmative action may be successful in increasing the shares of minorities and females in hires in the contractor sector, and decreasing their shares in terminations, without producing any corresponding increase in the growth rate of their employment in the contractor sector. I also show that in a sample of reviewed establishments, females and black males have been underrepresented in separations relative to their share of hires, implying a comparatively stable employment relationship.

A debate of major policy significance has been continuing between the view represented by Heckman and Butler, and that found in the work of Freeman, concerning the role played by the federal government in reducing racial economic inequality. The final section discusses the impact of affirmative action in reducing racial inequality in earnings, and presents the conclusions of this research.

The findings to be presented here speak directly to those concerned with the position of minorities and females in our society, and with the role the federal government plays in improving their position. The single most certain aspect of affirmative

action is that it is controversial. This study brings new evidence to bear on that controversy; evidence that can enlighten discussions both of discrimination in the United States, and of the impact of government regulation.

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Past Studies

Past studies of affirmative action are divided into studies of the regulatory process that find it mortally flawed, and studies of impact that find it successful. The process studies by the U.S. Commission on Civil Rights, the General Accounting Office, and the House and Senate Committees on Labor and Public Welfare all conclude that affirmative action has been ineffective and blame weak enforcement and a reluctance to apply sanctions. That this is not merely politics can be judged from the fact that the Department of Labor has been sued with some measure of success more than once for failure to properly enforce affirmative action.² Debarment, the ultimate sanction, has been used only 26 times, with debarment of the first non-construction contractor not occurring until 1974. The GAO and USCCR have found that other forms of regulatory pressure such as pre-award reviews, delay of contract award, and withholding of progress payments have not been forcefully and consistently pursued. However, as evidenced by the increased incidence of debarment and backpay awards, enforcement did become more aggressive after 1973.

In light of the unanimity of these process studies in finding the affirmative action regulatory mechanism seriously deficient, it is surprising that the few past econometric studies of the impact of affirmative action in its first years, by Burman, Ashenfelter and Heckman, Goldstein and Smith, and Heckman and Wolpin, all based on a comparison of EEO-1 forms by contractor status, have generally found significant evidence that it has been effective for black males. While these few studies of the initial years of affirmative action between 1966 and 1973 are not directly comparable because of differing specifications, samples, and periods, they do generally find that despite weak enforcement in its early years, and despite the ineffectiveness of compliance reviews,

affirmative action was effective in increasing black male employment share in the contractor sector, but generally ineffective for other protected groups. This study will use a new data set to examine a more mature affirmative action program between 1974 and 1980, after the beginning of substantial enforcement of regulations barring sex discrimination, after the start of aggressive enforcement in the early seventies, and including the period after the major reorganization of the contract compliance agencies into the OFCCP in 1978.

*Seeks to
make this a
model for
the private
sector.*

Section 1: The Impact of Affirmative Action on Minority and Female Employment

The male share of employment has fallen steadily since 1960 as females have flooded into the labor force. In 1974, .389 of the employed were female. By 1980 this had increased by 7.2% to .417. While the proportion of non-white males in total employment remained stable over this same period at .060, their proportion among males rose by 5%, from .098 to .103. On their face, these growth rates in representation are not strikingly higher after 1970 than before. At the same time, both females and non-white males share of unemployment has been growing, along with their employment shares. The period between 1974 and 1980 witnessed growth in females' share of employment, and in non-white males share of male employment. What part has affirmative action played in these increases?

Affirmative action may usefully be thought of as a tax on the employment of white males in the contractor sector, a tax that shifts the demand for white male labor down. If affirmative action is effective, I expect the rate of change of protected groups' employment share to be higher in contractor establishments than in non-contractor establishments, ceterus paribus. Since affirmative action goals are similar within industry within region, I also expect the variance of employment share to fall more and remain lower at contractor firms, controlling for industry and region. In the long run, I expect the levels of the employment shares of protected groups to be higher in contractor firms, controlling for industry and region which determine skill

requirements and local labor supply, and are not controlled for in the following cross-tabulations. The crucial tests are those on changes in levels of employment shares which difference out unchanging variables. Since stocks are only susceptible to policy through changes in flows, I expect the flows, or in other words the change in stocks to be a more sensitive indicator of the impact of policy. It should also be noted that 1974 is an early year in the history of affirmative action, especially for females. While affirmative action became effective in 1965, the provisions pertaining to females were a later addition, first enforced about 1974. For both non-whites and females, the adjustment process was by no means over by 1974.

Comparison of Mean Changes in Employment Shares in the Contractor and Non-contractor Sectors

Table 4.1 shows that between 1974 and 1980 black and female employment shares increased significantly faster in contractor establishments than in non-contractor establishments. T-tests in Table 4.1 reject the equality of changes in means in all cases except non-black minorities, which are the smallest group. There is no striking evidence in the changes in variances in representation over time, but the variance in the contractor sector is always significantly less than in the non-contractor sector. Contractor establishments start with proportionately more non-white males but fewer females in 1974, which in itself casts doubt on the argument that female intensive establishments are being selected as contractors. The most compelling evidence of the impact of affirmative action in Table 4.1 is the significantly greater increases in female and black male employment shares in contractor establishments.³

The interpretation of tests of affirmative action would be less straightforward were scale effects to differ greatly across sectors. However we see in Table 4.1 that there is only a small difference in the growth rates of contractor and non-contractor establishments; both are growing at between 2 to 3 percent per year, so differences in scale effects across sectors are likely to be negligible. On net in these establishments

members of protected groups are, in part, being substituted for white males over time. This also suggests that contractor firms are not growing fat on government largesse, allowing them to expand total employment to take on relatively unproductive minorities and females. This is consistent with evidence presented in other work that the productivity of members of protected groups relative to that of white males did not fall as their relative employment share increased.

Reviewed vs. Non-Reviewed

Given that contractor establishments have increased their employment of non-whites and females more than non-contractor firms have, what administrative tools have been useful? Do compliance reviews matter? One alternative is that the threat of a compliance review is sufficient to obtain the desired behavior, so that reviewed establishments do not differ significantly from non-reviewed contractor establishments. This would be plausible if the threatened penalty if caught were severe enough to outweigh the small probability of being caught. This is unlikely, because both the probability of review and the penalties imposed are not great. The OFCCP has records of at least 27,000 reviews completed between 1973 and 1981 at 11,000 different identifiable establishments. In 1980, roughly 115,000 establishments were government contractors, so at least ten percent of all contractor establishments had been reviewed between 1973 and 1981. Twenty-six of these reviews resulted in the ultimate penalty of debarment. Between 1969 and 1976, compliance reviews produced 331 conciliation agreements according to a Department of Justice memorandum. These agreements awarded \$61,279,000 in back pay, or \$185,133 per company in a heavily skewed distribution. Short of debarment or backpay awards, affirmative action extracts only promises, though as we have seen, these promises are not empty.

Compliance reviews have been targeted at large establishments that already employ proportionately more non-whites. The economics of targetting enforcement, and detailed empirical tests of actual enforcement patterns are analyzed in other

work. Here I shall only note that while there are obvious advantages in terms of economies of scale and signalling to reviewing large establishments first, there seems little to be gained in terms of reducing discrimination by enforcing affirmative action primarily at establishments that already have the highest representation of non-whites, conditional on size. Among the 41258 establishments that were contractors in 1974, the establishments that were reviewed between 1975 and 1979, inclusive, employed an average of 745 workers in 1974, far more than the average of 239 employed by non-reviewed contractors. In addition, the employment share of non-whites was 24% greater at reviewed contractors than at non-reviewed contractors in 1974, before review. This helps explain why we previously observed no decline in the variance of representation among contractors. If one thought of the growth of non-white representation as following a logistic growth curve, then squeezing further gains from establishments in the upper tail of the distribution would be difficult. If reviewed contractors start out above the mean in protected group employment, compliance reviews that prompt them to increase their employment of minorities further may actually increase the variance in representation in the contractor sector.

Establishments that were reviewed expanded in size, though not significantly more than the non-reviewed. Since the reviewed establishments were relatively non-white intensive, the likely scale effect would work against an increase in non-white employment share among the reviewed.

It is also interesting to note that contractor establishments that were reviewed at all underwent an average of 1.8 reviews between 1975 and 1979 inclusive, and that these reviewed contractors were more likely to maintain contractor status than were the non-reviewed contractors. Only 3.4 percent of the reviewed contractors were no longer contractors by 1980. In contrast, 11.8% of the non-reviewed contractors ceased being contractors. While not controlling for other variables, this comparison does not in itself suggest that the compliance review process is so burdensome as to

lead firms to eschew federal contracts.

The observed impact of compliance reviews should be interpreted in view of a plausible simultaneity argument: the OFCCP tends to review those establishments with the lowest growth rates of female and minority employment. This is indeed among the things the OFCCP claims to do. If so, this simultaneity would bias against finding a higher growth rate for female or minority representation among reviewed establishments.

Multivariate Log-Odds Models ?

*Soc. Sci. research
methodology*

Do compliance reviews and contractor status have the same impact if other variables are controlled for? For example, the size of the establishment could be a crucial variable. Large plants might tend to be good corporate citizens, or they may be more likely to have formalized and rationalized personnel systems. Or simply by being large they may escape the familial or tribal tendencies of small workforces. For any of these reasons, one might expect larger firms to have better affirmative action records. At the same time, one might expect contractor status to be positively correlated with establishment size. In this case, the previous finding in cross-tabulations of a positive relationship between contractor status and growth rates of female and minority employment share might be spurious; it might be picking up the correlation between protected group share and the omitted establishment size. Similar arguments of a more tenuous nature may be made about industry and region.

In this section I present the results of log-odds equations that correct for establishment size, growth rate, corporate structure, percent non-clerical white-collar, industry, region, and initial period demographics. The sample means of these control variables, and the abbreviations by which they shall be referred in the following tables, are indicated in Table 4.2. The interpretation of contractor effects in this section assumes that both contractor and non-contractor establishments are wage takers in the same labor markets, and that both sectors have the same wage elasticity of

demand.

Table 4.3 presents the primary log-odds results, and shows a consistent pattern across demographic groups. Establishments that were contractors in 1974 significantly increased the employment share of black males, other males, white females and black females. According to Table 4.3, compliance reviews also played a significant role in advancing black males, white females and black females, and in retarding the employment of non-black males.

The estimate in equation 2 is that black males' share of employment increased .82 percentage points more in contractor establishments, not counting the direct effect of reviews. Since 6.8 percent of all contractor establishments accounting for 17.4 percent of all contractor employment were reviewed in subsequent years, the additional impact of compliance reviews is to increase black males share by .174 times 1.03, or .18 percentage points. The total impact of the contract compliance program is then to raise black males' share by one percentage point in the contractor sector over the six years between 1974 and 1980. Dividing by six, yields a rough annual impact of .17. This is about the geometric mean of previous estimates: a fourth of Heckman-Wolpin's estimated .7 percentage point annual impact, but four times greater than Goldstein-Smith's .036. This shift over six years is not small. It is equivalent to 14 percent of black males' initial weighted employment share in the contractor sector, not an insubstantial demand shift.

These demand shifts, the central results of Table 4.3, are summarized in Table 4.4. With the exception of the residual and smallest group, non-black minority females, members of protected groups have enjoyed improved employment opportunities at contractor establishments. This also holds true for white females in this log-odds specification, although the effect is of marginal significance. In row 2, compliance reviews appear to have been an effective tool in changing employment patterns. The impact of compliance reviews is greater than the impact of simply being a federal con-

tractor in every case except non-black minority males. Direct pressure does make a difference.

The evidence here is that a process that has been frequently criticized as largely an exercise in paper-pushing has actually been of material importance in prompting companies to increase their employment of minorities and females. The combined impact of being a contractor, and of undergoing a review as in the case 17.4 percent of all contractor employment, is presented in row 3. Row 5 displays the relative extent of these contract compliance induced demand shifts by expressing them as a proportion of initial 1974 employment shares in the contractor sector. The shift is largest for blacks: fourteen percent for black males, and eleven percent for black females. The proportionate shifts for white females and for non-black minority males are not as large: two and five percent respectively. It has been commonly speculated that employers can kill two birds with one stone by hiring black females. The evidence here is that while black females have gained relatively more under affirmative action than white females, they have not gained more than black males, so that being black appears more important than being female. Had black females been especially favored, we would have expected their relative gains to be the greatest.

To derive an estimate of the effect of affirmative action on market demands, I assume that affirmative action has not directly altered labor demand schedules in the non-contractor sector. I also maintain the assumptions that the demand elasticities are equal in both sectors, and the supply curve identical, so that the differential between employment shifts in the contractor and non-contractor sectors can be identified as a demand shift. Since 68.6 percent of employment in the sample is in contractor establishments, the market demand shift in row 6 is taken to be .686 times the shift in the contractor sector. In other words, the market shift is simply the weighted average of sectoral shifts. Because many small employers who are not contractors are not included in the sample, this may well overestimate the shift in the

economy as a whole.

Employment opportunities depend critically on growth. Table 4.3 also indicates that minorities and females experienced significantly greater increases in representation in establishments that were growing and so had many job openings. For every percentage point increase in the growth rate of establishment employment, white males' employment share drops by about half a percentage point, suggesting that members of protected groups dominate the net incoming flows. Establishment size has only a small impact, but establishments that are not part of multi-plant corporations have significantly lower growth rates of employment for members of protected groups.⁴ Corporate size matters rather than establishment size, with larger corporations showing greater increases in minority and female employment. Except for black males, members of protected groups also do far better at establishments that are non-clerical white-collar intensive.

There is significant variation in the growth of minority and female representation across industries and regions. To determine the within industry within region impact of affirmative action, all of the equations in Table 4.3 include 27 industry and 4 region dummy variables. The omitted groups were retail trade and New England. Some of these variables had significant and strong effects. White males' employment share, a summary measure, is significantly five or more percentage points higher in mining, construction, lumber, stone clay and glass, and transportation. It is five or more percentage points lower in apparel. Mirroring this, white females' share is significantly 5 or more percentage points lower in agriculture, mining, construction, stone clay and glass, primary metals, petroleum and coal products, and transportation, and five or more higher in apparel and furniture. Black males' share is significantly at least 2 percentage points lower in agriculture, mining, apparel, lumber, leather, and electrical machinery. Since initial 1974 employment share, region, growth rate, and percent non-clerical white-collar are controlled for, these appear to reflect real differences

across sectors in the growth of minority and female employment. Across regions, blacks increase their employment share significantly more in the South, although F-tests do not reject the equality of coefficients on contractor and review status in the South and nationally.

Changes in Contractor Status

The impact of establishments which change contractor status between 1974 and 1980 is explored in Table 4.5. In the case of black males, the coefficients line up in the expected order of magnitude. Black males experienced the greatest employment gains at establishments that remained contractors, followed in order by establishments that left contractor status, those that became contractors, and finally, those that never were contractors. For all protected groups, employment gains, if any, were smaller at establishments that were not contractors in 1974 and 1980 than in establishments that were contractors in either or both years. Except for white females, establishments which left contractor status demonstrate better employment records for members of protected groups than do establishments that just became contractors. This is consistent with state dependence based on the inertia of employment stocks and personnel policies. Except for black males, the impact of affirmative action actually appears to have been greater at establishments that ceased being contractors than at those that remained contractors. If some establishments found the cost of complying with affirmative action exorbitant, one might well expect them to give up being contractors before incurring the cost. In this sense, the pattern observed in these cases is anomolous. Similarly, unless screening of new contractors has become more stringent, it is not obvious why new entrants should have better records of employing white females and of not employing white males than contractors of long-standing. If these establishments are becoming contractors because they find it easy to comply with affirmative action, as one self-selection argument goes, why didn't they choose to reap the benefits of being a federal contractor six years sooner? Before

But only studies those which did it give up being contractors

leaving Table 4.5, note that while the status change variables are usually individually significant, they do not generally contribute to a significant reduction in the standard error of the estimate.

The tests presented here suggest that while generating tremendous public criticism and resistance and while undergoing frequent regulatory reorganization, affirmative action has actually been successful in promoting the employment of minorities and females. In the contractor sector affirmative action has increased the demand relative to white males of black males by 14.8%, of non-black minority males by 6.3%, and of white females by 2.9%. Among females, it has increased the demand for blacks relative to whites by 9.0%. For a program lacking public consensus and vigorous enforcement, this is a suprisingly strong showing. While the gains of white females are smaller than those of blacks, it is important to keep in mind that the employment of females and minorities has been increasing in both sectors. Indeed, if the OFCCP pressured establishments to hire more females and minorities compared to their own past record rather than compared to industry and region averages, the observed pattern is just what we would expect to see during a period when female labor supply had been growing. Females' share would increase at all establishments due to the supply shift, and contractor establishments would be under little pressure to employ more females than non-contractors. The relatively shorter history of affirmative action for females, as well as the demographic composition of the bureacracies that enforce affirmative action, may also help explain the differential impact of affirmative action across protected groups.

The statistical tests shown here give evidence of a contract compliance program that works. Executive Order 11246 has led to significant employment gains for females and for blacks in contractor establishments, and compliance reviews have played an important role in this process.

Selection or Changed Behavior?

It is not implausible to suppose, along the lines of Heckman and Wolpin, that those establishments with a relative overabundance of white males would avoid being federal contractors. Some of the findings presented above might be qualified if there were evidence of such selection: if establishments with high protected group employment were more likely to be contractors. Because of the recursive nature of the system, this proposition is tested in Table 4.6 in logit estimates of the probability of being a contractor in 1980 as a function of 1974 demographics, the change in demographics between 1974 and 1980, and establishment size, growth rate, corporate status, industry and region. There is little evidence here to support the proposition that establishments with a high or growing level of minority or female employment are more likely to be contractors. This leads one to speculate that perhaps the costs of affirmative action are not great on average, or that they are balanced by lump-sum transfers from the government in a contracting process that does not turn on price alone.

The evidence in Table 4.6 suggests that the establishments that were more likely to be contractors in 1980 were actually those with the greatest proportion of white males and the least proportion of minorities and females in 1974, just the opposite of what one selection argument would suggest. Similar results are found when contractor status in 1974 is controlled for in linear probability equations. These effects are significant, with the exception of black males, who have no significant impact one way or the other on contractor status at the .05 confidence level. Since the share variables must sum to one, the smallest group, non-black minority females, is omitted. Controlling for initial period demographics, Table 4.6 also suggests that establishments with the greatest increases in minority or female employment share were not significantly more likely to be contractors in 1980. However, one would have expected some of these coefficients to be positive, and the coefficient on white males is also negative. While it is possible to interpret these estimates to say that conditional on

1974 demographics, establishments in which white male employment share increased at the expense of black males were slightly more likely to be contractors, this small effect is statistically insignificant. In general, there is no significant evidence here that establishments with a large or growing proportion of minority or female employees are more likely to be contractors. In this regard, it is worth recalling that the Heckman-Wolpin estimates imply that individually the level or growth of black male employment share had an insignificant effect on the probability of being a federal contractor, and that establishments with high or growing female or non-black minority employment shares were actually less likely to be contractors, though insignificantly so [Heckman and Wolpin, Table 7, p. 562]. Affirmative action appears to work not by the selection of firms with good records of protected group employment into contractor status, but rather by inducing contractors to employ more minorities and females.

Section 2: Turnover: Churning or Stable Employment

We have seen that affirmative action has been successful in increasing the employment share of protected groups, and that compliance reviews have played a significant role in this process. Our evaluation of this impact depends on its permanence. To take an extreme example, if there were one black economics professor earning handsome rents by riding circuit with the reviewers across universities, we might question whether any lasting reduction in discrimination or improvement in the employment of black professors had been achieved. This speculative example may not be so far-fetched, given past testimony about black construction workers "bicycling" from one construction project to another ahead of the reviewers. To what extent has the observed improvement in the employment of minorities and females been accompanied by a game of musical chairs, albeit with added chairs? The interpretation of protected groups' separation rates relative to white males' will depend on whether the separations are quits or fires. If members of protected groups have disproportionately high voluntary turnover then we might infer that affirmative action has induced high

sorting costs by creating a situation of excess demand, in which there are not enough workers of sufficient quality to meet the imposed goals. An alternative explanation in the case of disproportionate fire rates is that employers run a revolving door policy. Hiring minorities and females while under pressure, then firing them.

Turnover may also be viewed in a more positive framework. Given the higher net growth rates of females and minorities in the contractor sector, through what channels has this increase been achieved? Have establishments found it most effective to increase protected groups share of hires and promotions or to decrease their share of terminations?

In Table 4.7, for a sample of 2240 establishments that were reviewed in 1978, I present data on turnover by occupation. Those who are unfamiliar with turnover data may be surprised at the high turnover rates: 1/3 of the stock is hired, 1/4 separated, and 1/5 promoted annually. The rates in this sample are actually close to Bureau of Labor Statistics rates for manufacturing. In 1978, in durable goods manufacturing the annual new hire rate was .336, while the rate of separations was .408. In non-durables these rates were .408 and .540 respectively.⁵ In such a fluid employment situation, there should be many opportunities to increase the employment of members of protected groups without displacing sitting white males, although this will depend on the turnover of positions, not people.

Are black males overrepresented in turnover? In Table 4.8 we see that in no occupation do black males account for a significantly larger proportion of separations than of hires. This is consistent with the observed net growth of black male employment share in the EEO panel data. In another sense, black males are overrepresented in separations: their proportion of separations is greater than their proportion of stock in all white-collar occupations, except officials and managers. This may be evidence of churning in the white-collar occupations. In the blue-collar occupations, black males' share of separations is lower than their share of hires and their share of

stock, indicating a more stable work force relative to non-black males. Of course, since turnover is endogenous, this may well reflect employers' policies as well as employees' behavior. In all occupations except service workers we find evidence of upgrading: black males are overrepresented in promotions.

Females exhibit more stable employment patterns than males. Table 4.9 shows that in every occupation females share of separations is lower than their share of stock, suggesting that their separation rate is lower than that of males.

This interpretation of the evidence suggests that establishments have had more long-lasting success in meeting affirmative action goals for females than for black males. They have been more successful in finding and keeping qualified females. On the other hand, for black males in white-collar occupations, there is some evidence of churning. In these occupations, black males are overrepresented in separations, suggesting that establishments have trouble finding and keeping qualified black males. In light of black males' high share of hires, the affirmative action goals for black males may be inducing high search costs. However, this interpretation is problematical since it does not control for job tenure, which we know is an important determinant of separations.

Separations usually are concentrated among the newly hired. It is more appropriate then to compare share of separations with hires rather than with stocks, which leads to a different interpretation of the results in Tables 4.8 and 4.9. Think of the new hires as the stock from which the separations come. Now in every occupation black males' share of separations is less than or about equal to their share of hires. In this light, black males experience relatively stable employment, and there is no significant evidence of churning. The same finding of stability holds true of females, except in the craft occupations, where critics have claimed the goals set by affirmative action are too high. Under this plausible interpretation, the evidence in Tables 4.8 and 4.9 that both females and black males at reviewed contractor establishments have

low separation rates relative to other workers implies that their employment gains won under affirmative action are not short-lived.⁶ At least in this sample, earnings inequality by race or sex is not obviously due to the instability of blacks or females.

Having previously found that the demand for black males increased in the contractor sector it is natural to infer that this would tend to drive their relative wage up, absent an excess or an infinitely elastic supply of black males. While black unemployment rates are very high, this is much less the case among the skilled, where other work shows affirmative action has increased demand the most. Even here, some might argue that the increased demand for black males could be met out of natural turnover, so wages need not rise to attract new workers. But this line of reasoning ignores the endogeneity of turnover, and has the same economic content as the statement that since the number of oranges bought is identical to the number sold, there is no reason for the price of oranges to change. To fully explain turnover by framing it as an endogenous variable within a full model is well beyond the scope of the present work, and has not been our purpose here. This work has shown in a sample of reviewed contractor establishments that females and black males share of new hires is typically greater than their share of separations. The evidence here is that reviewed establishments do not run a revolving door policy.

Comparison of Flows and Stocks

In this section I develop a formal model making clear the relationship between the flows and stocks already discussed. I shall develop conditions that must hold for consistent behavior among stocks and flows, and point out a paradoxical theoretical condition under which an affirmative action program that is effective in increasing protected groups' share of hires appears to be ineffective because it does not increase the growth rate of their share of employment.

The change in stocks is equal to hires less separations, assuming no promotions across occupations. In share form this identity is:

$$P_t = \lambda P_{t-1} + \alpha H - bT \quad (4)$$

where

P_t = Blacks' share of stock in year t.

H = Blacks' share of hires.

T = Blacks' share of separations.

α = The ratio of total hires to total end of year stock.

b = The ratio of total separations to total end of year stock.

λ = $1 - \alpha + b$

First I shall illustrate that the observed turnover data from establishments reviewed in 1978 is consistent with the observed change in stocks in reviewed establishments between 1974 and 1980. For example, consider black male craftsmen. In 1978 their share of hires was .067, of separations .052, and of stock .067 (see Table 4.8). From Table 4.7 we know that in 1978 craft workers had some of the lowest turnover rates of any occupation, a hire rate of .18 and a termination rate of .17. Are these flows consistent with the observed changes in stocks? The share of craft jobs held by black males rose by .020 from .056 to .075 in non-reviewed firms, but by .013 from .048 to .061 in reviewed establishments between 1974 and 1980 in a sub-sample of a few thousand establishments. On this basis, and judging from more stringent regression tests, compliance reviews have caused neither higher levels nor growth rates of black males' share of craft jobs. Yet from Table 4.8 we know blacks share of hires is greater than their share of separations in this occupation, while the hire rate is approximately equal to the termination rate. Solving the share equation recursively we find:

$$P_t = \lambda^n P_{t-n} + \frac{\lambda^n - 1}{\lambda - 1} (\alpha H - bT) \quad (5)$$

Substituting into this equation taking 1978 as the starting date we find after six years that $\Delta P = .016$ and $\% \Delta P = 33$. These are close to the observed changes in reviewed

firms between 1974 and 1980; $\Delta P = .013$ and $\% \Delta P = 27$. This example demonstrates that the flow statistics from compliance review reports are roughly consistent with the stock statistics from EEO-1 forms.

Now consider whether the apparent ineffectiveness of compliance reviews on black males' share of craft jobs might be due to relatively low turnover in the reviewed sector. The impact of affirmative action might be masked if turnover rates were exogenously higher in the non-contractor or non-reviewed sector. For purposes of illustration assume that in the crafts black males' share of hires increases by one percent and their share of separations decreases by one percent at establishments that undergo review. The change in black male employment share in reviewed establishments would now be identical to that in non-reviewed establishments if turnover were fifteen percent higher among the non-reviewed. This illustrates, but only illustrates, that with higher turnover rates among the non-reviewed, or among the non-contractors, the true impact of affirmative action may be understated by looking only at protected groups' share of employment or even change in share of employment.

Section 3: Conclusions- The Impact on Racial Earnings Inequality

Those who have argued about the propriety of affirmative action have not been quibbling over a fine point. The federal contract compliance program has substantially improved employment opportunities for members of protected groups. [The growth rates of females' and minorities' shares of employment are greater in contractor establishments obligated to undertake affirmative action than in non-contractor establishments with no such obligation. Compliance reviews, the major enforcement tool of the affirmative action program, while poorly targetted against discrimination, have contributed significantly to improving the employment of members of protected groups.] This evidence from employment stocks in 1974 and 1980 is corroborated with independent data on flows in 1978 from a different source which shows that in general members of protected groups experience more stable employment than white males

Conclusion
5/27/5

and accounted for a greater proportion of new hires than of current employment in reviewed establishments. This flow data also suggests the possibility that since turnover rates may be higher in non-reviewed or non-contractor establishments, I may understate the impact of affirmative action.

The scale of the demand shifts due to affirmative action found in this paper is not small, but this can best be appreciated by comparing them to relative wage changes during the same period. Between 1974 and 1980, the black male to white male ratio of the mean earnings of full-time, full-year workers increased by 2.3 percent from .684 to .700.⁷ What part of this improvement in relative black male earnings may be explained by affirmative action?

To frame the implications of the demand shifts found here for the change in black male relative earnings, consider the following simple model of the labor market, where all variables are in logarithmic form:

$$N^D = \lambda - \eta W \tag{6}$$

$$N^S = b + \varepsilon W \tag{7}$$

where

N^D is the logarithm of the demand for black male labor relative to white male labor.

N^S is the logarithm of relative labor supply.

W is the logarithm of the ratio of black to white male wages.

In equilibrium:

$$W = \frac{\lambda - b}{\varepsilon + \eta} \tag{8}$$

The logarithmic derivative of relative wages with respect to a demand shift is then:

$$\frac{dW}{d\lambda} = \frac{1}{\varepsilon + \eta} \tag{9}$$

In Table 4.3 I estimated that the relative demand for black male to white male workers increased by 14.8 percent in the contractor sector between 1974 and 1980. Maintaining the assumption that affirmative action has not directly shifted demand

curves outside the contractor sector, and assuming that roughly half of all employment is in the contractor sector, the implied relative demand shift overall is 7.4 percent. For demand and supply elasticities that sum to less than six, at least half of the improvement in black relative earnings among men may be explained by affirmative action. Since the actual percentage increases in the ratio of median earnings, or in the mean or median earnings of all workers were all less than 2.3 percent, affirmative action may well have played an even greater role. The same would be true the lower the elasticity of supply or demand. While it is not implausible to think of the elasticity of relative labor demand being greater than one, in other work I estimate this elasticity of substitution of non-white for white male labor to be on the order of of .7 to 1.1. While other factors on both the demand and the supply side of these markets have likely also played a role, the increase in the demand for black male labor relative to white induced by affirmative action can help account for a significant part of of the increase in the relative earnings of black males.⁸ This view is supported by individual wage equations estimated for the 1978 CPS sample matched with data on the percent of employment by industry by SMSA that is in contractor establishments. These preliminary estimates, to be reported fully in future work, suggest that racial earnings inequality is reduced where affirmative action pressures are the greatest.

This paper has presented significant large sample evidence with detailed controls at the establishment level that minority and female employment has increased faster at contractor establishments that bear the affirmative action obligation. It has also suggested that while compliance reviews have not been directly targetted against establishments with the lowest representation of non-whites, these reviews have been an effective enforcement tool. The demand shift is large, and does not appear transient. Correcting for broad occupation in a new sample of reviewed establishments this study also found that females and black males experience relatively stable employment. In sum, amidst vigorous contention , affirmative action has played a

major role in improving the economic position of minorities.

Appendix: Data

Two rich, detailed and disaggregated data sets are used in the empirical tests: establishment level EEO-1 reports on more than sixteen million employees for 1974 and 1980, and establishment level affirmative action compliance review reports for the period 1973 to 1981.

Under Title VII of the Civil Rights Act of 1964, the Equal Employment Opportunity Commission requires annual reports on workforce demographics from all private employers with 100 or more employees, or 50 or more employees and a federal contract or first-tier subcontract worth \$50,000 or more. In the case of multi-plant employers, all establishments with more than 24 employees that belong to firms fulfilling the above conditions must report individually. In 1978, 39,000 employers with more than 165,000 establishments filed reports covering 36 million employees, more than half of all private non-farm employees. The EEO sample is extensive, covering three-quarters of all manufacturing employment as reported by the B.L.S. Employers with small workforce establishments such as construction, trade and agriculture are underrepresented. Construction and agriculture are also underrepresented because temporary or casual employees are not counted as employees for the purposes of reporting requirements [EEOC Report 1978, p.xi].

Firms have an obvious incentive to discover that their white male employees are really minority females when it comes to filling out their EEO-1 forms. This need raise no problem for the current study if such "inflation" is uniform across sectors as is likely if liability to Title VII litigation is perceived as the primary threat. Under Title VII pressure moreover, firms will be more concerned with inflating minority and female employment levels than growth rates. However, if this lying does extend subtly to growth rates, then to the extent that such behavior is greater among contractor establishments, all studies including the one at hand, that rely on comparisons of contractor and non-contractor EEO-1 forms will overestimate the true impact of

affirmative action. In contrast to a firm filling out an EEO-1 form, a white male filling out a Census of Population form has no such incentive to claim upon deep introspection that he is after all a minority female. A rough comparison with the Census of Population reveals no flagrant exaggeration of female or black male employment shares in the EEO sample.

From samples of roughly 160,000 establishments in 1980 and 100,000 establishments in 1974 I found 68,690 establishments that filed identifiable reports in both years. The empirical tests comparing contractors with non-contractors are based on these 68,690 establishments with more than sixteen million employees from the matched sample.

An establishment is considered a contractor if the company or any of its establishments are prime government contractors or first-tier subcontractors with a contract, subcontract or purchase order of \$50,000 or more. This study identifies any such establishment as a contractor, whether or not the establishment so identified itself. Note that the sub-contractor clause vastly extends the compass of affirmative action regulation. To the extent that I label as contractors some establishments that are not aware that they are under the affirmative action obligation, I mix the sin of ignorance together with the greater sin of willful volition. If affirmative action were found to be ineffective, it would be useful to separate these two causes.

Contractor status changers, particularly entrants, between 1974 and 1980 are surprisingly common. Eleven percent of all 1974 contractor establishments were non-contractors in 1980, while twenty-seven percent of all 1974 non-contractors were identified as contractors in 1980, constituting seventeen percent of all 1980 contractors. This suggests contractors have become better labelled over time. Whether these status changes are true, or just an artifact of more accurate reporting, my results will be biased against finding any affirmative action effect when I test according to 1974 status only. In other words, I underestimate the effect of being a contractor because I

include among the non-contractors some establishments that became or really were contractors, and I include among the contractors some establishments that became or really were non-contractors.

To compare demographic changes across reviewed and non-reviewed establishments I merged the matched 1974 and 1980 EEO-1 establishment demographic data with data on OFCCP compliance reviews. OFCCP administrative records contain data on 27,000 compliance reviews at 11,000 identifiable establishments, between 1973 and 1981. Before 1978, I have data almost exclusively on reviews conducted by the Department of Defense, but these accounted for nearly half of all compliance reviews. Reviews completed prior to 1973 or after 1979 are underrepresented, and due to general under-reporting some establishments that were reviewed will be included among the non-reviewed, biasing my tests against finding an impact of compliance reviews. I labelled as reviewed any establishments that had a record of at least one compliance review between 1975 and 1979 inclusive. Multiple reviews are not rare, but are not controlled for in my tests. Since I expect decreasing returns to multiple reviews, this will bias against finding any review effect in the case of establishments reviewed prior to 1974. In other cases I will simply be measuring the cumulative effect of reviews. Since the mode year of review completion in the sample is 1975, while demographic changes are measured between 1974 and 1980, there is little potential for underestimating review effects due to lags in response. Finally, turnover data comes from a sample of 2240 establishments that completed compliance reviews in 1978.

NOTES

1. Affirmative action in this study refers narrowly to the obligation borne by federal contractors under Executive Order 11246, and not to other forms of voluntary of court ordered affirmative action.
2. See for example the cases of Legal Aid Society of Alameda County v. Brennan, Women's Equity Action League v. Department of Labor, and Washington Area Construction industry Task Force v. Marshall.
3. Table 4.1 shows that affirmative action has been effective at the average establishment, not for the average worker. To draw inferences regarding wages, changes in employment share must be weighted by establishment size. This comparison shows smaller differences between sectors, suggesting that affirmative action has produced greater changes at smaller establishments.
4. Other regressions show some evidence that affirmative action has been more effective at smaller establishments, and that affirmative action for black males has been more effective at male intensive establishments.
5. This is derived as twelve times the average monthly rate from Table 83, Handbook of Labor Statistics, 1980.
6. Previous studies of turnover by race and sex have centered on the analysis of quit rates in aggregate industry data and have found conflicting results. These studies are briefly summarized by Blau and Kahn, who find in the NLS dataset that once individual and job characteristics are controlled for, the quit rates of young men and women are roughly equal, and those of young blacks less than those of young whites. In a similar study based on the Michigan PSID data, Viscusi finds that while women have higher quit rates within major occupational groups than do men, half of this difference is explained by differences in job characteristics and regional economic conditions. The present study is the first to examine total turnover data at the establishment level. In contrast to previous studies, I find

that just controlling for broad occupation, females have lower separation rates than males, and blacks have lower rates than whites. This strong result may well be due to the unrepresentative nature of the sample or to behaviour endogenous to the review process. Nevertheless, it is in accord with previous findings that racial and sexual differentials in quits in aggregate industry statistics overstate behavioral differences.

7. Earnings of full-time workers employed 50-52 weeks from U.S. Bureau of the Census, Current Population Reports, Series P-60, "Money Income in 1974 of Families and Persons in the U.S.", no. 101, January, 1976, Table 61, p.127. and from U.S. Bureau of the Census, Current Population Reports, Series P-60, "Money Income in 1974 of Households, Families, and Persons in the U.S.", no. 132, July, 1982, Table 59, p.213,214.
8. For a discussion of these issues, see Charles Brown, "Black/White Earnings Ratios Since the Civil Rights Act of 1964: The Importance of Labor Market Drop-Outs" National Bureau of Economic Research Working Paper #617, January, 1981, and Richard Butler and James Heckman, "The Government's Impact on the Labor Market Status of Black Americans: A Critical Review" in Leonard J. Hausman et. al., eds., Equal Rights and Industrial Relations, (Madison, Wi : Industrial Relations Research Association, 1977), pp. 235-281.

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ff
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Table 4.1: Proportion of all Employees

Line	Demographic Group	Contractor Status	Number	1974		1980		MeanΔ	Mean%Δ
				Mean	σ	Mean	σ		
1	Black	N	27432	.053	.10	.059	.10	.006	28
2	Males	Y	41258	.058	.10	.067	.10	.008	33
3				(6.0)		(9.4)		(6.5)	(3.6)
4	Other	N		.034	.10	.046	.10	.012	52
5	Minority	Y		.035	.08	.048	.09	.013	58
6	Males			(1.6)		(2.1)		(1.2)	(2.1)
7	White	N		.448	.27	.413	.26	-.034	-2
8	Males	Y		.584	.26	.533	.25	-.047	-4
9				(66.7)		(66.5)		(16.4)	(2.0)
10	Black	N		.047	.10	.059	.11	.012	47
11	Females	Y		.030	.07	.045	.08	.015	77
12				(24.0)		(19.2)		(5.7)	(10.8)
13	Other	N		.024	.08	.036	.08	.012	65
14	Minority	Y		.016	.05	.028	.06	.012	77
15	Females			(14.8)		(13.0)		(1.1)	(3.2)
16	White	N		.394	.27	.400	.26	.006	17
17	Females	Y		.276	.23	.288	.23	.012	30
18				(59.7)		(57.8)		(7.8)	(11.9)
19	Total	N		186	286	209	341	23	17
20		Y		271	728	276	720	5	21
21				(21.2)		(16.2)		(10.7)	(3.3)

Note: T-Tests across means in parentheses, on every third line. In every case, F-tests reject equality of variances across contractors and non-contractors, with more than 99% confidence. The last column is the mean of percentage changes, not the percentage of change in means.

N = non-contractor in 1974.

Y = contractor in 1974.

Table 4.2: Variable Definitions, Means, and Standard Deviations
N = 68690

Variable Name	Mean	Standard Deviation	Definition
C74	.601	.49	= 1 if establishment was part of a contractor company in 1974
STAYC	.533	.50	= 1 if establishment was part of a contractor company in 1974 and in 1980
LEAVEC	.068	.25	= 1 if establishment was part of a contractor company in 1974 but not in 1980.
ENTERC	.109	.31	= 1 if establishment was part of a contractor company in 1980 but not in 1974.
R	.041	.20	= 1 if establishment completed a compliance review between 1974 and 1980 exclusive.
SIZE	237	594	Total number of employees in 1974.
GROWTH	.197	1.67	Rate of growth of total employment from 1974 to 1980.
SINGLE	.183	.39	= 1 if establishment was not part of a multi-establishment company.
PWC	.381	.31	Proportion of all employees who are officials, managers, professionals, technicians and sales people.

Table 4.3: Log-Odds Equations of the Effect of Contractor and Review Status on Employment by Demographic Group.
N = 68690

Demographic Group	White Males	Black Males	Other Males	White Females	Black Females
Equation:	1	2	3	4	5
C74	-.300 -.012 (.005)	.816 .136 (.009)	.207 .046 (.009)	.242 .011 (.006)	.310 .062 (.009)
R	-1.43 -.057 (.012)	1.03 .171 (.021)	-.234 -.052 (.022)	1.34 .061 (.015)	.660 .132 (.021)
P74*	115 4.60 (.010)	56.5 9.41 (.042)	46.0 10.21 (.050)	110.0 4.92 (.013)	53.8 10.76 (.050)
SIZE	.0002 .000008 (.000004)	.0002 .000033 (.000007)	-.00063 -.00014 (.000007)	-.0026 -.00012 (.000005)	-.00027 -.00043 (.000007)
GROWTH	-.475 -.019 (.001)	.138 .023 (.002)	.117 .026 (.002)	.163 .007 (.001)	.130 .026 (.0023)
SINGLE	.050 .002 (.007)	-1.27 -.212 (.012)	-.851 -.189 (.012)	-.792 -.036 (.008)	-1.53 -.305 (.012)
PWC	-4.43 -.177 (.009)	-.324 -.054 (.016)	.887 .197 (.0017)	10.41 .471 (.011)	.66 .131 (.016)
R ²	.837	.545	.519	.796	.536
MSE	.343	.992	1.116	.485	1.017

Note: The first line is $100(dP/dX)$ evaluated at mean P. The second is the coefficient from the log-odds equation. The third is the standard error. All equations include 27 industry and 4 region dummies.

Table 4.4: Demand Shifts Induced by the Contract Compliance Program: A Summary of Table 4.3.

Demographic Group:	White Males	Black Males	Other Males	White Females	Black Females
Equation:	1	2	3	4	5
1. Contractor Effect	-.30*	.82**	.21**	.24	.31**
2. Review Effect	-1.43**	1.03**	-.23*	1.34**	.66**
3. Total Effect	-.55	1.00	.17	.47	.42
4. Initial Share in Contractor Sector	59.8	7.3	3.2	24.4	3.8
5. Proportionate Shift in Contractor Sector	-.01	.14	.05	.02	.11
6. Proportionate Market Demand Shift	-.01	.10	.03	.01	.08

Note: The contractor and reviewer effects are the change in proportion as estimated in Table 4.3 evaluated at the sample mean. The initial shares are means across establishments weighted by establishment size, or, in other words, the ratio of means in the contractor sector. Significance levels are indicated in rows 1 and 2 only.

* = Significant at the .05 level.
 ** = Significant at the .01 level.

Table 4.5: Log-Odds Equations of the Effect of Contractor and Review Status on Employment by Demographic Group, Status Changers.
N = 68690

Demographic Group: Equation:	White Males 1	Black Males 2	Other Males 3	White Females 4	Black Females 5
STAYC	-.375 -.015 (.006)	.876 .146 (.010)	.230 .051 (.011)	.506 .023 (.007)	.240 .048 (.010)
LEAVEC	-1.025 -.041 (.010)	.786 .131 (.017)	.333 .074 (.018)	.748 .034 (.012)	.825 .165 (.017)
ENTERC	-.575 -.023 (.008)	.150 .025 (.014)	.113 .025 (.015)	.968 .044 (.010)	.050 .010 (.014)
R	-1.45 -.058 (.012)	1.02 .169 (.021)	-.230 -.051 (.022)	1.34 .061 (.015)	.700 .140 (.021)
P74	115 4.60 (.010)	56.5 9.41 (.042)	46.0 10.21 (.050)	110.0 4.92 (.013)	53.8 10.74 (.050)
SIZE	.0002 .000008 (.000004)	.0002 .000032 (.000007)	-.00063 -.00014 (.000007)	-.00026 -.000012 (.000005)	.00027 .000042 (.000007)
GROWTH	-.475 -.019 (.001)	.138 .023 (.002)	.117 .026 (.002)	.163 .0074 (.00016)	.130 .026 (.0023)
SINGLE	.002 .0001 (.007)	-1.25 -.208 (.012)	-.837 -.186 (.012)	-.682 -.031 (.008)	-1.55 -.309 (.012)
PWC	4.43 -.177 (.009)	-.336 -.056 (.016)	.887 .197 (.0017)	10.36 .471 (.011)	.69 .137 (.016)
R ²	.837	.545	.519	.796	.536
MSE	.343	.992	1.116	.485	1.016

Note: The first line is 100(dP/dX) evaluated at mean P. The second is the coefficient from the log-odds equation. The third is the standard error. All equations include 27 industry and 4 region dummies.

Table 4.6: Logit Estimates of Simultaneity: the Effect of Establishment Demographics on Contractor Status in 1980.
N = 68690

II	$\frac{dP}{dx}(\bar{P})(1-\bar{P})$	Beta	Asymptotic Standard Error
Proportion White Male, 1974	.079	.344	.13
Proportion Black Male, 1974	-.032	-.138	.15
Proportion Non-Black Male, 1974	-.086	-.376	.18
Proportion White Female, 1974	-.205	-.891	.13
Proportion Black Female, 1974	-.200	-.871	.17
Δ Proportion White Male, 1980-1974	-.552	-2.40	.18
Δ Proportion Black Male, 1980-1974	-.543	-2.36	.23
Δ Proportion Non-Black Minority, 1980-1974	-.727	-3.16	.25
Δ Proportion White Female, 1980-1974	-.499	-2.17	.17
Δ Proportion Black Female, 1980-1974	-.511	-2.22	.23
SIZE	.0011	.0047	.0043
GROWTH	-.453	-1.97	.021
SINGLE	.00009	.00039	.00013
27 Industry and 4 Region Dummies	Yes		
MSE	.189		
Mean of Dependent Variable	.641		

Table 4.7: Mean Employment Stocks and Annual Flows by Occupation, 1978.

Line No.	Occupation	N	Stock	Hires	Hires Per Stock
1.	Officials & Managers	2235	94.6	7.6	.08
2.	Professionals	1975	155.3	31.3	.20
3.	Technicians	1913	70.5	20.5	.29
4.	Sales	951	36.7	12.7	.41
5.	Clerical	2214	105.5	33.5	.32
6.	Craft	1919	146.7	25.7	.18
7.	Operators	1943	264.5	109.3	.41
8.	Laborers	1218	79.8	71.6	.90
9.	Service	1521	26.1	17.5	.67
10.	Total	—	974	330	.34

Line No.	Occupation	Terminations	Terminations Per Stock	Pro-motions	Promotions Per Stock
1.	Officials & Managers	9.5	.10	19.1	.20
2.	Professionals	21.7	.14	32.2	.21
3.	Technicians	14.2	.20	17.5	.25
4.	Sales	9.7	.32	6.9	.22
5.	Clerical	25.3	.24	25.5	.24
6.	Craft	25.2	.17	30.6	.21
7.	Operators	80.6	.30	57.6	.22
8.	Laborers	46.7	.59	28.5	.36
9.	Service	13.7	.52	7.3	.28
10.	Total	247	.25	225	.23

Table 4.8: Percent Black Male by Occupation, in Stock and Flows—
1978.

Line	Occupation	N	Stock	Hires	Terminations	Promotions
1.	Officials & Managers	2235	.026 (.06)	.042 (.14)	.021 (.09)	.047 (.15)
2.	Professionals	1975	.016 (.05)	.032 (.09)	.024 (.08)	.025 (.09)
3.	Technicians	1913	.039 (.08)	.053 (.13)	.055 (.14)	.050 (.14)
4.	Sales	951	.018 (.07)	.056 (.12)	.026 (.11)	.037 (.14)
5.	Clerical	2214	.019 (.05)	.022 (.07)	.023 (.08)	.028 (.09)
6.	Craft	1919	.067 (.12)	.067 (.15)	.052 (.12)	.101 (.21)
7.	Operatives	1943	.103 (.16)	.099 (.16)	.100 (.15)	.119 (.20)
8.	Laborers	1218	.162 (.22)	.173 (.23)	.155 (.23)	.170 (.27)
9.	Service	1521	.184 (.26)	.188 (.28)	.173 (.28)	.154 (.28)

Table 4.9: Percent Female by Occupation, in Stock and Flows—1978.

<u>Line</u>	<u>Occupation</u>	<u>N</u>	<u>Stock</u>	<u>Hires</u>	<u>Terminations</u>
1.	Officials & Managers	2235	.094 (.19)	.080 (.19)	.077 (.17)
2.	Professionals	1975	.153 (.19)	.175 (.25)	.151 (.24)
3.	Technicians	1913	.209 (.24)	.203 (.27)	.185 (.27)
4.	Sales	951	.136 (.23)	.162 (.28)	.123 (.25)
5.	Clerical	2214	.799 (.18)	.825 (.21)	.789 (.25)
6.	Craft	1919	.102 (.19)	.068 (.18)	.083 (.20)
7.	Operatives	1943	.372 (.34)	.361 (.33)	.347 (.33)
8.	Laborers	1218	.227 (.28)	.203 (.27)	.195 (.27)
9.	Service	1521	.334 (.33)	.178 (.28)	.145 (.26)

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DRAFT

A Review of the Effect of Executive Order 11246
and the Federal Contract Compliance Program
on the Employment Opportunities of Minorities and Women

A Report of
The Office of Federal Contract Compliance Programs
Employment Standards Administration
U.S. Department of Labor

April, 1983

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INTRODUCTION

The effect of affirmative action on the employment opportunities of minorities and women has been debated since it first was made a requirement of Federal contractors by President John F. Kennedy in Executive Order 10925 on March 6, 1961. Throughout most of the intervening period, the debate has been waged in the absence of any factual documentation of the impact of such Federally-mandated programs, at least on a national scale.

Beginning in September, 1981, the Director of the Office of Federal Contract Compliance Programs, Ellen M. Shong, caused the present study to be made. The study was conducted by J. Griffin Crump, Special Assistant to the Director. Its objective was to determine whether the impact of the Federal contract compliance program could be measured; that is, whether there was any significant difference between the employment and advancement of minorities and women in the work forces of Federal contractors and subcontractors and those of employers not covered by the Federal compliance program, and if so, whether the difference was attributable to the compliance program.

The study has shown the answers to both of the above questions to be "yes."

Background

The Office of Federal Contract Compliance Programs (OFCCP) is the Federal agency charged with enforcing the requirements of the Executive Order. Executive Order 10925 was superseded by Executive Order 11246, which was issued by President Lyndon B. Johnson on September 24, 1964 and later amended by him on October 13, 1967, through Executive Order 11375, to include women. Executive Order 11246, as amended, prohibits discrimination by Federal contractors against employees and applicants for employment because of race, creed, color, sex or national origin, and, in addition, requires the contractor to take affirmative action to ensure nondiscrimination. By regulation, all contractors having contracts of \$10,000 or more are required to take such action. That action is described in the Order as including "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." In addition, by regulation, contractors having 50 or more employees and a contract of \$50,000 or more have been required to maintain written affirmative action programs that analyze their work forces and employment practices and establish goals and timetables for the hiring and promotion of women and minorities where they are shown to be underutilized relative to their availability. Special

attention is to be paid to six categories 1/ of jobs for minorities and six for women. 2/

Special Emphasis Categories

Minorities

Officials and Managers
Professionals
Technicians
Sales
Office and Clerical
Skilled

Women

Officials and Managers
Professionals
Technicians
Sales
Skilled
Semi-skilled

From its inception in 1965 until October, 1978, the compliance program was implemented by the major contracting agencies of government (such as the Department of Defense, the General Services Administration, etc.) while policy was established by OFCCP's predecessor, the Office of Federal Contract Compliance (OFCC). Since October, 1978, policy-making and implementation have been consolidated in OFCCP.

1/ See "EEO-1 Job Categories" in Glossary.

2/ OFCCP's regulations, at 41 CFR 60-2.11, state: "Based upon the Government's experience with compliance reviews under the Executive Order program and the contractor reporting system, minority groups are most likely to be underutilized in departments and jobs within departments that fall within the following Employer's Information Report (EEO-1) designations: Officials and managers, professionals, technicians, sales workers, office and clerical and craftsmen (skilled). As categorized by the EEO-1 designations, women are likely to be underutilized in departments and jobs within departments as follows: Officials and managers, professionals, technicians, sales workers (except over-the-counter sales in certain retail establishments), craftsmen (skilled and semi-skilled). Therefore, the contractor shall direct special attention to such jobs in its analysis and goal setting for minorities and women."

Methodology

OFCCP carries out its Executive Order 11246 program primarily through a system of compliance reviews of covered Federal contractors. The study's basic hypothesis was that if the compliance program is effective, Federal contractor establishments as a group should, over a period of time, show higher performance in employment and advancement of minorities and women than noncontractor establishments. Further, reviewed establishments as a group might be expected to exceed the accomplishments of unreviewed establishments. 1/

In order to test these hypotheses, a number of things were needed. These included the availability of relevant employment data over a sufficiently long period to observe change; selection of a large enough sample of employers to ensure representative indicators/patterns; the ability to identify and separate Federal contractors' work forces from other employers'; the ability to identify contractor establishments which had experienced compliance reviews, and the use of a select group of establishments which by its makeup would tend to eliminate certain variables, such as expansion and contraction of the contractor universe, Title VII influence, etc. Fortunately, all of these elements either were found to exist or could be produced.

1/ It was also considered that a "spill-over" effect between reviewed and unreviewed establishments of the same contractor might tend to blur such a pattern. ("Spill-over" meaning that beneficial employment decisions resulting from a compliance review or reviews of some of a contractor's establishments would be applied in more of its establishments, thus also improving results in those unreviewed establishment.)

It was decided that the performance of Federal contractors subject to the compliance program would be compared to that of non-contractors for the period 1974-1980. This particular period was chosen because it utilized the most reliable current data (1980 EEO-1 reports) and coincided with the period of implementation of two major aspects of the compliance program, i.e., the requirement of written affirmative action programs, which began in 1971, and implementation of compliance activity regarding equal opportunity for women, which began in 1972. 1/

Since the universe of Federal contractors is constantly changing, with firms entering and/or leaving such status during any given period, an attempt to measure the performance of all Federal contractors over that long a period would not be possible. In order to overcome this problem OFCCP selected for study those establishments which filed reports both in 1974 and 1980. Using the EEO-1 master files for 1974 and 1980 supplied by the Equal Employment Opportunity Commission (EEOC), all of those employer

1/ Written affirmative action programs were required by Revised Order No. 4, issued by OFCCP's predecessor, the Office of Federal Contract Compliance (OFCC), on December 4, 1971. Although Executive Order 11246 was amended in 1967 to cover sex discrimination, the establishment of goals and timetables for hiring and promotion of women was not required of Federal contractors until April, 1972. Since contractors' affirmative action programs ordinarily have been established for a period of one year, programs beginning after April, 1972 would have concluded after April, 1973. And, since employers file their EEO-1 reporting forms (see Glossary) during the first quarter of the calendar year, the first data likely to show the effect of Federal compliance action on behalf of women would be the EEO-1 filing of 1974.

establishments which filed EEO-1 reports in both years were identified. 1/ By excluding those reporting in one year but not in the other, establishments which came into being or went out of business during the period were eliminated, and a select group of 77,098 establishments with (in 1980) 20,406,128 employees was developed. (Tables A and B). This group was disaggregated into two major groups - 48,981 contractor establishments and 28,117 noncontractor establishments, thus permitting comparison of all such establishments reporting in the two years. Of 113,500 Federal contractor establishments filing reports in 1980, 43 percent were identified for use in this study, and the number of noncontractor establishments studied represented just under half the total of such firms that filed EEO-1 reports in 1980. By selecting these two groups for comparison, the performance of establishments subject to the provisions both of the Executive Order and of Title VII of the 1964 Civil Rights Act (i.e., Federal contractors) could be compared to those

On what basis was 1980 selected?

1/ Not included in this study are institutions of higher learning, which report their employment data in a different format (EEO-6 forms), and construction contractors whose permanent work forces number less than 50 employees, who also report employment under a different system.

subject only to Title VII (noncontractors). 1/ The percentages that minorities and women comprised of the major occupational categories in those two sets of establishments for the years 1974 and 1980 were then compared in a number of ways.

Summary of Findings

The results of the analyses show that establishments covered by the Executive Order have posted significantly greater gains in the employment and advancement of minorities and women than those not covered and have done so in all of the categories to which special attention was to have been directed. Further, in those establishments covered by the Executive Order where compliance reviews have taken place, greater progress has been made by minorities and women in the majority of special-attention categories, as well as the majority of all categories.

1/ Given that the main objective in selection of the sample was to obtain as large a body of establishments for comparison as possible, the similarity of proportion represented by the different industries in the contractor and noncontractor groups is remarkable (Chart 1). In eight of the ten industry groups represented, there is a difference of no more than 3.5 percent in the proportions which any industry's establishments comprise among the contractor and noncontractor groups. Nonetheless, some disproportion exists, i.e., durable manufacturing accounts for 18.5 percent of the contractors' establishments, versus 12.5 percent of the noncontractors', and service industries represent 19.5 percent of the noncontractor establishments, versus 9.4 percent of the contractors'. There was no notable dissimilarity in total employment growth between contractor and noncontractor establishments in the service industries. However, in durable manufacturing, contractor establishments experienced a decline of nearly 8 percent of total employment whereas noncontractor establishments' total employment increased by 31 percent. Noteworthy differences also occurred in some industries where the proportions were quite similar. Where such occurred, they are noted in the text.

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Contractors versus Noncontractors

Although the study shows that the participation of minorities and women has increased in virtually all of the nine major occupational categories of both reviewed and unreviewed contractors as well as noncontractors, Federal contractor establishments have experienced a far greater growth in the percentage of jobs held by minorities and women than noncontractor establishments during this 1974 - 1980 period.

Minority participation in the contractors' work forces grew by 20.1 percent while total employment in those same establishments increased only 3.0 percent; whereas total employment in noncontractors' work forces went up by 8.2 percent, but only a 12.3 percent gain for minorities was recorded. (See Charts 3 and 4.)

Women's participation in the contractors' work forces grew by 15.2 percent, as opposed to 2.2 percent in noncontractors' work forces. 1/
(See Charts 6 and 7.)

1/ The net increase of minorities in contractors' establishments was 496,506, or 23.7 percent, versus 216,524, or 21.5 percent, in the noncontractors'. Women employed in contractor establishments increased by 783,468, an 18.7 percent gain, versus 312,205, or 10.5 percent, in noncontractor establishments. It should be noted here that net increases, while intrinsically important and also useful in comparing utilization of opportunities, are not as good indicators of success as is the growth of participation rates, since the latter show the proportion of jobs held by those whose opportunities are to be enhanced. For example, if a contractor establishment were able to retain its minority employees while its overall employment fell, that success would be registered by growth of the minority participation rate (percentage of jobs held) even though no net increase of minorities occurred. (The same phenomenon can occur in conjunction with growth, but is more easily illustrated in the foregoing example.)

Reviewed versus Unreviewed Establishments

The comparison of reviewed and unreviewed contractor establishments shows an overall greater growth of minority participation rates ^{1/} in reviewed establishments than in unreviewed, 22 percent vs. 19.4 percent (see Chart 16), and greater growth of participation in all but one of the occupational categories in the reviewed establishments, including five of the six special-attention categories. These minority gains in reviewed establishments occurred despite a .01 percent total employment growth in those same establishments. Unreviewed contractor establishments experienced a 4.2 percent growth in total employment. (See Chart 17.) ^{2/}

Reviewed contractor establishments showed greater participation gains for women in all white-collar categories and service work. Women in unreviewed establishments made greater gains in the blue-collar categories of skilled, semi-skilled and unskilled. Because of the large numbers involved in the increases in the latter categories, overall participation rates for women increased 15.4 percent in unreviewed establishments, compared to 14.2 percent

^{1/} The term "participation rate" (see Glossary) is used in this study as it is commonly applied and understood in the compliance program and the working field of equal employment opportunity.

^{2/} (For the statistical significance of these and all other differences cited, see Tables E and F.)

in reviewed. In all, women in reviewed establishments made greater gains in six of the nine categories, including four of the six in the special-attention group. (See Chart 19.)

Redistribution

In addition to the rising levels of employment of minorities and women, the study shows significant changes in the more complex area of distribution of minorities and women within the work forces compared. The distribution of minorities and women in establishments covered by the Executive Order has shifted from service worker and lower-skilled blue-collar jobs to white-collar and higher-skilled blue-collar jobs in greater percentages than in establishments not covered by the Order, and a similar contrast is found between the reviewed and unreviewed contractor establishments. While there has been a redistribution of jobs in general of the sort described above, the greater shift has been among the Federal contractor establishments and the reviewed establishments within that group. Minorities and women have shared in that redistribution in proportions and patterns consonant with the objectives of the compliance program, as subsequent discussion will detail.

It should be noted that both the covered establishments and the reviewed establishments accomplished the greater levels of achievement noted above despite a smaller total employment growth than that experienced by the establishment groups with which they were compared. (See previous pages and Tables B and D.)

Taking into account the socio-economic developments during the studied period which are cited in the following pages, and having controlled for the major variable of Title VII influence, we believe that the superior performance in employment and advancement of minorities and women found in the establishments of the Federal contractors are attributable to the good-faith efforts of Federal contractors to comply with their contractual obligations of affirmative action. In short, affirmative action efforts by Federal contractors and enforcement of the Executive Order by OFCCP have had greater impact on equal employment opportunities for women and minorities than has mere non-discrimination, which is the only obligation of non-Federal contractors.

Federal Contractors - Historical Perspective

In order to appreciate more fully the progress made by minorities and women in Federal contractor establishments during the period covered by this study, it is necessary to refer briefly to the

history of Federal compliance efforts preceding and subsequent to issuance of Executive Order 11246.

The relatively poor EEO profile of Federal contractors seen in 1974, i.e., the smaller proportions of minorities and women found in their work forces than in those of noncontractors, is a manifestation of the effects of discriminatory practices that antedate the establishment of the compliance program. These practices were prevalent before World War II, and became the focus of government concern in wartime because of their deleterious effect on the defense effort. Federal contractor establishments typically comprised the best-paying jobs, and competition for those jobs was most intense. It was also in those establishments that some of the most jealously guarded systems of preference for white males were prevalent. Where minorities were employed, they were found almost entirely in the so-called "3-H" jobs--hard, hot and heavy. Women were concentrated in clerical occupations in business and industry in general, and in low-paying semi-skilled jobs in women-intensive industries such as garment manufacturing and food processing. Federal contractors were also heavily unionized, at a time when union contracts often contained discriminatory features regarding women and minorities. Discriminatory practices by many unions, particularly in the skilled trades, were the rule,

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rather than the exception. As war drew near, under pressure from black leadership and war-related production demands, President Franklin D. Roosevelt issued Executive Order 8802, banning discrimination in the Federal Government and in war industries based on race, color, creed and national origin.

When the war began, minorities and women continued to be excluded from many contractors' general work forces even when production schedules were failing for lack of workers. Because most major U.S. corporations that were not yet Federal contractors became such during the war, Government efforts to eradicate racial discrimination in war industries had important short-term benefits for growth of non-white employment. But some contractors, notably those with sole source situations, resisted all government efforts to bring about compliance and persisted for the duration in exclusion of minority workers. A list of 37 plants described by the President's Fair Employment Practice Committee in its first wartime report as among those "in which resistance to the hiring of non-whites was most stubborn" 1/ included 20 whose parent companies were ranked in the first Fortune 500 list a decade later. 2/ As the war drew to a close, minority and

1/ Fair Employment Practice Committee, First Report, July 1943-December 1944, U.S. Government Printing Office, Washington: 1945, page 66.

2/ Future, Supplement, July 1955, Fortune Directory of the 500 Largest U.S. Industrial Corporations.

female employment in war industries plummeted. Returning veterans reclaimed their jobs and pre-war practices of race and sex discrimination blossomed anew. The Federal contractor monitoring agency of the day, the Fair Employment Practices Committee, reported in June, 1946, that "The wartime gains of Negro, Mexican-American and Jewish workers are being lost through an unchecked revival of discriminatory practices." 1/

In January, 1953, the FEPC's successor, the President's Committee on Government Contract Compliance, reported:

"The Committee... found the nondiscrimination provision (in Government contracts) almost forgotten, dead and buried under thousands of words of standard legal and technical language in Government procurement contracts.

"A few contractors have assumed their full obligation under the clause and have opened their employment rolls to all persons qualified for jobs. The majority of contractors, however, have viewed the provision as just another contractual clause of relatively minor importance and have made little, if any, attempt to adhere to its standards."

Government itself was not exempt from blame in the situation. The Committee continued, "Government contracting officers in

1/ Fair Employment Practice Committee, Final Report, June 26, 1946, U.S. Government Printing Office, Washington: 1947, page VIII.

most agencies have lacked proper machinery to enforce this clause. In many cases even the will has been absent to require contractors to meet their obligations under it." 1/ The pattern continued for the next decade, despite new Federal initiatives such as the President's Committee on Equal Employment Opportunity, which reported in November, 1963, that in establishments filing compliance reports Negroes held only 6.3 percent of reported jobs and only 1.3 percent of reported white-collar jobs. 2/ In this same year, non-whites accounted for 10.5 percent of total U.S. employment and 4.3 percent of all white-collar jobs nationally. 3/

The phenomenon of the largest Government contractors having relatively poor EEO profiles in their communities was notable enough for the United States Civil Rights Commission to attempt to elicit testimony from a number of such firms and their employee unions in hearings conducted in various parts of the country in 1962 and 1963. While the Commission was successful in eliciting testimony, some firms refused to provide employment statistics. 4/

1/ The President's Committee on Government Contract Compliance, Equal Economic Opportunity, Washington, D.C., January 16, 1953, page 3.

2/ The President's Committee on Equal Employment Opportunity, Report to the President, November 26, 1963, page 19.

3/ Source: U.S. Department of Labor, Employment and Earnings Vol. 10, No. 8, February, 1964.

4/ Report of the United States Commission on Civil Rights, 1963.

In 1961, Vice President Lyndon Johnson called a meeting of the presidents of the 50 largest Government contractors and signed up most of them in a program to promote equal opportunity called "Plans for Progress." It was a program of voluntary effort for EEO. Although attempts were made to expand the membership in the program to noncontractors as well, the membership remained predominantly Government contractors. In 1968, after studying the employment of minorities by 100 major corporations headquartered in New York, the Equal Employment Opportunity Commission (EEOC) reported that in "a comparison of firms which had joined 'Plans for Progress' and similar non-member firms... the 'Plans for Progress' firms showed consistently poorer records in white collar minority employment, particularly at the higher levels where they were supposedly focusing special attention on the problem." 1/

This, then, is the background against which the relative employment levels of minorities and women in contractor and non-contractor establishments both at the beginning of the study period in 1974 and at its end in 1980 must be viewed.

1/ See Help Wanted... Or Is It? U.S. Equal Employment Opportunity Commission U.S. Government Printing Office, 1968, page 14.

Employment Patterns of Minorities and Women

Before commenting on the changes which have occurred during the studied period, it is well to note that employment practices of both contractors and noncontractors have impacted differently upon minorities than upon women. A glance at the employment patterns seen on Charts 2 and 5 will illustrate the difference. It can be seen immediately that the patterns of utilization of minorities are quite similar in both contractor and noncontractor establishments, whereas the patterns of utilization of women are very different between the two. That difference is accounted for by the larger presence of women-intensive industry establishments, such as health services, in the noncontractor group. Because of this difference in employment patterns, changes that might indicate progress for minorities might not indicate the same for women, and vice-versa. As noted above, OFCCP's regulations have taken this difference into account in establishing objectives for effecting change, and this study treats the observable results accordingly.

PERFORMANCE OF CONTRACTORS AND NONCONTRACTORS COMPARED

Minorities

The pattern of minority employment following World War II, whether in contractor or noncontractor work forces, was one of concentration in lower-skilled blue collar and service occupations.

In the work forces of Federal contractors reporting in 1962, for instance, 94.9 percent of black men and 80.8 percent of black women were employed in blue-collar jobs. Within those blue-collar categories, 90.7 percent of the black men and 95.2 percent of the black women worked in semi-skilled, unskilled and service occupations. 1/ An objective of the compliance program has been to increase the proportion of minorities in skilled and white-collar jobs.

Although contractor establishments, in 1974, were employing proportionately fewer minorities than noncontractors' in all but three of the nine EEO-1 categories, i.e., clerical, semi-skilled and service workers, by 1980 they had overtaken and passed noncontractor establishments in the professional and sales categories (Chart 2.) The relative growth of minorities' participation rates in each of the EEO-1 job categories is shown on Chart 3. In addition to leading noncontractor establishments in the employment of minorities in five of the nine EEO-1 categories, contractor establishments in 1980 were almost even with noncontractors in employment of minorities as officials and managers; they also had narrowed the gap very significantly in the technicians category and were within one percentage point in overall employment. Contractor establishments have effected these greater

1/ For a tabular comparison of occupational groupings by race and sex in 1962, see Report to the President, President's Committee on Equal Employment Opportunity, Washington, D.C., November 26, 1963, pages 17 ff.

gains in minority employment even though they experienced less total employment growth. Net changes in total employment (in each EEO-1 category (yellow bar)) compared with net changes in minority employment are graphically illustrated in Chart 4. In the professional category, for example, contractor establishments, with an overall employment increase of 23.9 percent, effected a minority net increase of 94.7 percent; whereas noncontractor establishments, though having a 47.5 percent overall increase, effected only a 65 percent net increase of minorities.

Distribution of Minority Workers

During the period of the study an important shift in minority distribution took place in the contractor establishments (Chart 8). Along with the rising participation rates of minorities in contractors' work forces overall, the proportion of minority workers found in skilled and white-collar jobs rose from 37.9 percent in 1974 to 47.4 percent in 1980 - a shift of 9.5 percentage points and a growth of 25 percent. 1/ The growth in noncontractors' establishments was considerably smaller (from 35.9 percent to 39.1 percent) - a shift of 3.2 percentage points, and a growth of 8.9 percent. In charting redistribution of the employment of a race or sex group over time, one is tracking movement of the group, not of individuals. The ratio of hires to promotions involved in the change cannot be ascertained from the presently

1/ Charts 8-10 and 21-23 indicate the degrees of movement in shifts of percentage points.

available data. However, it can be stated from compliance program experience that virtually all minority entry into the skilled trades has followed the path of formal apprenticeship or even longer alternate training routes in certain companies. Also, a substantial proportion of the minority increase seen in officials and managers results from selection of minority individuals from the ranks of skilled and semi-skilled workers, a traditional source of new supervisors in most of industry, but a route of career progression in which minorities until recently did not share.

The results of contractors' employment practices appear even more favorable when one compares the proportion of minority workers still found in the unskilled and service worker jobs in 1980.

In noncontractors' establishments, 39 percent of minority workers were still found in the two categories, versus 22 percent in those categories in contractor establishments.

While minorities in contractor establishments were moving into officials and managers and sales categories in substantial proportions, they declined by 19.0 percent in the sales category in noncontractor establishments (See Chart 4.)

Comparison With National Labor Force

In 1974, minorities accounted for 16 percent of the U.S. labor force. At that time minorities were underrepresented in all the white-collar job categories in both contractor and noncontractor establishments (Chart 11). They were overrepresented in unskilled

and service worker employment. By 1980, minorities accounted for 17.8 percent of the labor force. Of particular interest is the attainment by minorities of a participation level in the office and clerical category in contractor establishments that is comparable to their proportion in the labor force. For the first time, minorities in 1980 were participating in a white collar activity proportionately to their representation in the labor force. However, there were no white collar job categories where they had attained proportionate representation in the noncontractor establishments.

Women

The difference in performance between Federal contractors and noncontractors in employment of women during the period studied is even greater than that for minorities. Although Federal contractors trailed noncontractors in women's employment in all of the major job categories in 1980 as well as in 1974 (Chart 5), the growth of women's participation rates in contractor establishments exceeded that in noncontractor establishments in all EEO-1 categories (Chart 6.) This resulted in contractor establishments improving their position vis a vis noncontractor establishments in every category, so that by 1980 the gap between contractor and noncontractor employment of women narrowed by 3.6 percentage points (Chart 5). The patterns seen in Chart 5 reflect, in part, the high concentration of women in professional and technical occupations in industries such as

Distribution of Women Workers

Women have been concentrated in office and clerical positions in both contractor and noncontractor establishments (see Chart 9.) During the period under study, women in contractor establishments shifted into the other white-collar categories and skilled occupations at a notably higher rate than did women in non-contractor establishments. Also, women's employment in contractor establishments shifted from lower-skilled blue-collar jobs by 3.9 percentage points*, resulting in a 5.8 percent growth in the proportion of the female work force found in skilled and white-collar jobs. In non-contractor establishments, the shift was 2.4 percentage points and the growth in skilled and white collar was 3.7 percent.

Women were not concentrated in the lower-skilled blue-collar and service jobs to the extent that minorities were, however, and thus it was a compliance program objective to increase female participation in semi-skilled jobs as well as in skilled jobs, as has been noted earlier. This in fact did occur, with women's participation in contractors' semi-skilled jobs increasing more than four percentage points, while in noncontractors' establishments they fell almost four (Charts 5 and 12).

*The corresponding figure on Chart 9 should read 3.9, rather than 3.8.

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Comparison With National Labor Force

In 1974, women comprised 39.4 percent of the national labor force, and in 1980 they accounted for 42.6 percent. The proportion of women employed in noncontractor establishments was over those percentages in both 1974 and 1980, whereas women in contractor establishments were employed below those percentages in both years (Chart 12). In 1980, in noncontractor establishments, women were concentrated in clerical, technical, professional, service work and sales jobs - in all of which they exceeded their proportion of the labor force by more than 10 percent. In contractor establishments women exceeded that proportion by more than 10 percent only in clerical jobs. 1/

REVIEWED AND UNREVIEWED CONTRACTOR ESTABLISHMENTS COMPARED

All employers who are awarded Federal contracts of \$10,000 or more are obligated to take affirmative action to prevent discrimination. Establishments of these contractors are subject to review by the Federal Government to determine whether their policies and practices are in compliance with

1/ As noted earlier, the specific occupations in which women are concentrated within the broad categories of the noncontractors' work forces often compare unfavorably in earnings with occupations in the same broad skilled category which predominate in the contractors' work forces -- e.g., nurses vs engineers, health technicians vs computer technicians, sales clerks vs product line salespersons, etc. Thus, while women's presence below their national work force percentage in certain categories of the contractors' work forces indicates a need for improvement, their presence above that level in various categories of the non-contractors' work forces is not necessarily a favorable situation.

their contractual obligations to ensure equal opportunity. Currently, firms having contracts of \$50,000 and 50 or more employees must develop and maintain written programs of affirmative action. Because of the very large number of all contractors' establishments (there are currently about 114,000) compared to compliance program resources, only a fraction of the covered establishments are actually reviewed. Many Federal contractors are multi-establishment firms, while others are single-establishment only. Whatever the number of their establishments however, Federal contractors are aware that any of their establishments may be reviewed at any time.

During the period studied, it was the general policy of compliance agencies to schedule for review those establishments which appeared to offer the greatest opportunities for employment and advancement of minorities and women. Such criteria as size, location with regard to centers of minority population, turnover rate and "EEO profile" (proportions of minorities and women reported in the establishment's work force) were considered in selecting establishments to be reviewed. The regulatory requirement of a preaward review whenever a contract of \$1 million or more was to be awarded combined with other factors to ensure a wide-ranging mix of size and location of establishments.

As used in this study, the term "reviewed establishment" means a Federal contractor establishment which has experienced one or more compliance reviews by OFCCP or its predecessor agencies at any time.

Contractors whose establishments are to be reviewed are provided a 30-day notice of the impending review, except in the case of pre-award reviews or complaint investigations, in which cases the notification interval may be shorter. Since the data for this study are taken from EEO-1 reports filed annually by the contractors, and over a period of years, rather than from figures obtained during compliance reviews, it is unlikely that the data reported here reflect in any way the contractors' foreknowledge of any specific reviews.

The objective of this part of the study was to determine whether different patterns of minority and female employment were discernable in establishments which had experienced compliance reviews and in those which had not.

Minorities

Patterns of utilization of minorities were very similar between reviewed and unreviewed contractor establishments in 1974, with reviewed establishments lagging behind unreviewed in most categories except skilled workers, where utilization was essentially identical, and semi-skilled and unskilled, where reviewed establishments were ahead (Chart 14). The growth of

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minority participation rates in reviewed contractor establishments exceeded that in unreviewed establishments in eight of the nine EEO-1 job categories between 1974 and 1980 (Chart 15). By 1980, reviewed establishments were leading unreviewed by a full percentage point in skilled, and the lead in semi-skilled and unskilled had increased further. In total employment of minorities, reviewed establishments had pulled even with unreviewed, and the margin had been narrowed in all other categories except sales workers, where about 75 percent of the increase in unreviewed establishments was in retail sales establishments. 1/

Reviewed led unreviewed establishments in growth of minority participation in all white-collar categories except sales, as well as in all blue-collar categories. Growth of minority participation rates in reviewed establishments varied from 3.0 percentage points higher for unskilled workers to 16.1 percentage points higher for technicians than the same categories in unreviewed establishments (see Chart 16.)

Both reviewed and unreviewed establishments suffered declines of total employment in their blue-collar work forces during the studied period (Chart 17), but reviewed establishments suffered heavier declines, as well as net losses in skilled and service workers, whereas unreviewed establishment gained in total employment in those two categories. Despite these

1/ Retail sales positions, it should be noted, are relatively low-paying, whereas sales positions in industry are among the highest-paying jobs.

hospitals and other health services which are not typically Federal contractors. The high proportion of women seen as skilled and semi-skilled in noncontractor establishments may reflect their employment in women-intensive industries which do not sell directly to the Federal government and thus have not been classified as Federal contractors. Overall, contractor establishments increased their female participation rates by 15.2 percent compared to only 2.2 percent for noncontractors. 1/

Chart 7 illustrates the fact that contractor establishments not only accomplished much larger net increases of women than did noncontractors in all categories except unskilled, but did so despite relatively smaller growth of total employment, and, in semi-skilled, despite a total employment decrease of more than 10 percent.

A partial explanation for the greater increase of women service workers in contractors' establishments may be the increasing employment of women in protective services, the largest of which are Federal contractors, and in the guard forces of Federal contractors. This must be inferred from compliance program experience, since the data cannot be further refined.

1/ The notable decline in women's participation rates in the noncontractors' semi-skilled occupations seen on Chart 6 is the result of a 17 percent decline in semi-skilled employment in nondurable manufacturing. Women accounted for 69 percent (48,735) of that decline. The net decrease of women in the noncontractors' sales category (chart 7) is attributable almost wholly to a drop of 127,000 employees in the retail sales industry, of which women were nearly half.