ARTICLES

PAY EQUITY AND WOMEN'S WAGE INCREASES: SUCCESS IN THE STATES, A MODEL FOR THE NATION

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By 1989, twenty states had implemented programs to raise the wages of workers in female-dominated job classes in their state civil services. A study of these pay equity programs, conducted by the Institute for Women's Policy Research and the Urban Institute, found that all twenty states were successful in closing the female/male wage gap without substantial negative side effects such as increased unemployment. The extent to which the states succeeded depended on many factors including how much money was spent, the proportion of women affected, and the standard to which female wages were raised. As women's responsibilities for their families' well-being increase, it is important to explore policies to raise women's wages to levels that are free from discrimination or cultural devaluation.

An American woman working full-time year-round in 1992 earned only 71 percent as much as her male counterpart.[1] This represents a substantial increase since 1982 when the wage ratio of female to male earnings was 62 percent. Approximately half of this increase is due to an increase in women's real wages,[2] while the other half is due to a decrease in men's real wages.[3] Despite this considerable advance, the wage gap remains; women still earn less than men even in the same occupations.[4] When different jobs

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1. U.S. BUREAU OF THE CENSUS, *Money Income of Households, Families, and Persons in the United States: 1992*, Current Population Reports, Series P-60, no.184 (1993): xv. It is important to note that there is also a wage gap based on race and ethnicity. Men and women of color earn less than white men, and women of color generally earn less than white women. *Id.* at 92-95. Due to limitations in data from the states in our study, we focus primarily on the gender-based wage gap.

2. "Real wages" are wages adjusted for inflation.

3. INSTITUTE FOR WOMEN'S POLICY RESEARCH, THE WAGE GAP: WOMEN'S AND MEN'S EARNINGS 2 (1992).

4. For example, a woman teaching full-time year-round in an elementary or secondary

of comparable worth—those requiring similar levels of skill, effort, responsibility, or knowledge—are compared it is even more common to find pay inequities.[5]

The persistence of the wage gap compels attention for two reasons. First, there is the simple issue of justice; women deserve to be paid fairly for what they do. Second, and perhaps more important for many women, is the need for commensurately higher earnings as their role in supporting their families grows. The proportion of two earner families has increased from 36 percent of all families with children in 1975 to 47 percent of all such families in 1993.[6] The proportion of single female earner families with children has also been rising; they now comprise eighteen percent of all families with children.[7] In 1991, 13.7 million families with children were living below the poverty level; 8.1 million of those families were female-headed.[8] The financial contributions these employed women make to their families are important.[9]

The gender-based wage gap is not only discriminatory, it also deprives women and families of needed income. Pay equity has the ability to improve the economic condition of women by raising their wages to levels comparable with men's wages for work requiring similar levels of skill and knowledge. Through receipt of deserved wages, women and their families could improve their lives and lessen their reliance on public assistance programs. A recent study has determined that if pay equity adjustments were implemented economy-wide, the poverty rate among working women would be reduced by forty to fifty percent.[10] The results of our study

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school earns $6,000 less than a male teacher. U.S. BUREAU OF THE CENSUS, *supra* note 1, at 152. The Census Report does not control for human capital variables such as seniority, education level, or position. Studies that attempt to control for such factors disagree as to what portion of the wage gap is due to discrimination. *See, e.g.*, Morley Gunderson, *Male-Female Wage Differentials and Policy Responses*, 27 J. ECON. LIT. 46, 48-53 (1989) (studies using greater numbers of variables find smaller unexplained wage gaps, but certain control variables reflect discrimination themselves and should not be factored out).

5. When the state of Minnesota reviewed its civil service for pay equity, they found that female-dominated job classes were consistently paid less than comparable male-dominated job classes. For instance, radio communication supervisors (who were more likely to be male) and typing pool supervisors (who were more likely to be female) were determined to require comparable skills and responsibilities, yet the communications supervisors were paid $460 a month more than the typing pool supervisors, the equivalent of an additional $5,500 a year. COMMISSION OF THE ECONOMIC STATUS OF WOMEN, PAY EQUITY: THE MINNESOTA EXPERIENCE 11 (Dec. 1989).

6. Heidi I. Hartmann & Roberta M. Spalter-Roth, A Feminist Approach to Policy Making For Women and Families, paper presented at the Seminar on Future Directions for American Politics and Public Policy, Harvard University, Mar. 10, 1994.

7. *Id.*

8. U.S. BUREAU OF THE CENSUS, STATISTICAL ABSTRACT OF THE UNITED STATES: 1993 (113th ed.) 471, Table No. 740.

9. Because men's real wages fell throughout the 1980s, any real income gains made by low and middle income families came from women's earnings. United States Congress, Joint Economic Committee, Families on a Treadmill: Work and Income in the 1980s. A staff study. Washington D.C. Jan. 17, 1992. *See also* LAWRENCE MISHEL & DAVID M. FRANKEL, THE STATE OF WORKING AMERICA 40-41 (1990-91).

10. Deborah Figart & June Lapidus, Comparable Worth as an Anti-Poverty Strategy:

demonstrate that pay equity is a realistic policy option to correct the gender-based wage gap.

I. INTRODUCTION TO PAY EQUITY[11]

The concept of pay equity, also known as comparable worth or equal pay for jobs of equal value, refers to a set of remedies designed to raise the wages of jobs that are undervalued at least partly because of the sex or race of the workers who hold those jobs. Pay equity remedies can be used only when there is substantial segregation of a workforce by sex or race so that specific jobs can be identified that are predominantly or disproportionately held by one or another group.

As practiced in the United States and Canada, pay equity remedies are applied within a given firm, rather than in the labor market as a whole.[12] The jobs in a single firm are evaluated and compared to one another according to a set of uniform criteria, and a determination is made as to whether those jobs typically held by women or minorities are underpaid (i.e., paid less than jobs typically held by white males that are comparable in the skill, effort, responsibility, or working conditions they entail). An adjustment plan, generally intended to be implemented over several years, is developed to raise the wages of the jobs found to be underpaid.

II. A BRIEF REVIEW OF THE DEVELOPMENT OF PAY EQUITY REMEDIES

Pay equity remedies are relatively new. The first systematic pay adjustments made to the wages of state civil service workers, the pay adjustments analyzed by our study, explicitly for the purpose of redressing occupational and sex-based wage differentials occurred in 1983 in Minnesota.[13] Recognition of discrimination in employment and the existence of a gender-based wage gap, however, occurred significantly earlier. The Equal Pay Act of 1963,[14] requires employers to provide equal pay for women and men doing substantially similar work; Title VII of the Civil Rights Act of 1964,[15] mandates non-discrimination on the basis of sex, race, national origin, or religion in hiring and all conditions of employment, including compensation and advancement. Title VII has been the basis for a

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Evidence from the March 1992 Current Population Study, paper presented at the meetings of the Allied Social Science Association, Boston, MA, 1994:19.

11. In this Article we use the terms pay equity and comparable worth interchangeably. Both denote any reforms aimed at increasing the wages of employees in female-dominated occupations to the level of wages in comparable male-dominated or mixed occupations.

12. Examples of a "given firm" vary from one private employer's enterprise to the entire civil service of a state government.

13. In addition to being the first state to implement state-level pay equity reform, Minnesota was also the first state to require implementation of comparable worth policies at a local level. LINDA M. BLUM, BETWEEN FEMINISM AND LABOR: THE SIGNIFICANCE OF THE COMPARABLE WORTH MOVEMENT 53 (1991).

14. Equal Pay Act of 1963, 29 U.S.C. § 206(d) (1978).

15. Civil Rights Act of 1964, tit. VII, 42 U.S.C. § 2000e (1981 & Supp. 1992).

number of lawsuits alleging sex-based wage discrimination for dissimilar but comparable jobs.[16]

Issues of pay equity across dissimilar jobs were first raised during World War II when the federal government was substantially involved in setting wages in private industry. Post-war proposals for a Federal Equal Pay Act mandated equal pay for both equal work and work of equal value, but the legislation was not passed until the comparable worth standard was dropped.[17] Throughout the postwar period in the United States, the concept of pay equity has been legally tested by civil and women's rights lawyers and by labor unions, based on national laws such as the Equal Pay Act, Title VII of the Civil Rights Act of 1964, and similar state laws.[18] Although the concept did gain currency abroad,[19] these early efforts did not generally succeed in establishing pay equity remedies in the United States. Washington State's Council 28 of the American Federation of State, County, and Municipal Employees was the first to raise the "modern demand for equal pay for comparable work" in a letter to the governor in 1973.[20] By 1981, comparable worth had reached the Supreme Court of the United States in *County of Washington v. Gunther*,[21] and municipal workers in San Jose, California, focused national attention on the issue when they went on strike for nine days over unanswered demands for comparable pay.[22]

Once the issue gained national visibility, both the concept and the use of pay equity remedies spread rapidly in the United States. By 1989, when this study began, twenty states had implemented pay adjustments that affected female-dominated jobs in their civil services.[23] The National Committee on Pay Equity considers the efforts of six states—Iowa, Minnesota, New York, Oregon, Washington, and Wisconsin—to be comprehensive because the comparable worth of a broad range of occupations was assessed and pay increases were implemented accordingly.[24] The Committee identified an additional fourteen states[25] that

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16. PAULA ENGLAND, COMPARABLE WORTH: THEORIES AND EVIDENCE 225 (1992).

17. BLUM, *supra* note 13, at 39.

18. For a description of pay equity litigation at the state and local level, *see* ALICE H. COOK, COMPARABLE WORTH: A CASEBOOK OF EXPERIENCES IN STATES AND LOCALITIES (1985). For a discussion of pay equity litigation in the federal courts, *see* ENGLAND, *supra* note 16.

19. Equal pay for work of equal value language was incorporated in the official founding documents of the International Labor Organization (ILO) in 1919, 49 STAT. 2712, 2735 (1935-36), and the European Economic Community in 1957, 298 U.N.T.S. 11, 62 (1958). The ILO's Equal Renumeration Convention 100, Treaty 266, 165 U.N.T.S. 303 (1951), promulgates an equal pay for equal value standard and suggests that countries adopt scientific job measurement techniques. It is one of the most widely ratified ILO conventions. Similar language is incorporated in Great Britain's Equal Pay Act, 1970, ch. 41 (Eng.). The United States Civil Service Reform Act of 1978, 5 U.S.C. §2301(b)(3) (1994) states: "Equal pay should be provided for work of equal value. . . ."

20. MARK ALDRICH & ROBERT BUCHELE, THE ECONOMICS OF COMPARABLE WORTH 33 (1986).

21. 452 U.S. 161 (1981) (allowing female prison matrons who were paid seventy percent of the male prison guards' salary to claim sex-based discrimination under Title VII).

22. BLUM, *supra* note 13, at 50, 85.

23. NAT'L COMM. ON PAY EQUITY, THE NAT'L COMM. ON PAY EQUITY SURVEY OF STATE-GOVERNMENT LEVEL PAY EQUITY ACTIVITY 1988, 1 (1989).

24. *Id.*

implemented pay adjustments in selected occupations as a result of some type of study or negotiation process.

A number of women's advocacy organizations and labor unions are currently expending considerable effort on pay equity strategies, and state governments and others[26] are spending considerable resources to conduct job evaluation studies, determine the comparable worth of jobs, and adjust pay accordingly.[27] For example, this study finds that, in 1990 dollars, state governments have spent over $527,000,000 on pay adjustments since the start of implementation in 1983, raising pay for over 335,000 workers.

III. EVALUATING PAY EQUITY

In the midst of so much activity and expenditure, it seems important to ask whether pay equity remedies are having the intended effect. Has the pay gap between women and men (which pay equity advocates argue is caused at least in part by the undervaluation of women's jobs) been reduced, and, if so, by how much? Which workers benefited most? Has anyone lost? Are pay equity policies having unintended or unexpected effects? Are jobs lost in the public sector because of the higher cost of female labor? Beyond effects on civil service employees, do wages in the private sector fall due to an oversupply of female workers (resulting from the loss of public sector jobs)? Alternatively, is there a positive "spill-over" effect that raises wages in the private sector because women will no longer accept the lower wages there? Answers to these questions are needed to assess pay equity policy directions thus far and to provide important guidance to those pursuing and implementing pay equity strategies. Pay equity is a controversial public policy for several reasons. First, many economists, as well as other analysts and representatives of the business community, have criticized the assumptions underlying the concept of pay equity and argued against the use of pay equity remedies.[28] Mainstream economic theory provides few tools with which to assess sex-based wage differentials among occupations. Many economists believe that lower wages in female-dominated jobs are not cause for concern because they are based on actual differences between female and male workers; they argue that women may be simply less

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25. These are: California, Connecticut, Florida, Hawaii, Illinois, Maine, Massachusetts, Michigan, New Jersey, New Mexico, Pennsylvania, Rhode Island, South Dakota, and Vermont.

26. While private sector efforts undoubtedly exist, less is known about them. Because of the greater openness and access to wage information and the opportunity to air issues in the political arena, most organized groups have targeted pay equity efforts at the public sector, and particularly during the 1980s at the state and local levels.

27. Although current pay equity activities are too numerous to describe in detail here, recent state-level activities include the following: Unions and women's organizations in Alaska and Michigan have pressed the state legislatures to consider bills to amend state laws to include comparable worth standards; Delaware and the District of Columbia have recently completed comparable worth studies; North Carolina is looking at its personnel practices for evidence of discrimination. NAT'L COMM. ON PAY EQUITY, PAY EQUITY IN THE PUBLIC SECTOR: 1992 UPDATE (1992).

28. For an overview of various theories regarding the wage gap and critical of comparable worth remedies, *see, e.g.*, COMPARABLE WORTH: ISSUES AND ALTERNATIVES (E. Robert Livernash ed., 1980).

productive than men or may prefer traditionally female-dominated jobs, thereby crowding them and driving down wages. Economists generally believe that market forces work well to eradicate those wage differences between people or occupations that are not related to productivity. Even for some economists who recognize that discrimination occurs in labor markets, pay equity seems to be an inappropriate remedy.[29] For example, even if women are constrained to crowd into women's occupations (because of lack of opportunities elsewhere), the best remedy, some would argue, would be removing the constraints and improving women's opportunities. Raising wages, these economists argue, is counterproductive since it would attract even more workers to the already overcrowded occupation, yet leave more workers unemployed since the higher wages would be expected to reduce the number of jobs available.[30]

Second, whether based in economic theory or not, many observers object to interfering in the operation of the labor market on the scale that pay equity remedies seem to require. For example, in *Lemons v. City and County of Denver*, city nurses sought to have the worth of their jobs reassessed in relation to similar city positions that were not traditionally female-dominated and under-compensated. The court declined to grant relief, stating "[This case] is pregnant with the possibility of disrupting the entire economic system of the United States of America."[31]

Third, perhaps because pay equity remedies have been implemented in the United States primarily in the public sector, where the size and targeting of the pay adjustments is often debated in the public arena, the pay equity remedy process is often seen as inherently political rather than scientific, economic, or legal. Pay equity remedies were not supported by the federal government or accepted by the courts during the Reagan and Bush administrations. As Clarence Pendleton, President Reagan's Chair of the United States Commission on Civil Rights, said of comparable worth at a news conference in 1984, "This is probably the looniest idea since Looney Tunes came on the screen."[32]

Finally, adding to the controversy surrounding pay equity, other criticism moves in the opposite direction and views the resulting remedies as too limited in effect.[33] Although one researcher estimated that a national

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29. *See, e.g.*, MARK R. KILLINGSWORTH, THE ECONOMICS OF COMPARABLE WORTH 274 (1985). Although Killingsworth admits that gender-based discrimination is a major reason for differences in pay, he concludes that comparable worth may be an ill-conceived solution to a serious problem.

30. *Id.* at 276. Killingsworth concludes that comparable worth is a two-edged sword, capable of imposing costs as well as benefits on its intended beneficiaries.

31. 17 Fair Empl. Prac. Cas. (BNA) 906 (D.Colo. 1978), *aff'd*, 620 F.2d 228 (10 Cir.) *cert. denied*, 449 U.S. 888 (1980).

32. 1984 Lab. L. Rep. (CCH) 223: A2, *quoted in* FRANCES C. HUTNER, EQUAL PAY FOR COMPARABLE WORTH 2 (1986).

33. *See, e.g.*, BLUM, *supra* note 13, at 160-82. According to Blum, the comparable worth movement faces several problems which hamper its effectiveness in practice, including its tendency to universalize gender- and class-based interests in comparable worth, reinforce occupational hierarchies, and seek technocratic change instead of empowering people through grass roots participation.

comparable worth policy would eliminate about 28 percent of the wage gap,[34] implementation of pay equity policies at the state level eliminated less than twenty percent of the gap.[35] Therefore, even pay equity, often thought to be the most radical of equal employment opportunity remedies, leaves the major portion of the female/male pay gap untouched. Pay equity's relatively limited impact in the United States, as contrasted with other countries such as Australia and Great Britain, may be due to the firm-by-firm approach taken in the much more decentralized wage-setting system in the United States.[36]

These controversial aspects of pay equity policies show the need for a systematic look at what pay equity does, or does not, accomplish when actually implemented. Unfortunately, there are only a few studies on the impact of pay equity, and most of those analyze the *hypothetical* impact. Rather than focusing on actual cases of implementation, several studies provide economy-wide estimates of what would happen to wages and employment *if* comparable worth were implemented broadly.[37] Other studies consider the hypothetical impact if pay equity were implemented in a particular way in a particular jurisdiction.[38] Of the few studies that do consider changes that actually occurred in a particular jurisdiction, most are limited to only a portion of the implementation period. Moreover, they use different types of data and different methodologies for evaluating the effects of pay equity implementation.[39]

Accurate measures, made with a consistent methodology, of the impact of pay equity policies that have been implemented would clarify the role of wage adjustment strategies. Consistent information about the actual impacts of comparable worth policies, rather than the theoretical possibilities, would likely help to reduce the controversy surrounding pay equity remedies. If few or small negative effects were found, but benefits were substantial and targeted, then comparable worth would become increasingly understood as a reasonable policy remedy for a particular labor market problem—low pay in female-dominated jobs. If, in contrast, negative effects are found to be large and costly, or benefits small or misdirected, advocates may lose interest in comparable worth remedies as currently practiced and turn toward other strategies to achieve employment and wage equity. Alternatively, proponents may seek to improve upon current pay equity remedies.

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34. Elaine Sorensen, *Effect of Comparable Worth Policies on Earnings*, 26 INDUS. REL. 227, 238 (1987).

35. *See* ROBERT T. MICHAEL & HEIDI I. HARTMANN, PAY EQUITY: EMPIRICAL INQUIRIES 18 (Robert T. Michael, et al. eds., 1989).

36. *Id.* at 16.

37. *See, e.g.*, George Johnson & Gary Solon, *Estimates of the Direct Effects of Comparable Worth Policy*, 76 AM. ECON. REV. 1117 (1986); ALDRICH & BUCHELE, *supra* note 20, at 133-53.

38. Ronald G. Ehrenberg & Robert S. Smith, *Comparable Worth in the Public Sector*, *in* PUBLIC SECTOR PAYROLLS 243 (David A. Wise ed., 1987); Peter F. Orazem & J. Peter Mattila, *The Implementation Process of Comparable Worth: Winners and Losers*, 98 J. POLITICAL ECONOMY 134 (1990); Sorensen, *supra* note 34.

39. June O'Neill, Michael Brien, & James Cunningham, *Effects of Comparable Worth Policy: Evidence From Washington State*, 79 AM. ECON. REV. PAPERS & PROCEEDINGS 305 (1989); KILLINGSWORTH, *supra* note 29.

IV. FINDINGS FROM OUR STUDY OF PAY EQUITY PROGRAMS IN STATE GOVERNMENTS

In an attempt to answer some of the questions concerning the ability of pay equity reforms to raise women's wages and the possible side effects of such adjustments, the Institute for Women's Policy Research and the Urban Institute conducted a four-year study of pay equity programs in twenty states. The goal was to determine whether specific types of pay equity programs provide effective measures for reducing gender-based wage inequities and whether these programs cause any positive or negative unintended effects. The study reviews the types of programs implemented and, using both descriptive statistics and regression analysis, analyzes the effects of the programs on the wages and employment of female workers. The study relies on data collected from official state agencies, supplemented when necessary with information from labor unions and women's organizations.

The investigation of the economic effects of implementing pay equity in state civil services yielded the following results:

FIRST, pay equity implementation has been quite extensive. Twenty states implemented pay adjustments that had the effect of raising salaries in female-dominated jobs,[40] though not all of the states considered their wage adjustments to be motivated by pay equity concerns.[41] For the sixteen states from which we were able to collect data, the total spent on pay equity adjustments was more than $527,000,000 (1990 dollars) through 1992. Approximately 335,000 workers received pay increases.

SECOND, the states employed two basic strategies to achieve pay equity; either they targeted adjustments at the most undervalued female-dominated job classes, or they made large scale changes in their personnel systems. These large scale or systemic changes can be further broken down into those that affected the classification system, those that updated or implemented a job evaluation system, and those that revised the state's compensation system. Many states utilized a combination of these three systemic changes, and some used both targeting and systemic reform. Of the sixteen states for which we have sufficient information, seven states targeted adjustments, five implemented system-wide changes, and four combined both approaches.[42]

Even within these broad categories of action, there was considerable variation. Among the most important program design details were: first, whether states revised their job classification systems to better account for

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40. Most states considered an occupation to be female-dominated if at least seventy percent of the occupants were women. In Massachusetts, occupations in which sixty percent of the employees were women received adjustments.

41. The twenty states identified by the National Committee on Pay Equity, as mentioned *infra*, are: California, Connecticut, Florida, Hawaii, Illinois, Iowa, Maine, Massachusetts, Michigan, Minnesota, New Jersey, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, South Dakota, Vermont, Washington, and Wisconsin. Of these, Hawaii, Pennsylvania, Florida, and South Dakota do not consider their adjustments to have been motivated by pay equity. In Maine, New Mexico, Oregon, and Vermont pay equity was only one motivation for reform.

42. *See* Table One, *infra*.

the skills associated with female-dominated jobs; second, whether states gave adjustments to all undervalued job classes or only to undervalued female-dominated job classes; third, whether all undervalued female-dominated job classes or just the largest or lowest-paid were affected; and fourth, whether states raised the salaries of undervalued job classes to an average payline (which would be below the payline for male-dominated jobs), or to the male payline, or to some percentage of either. These program details are important because they determine how much pay discrimination was found, how many and which workers were affected, and the extent of the remedies.

When discussing program design, it is important to note that for some states (such as New Mexico, Oregon, and Vermont), pay equity was only one goal of larger civil service reform. Most of the states with multiple goals made system-wide changes, although some targeted occupations first to address pay equity and then used system-wide reform to respond to a variety of issues. In these states, where reforming pay equity was only one of the many desired outcomes, the programs may not have been designed to optimize pay equity, but rather to balance a variety of needs. As a result, pay equity outcomes may have been moderated. In some states, however, pay equity might not have been implemented at all had it not been part of larger administrative reform.

THIRD, the states began their pay equity implementation programs from different starting places. Beginning female/male wage ratios in the state civil services ranged from 66 to 88 percent; obviously, some states had further to go to close the pay gap than others. Several of the states that began with low-wage ratios—Iowa, Minnesota, Oregon, and Washington—undertook comprehensive remedies, presumably to close sizable portions of their wage gaps. The states also had different types of civil service systems in place at the outset of their pay equity activities. For example, Minnesota, New Jersey, and Hawaii had accessible results from existing job evaluation systems already in hand. This allowed them to target effectively, without re-evaluating the underlying personnel systems. Other states that wanted to achieve significant reform needed to begin by updating outdated classification, evaluation, or compensation systems. The states' starting places, in large measure, determined what types of pay equity programs they could pursue, while various actors—women's advocates, legislators, administrators, union leaders, and consultants—influenced the outcomes.

FOURTH, the scale of the pay equity activities varied considerably from state to state. The number of affected workers ranged from 700 in Hawaii to 78,000 in New York, while the dollar amounts spent varied from $1.1 million in Hawaii to $71 million in Massachusetts (1990 dollars).[43] When determining the extent of the pay equity programs, many variables, including the size of the state, the amount spent per affected worker, and the portion of the labor force affected (from two percent in Hawaii to eighty percent in Connecticut) should be considered.

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43. *See* Table One, *infra*.

TABLE ONE. TOTAL COST OF PAY EQUITY ADJUSTMENTS AND COST AS A PERCENT OF THE WAGE BILL, BY TYPE OF PROGRAM USED, SIXTEEN STATES (1990 DOLLARS)[1]

(States ranked by percent of wage bill for total costs of all programs implemented in each state)

State	Type of Program Used[2]	Total Cost	Cost as % of Wage Bill
Vermont	Systemic	$17,666,000	11.8%
Oregon	Systemic	52,192,000	9.8%
Iowa	Systemic	38,254,000	7.6%
Connecticut	Systemic	42,687,000	7.2%
Washington	Systemic	68,364,000	7.0%
New Mexico	Systemic	18,885,000	5.2%
Massachusetts	Systemic	70,740,000	4.2%
Minnesota	Targeted	31,492,000	3.5%
Maine (University)[3]	Systemic	3,243,000	2.7%
Michigan	Targeted	25,989,000	1.0%
California	Targeted	45,065,000	1.0%
New York	Systemic	53,421,000	1.0%
Illinois	Targeted	10,610,000	0.7%
New Jersey	Targeted	8,588,000	0.4%
Pennsylvania	Targeted	6,885,000	0.3%
Hawaii	Targeted	1,150,000	0.1%

Source: Data collected by the Institute for Women's Policy Research (IWPR) from states and other sources, as adjusted by IWPR.

Notes:

1. Florida, Rhode Island, South Dakota, and Wisconsin are not included on this table or Table Two due to a lack of data.

2. States marked "Systemic" used systemic types of remedies (job evaluation, reclassification, compensation plan changes) sometimes in addition to targeting, while states marked "Targeted" relied exclusively on targeting as a remedy.

3. This is the amount spent on adjustments in the University of Maine system as a percent of the wage bill for the University system.

Given this variation, one useful way to assess the scale of activity among the states is to calculate the amount spent by each state on pay equity as a portion of that state's annual wage bill. This study looked specifically at the total spent on executive branch civil service wages and salaries in the year before pay equity was implemented. Pay equity adjustments as a percentage of the states' annual wage bills ranged from one-tenth of one percent in Hawaii, which targeted only a few occupations (and not admittedly for pay equity reasons), to twelve percent in Vermont, which undertook a complete reorganization of its civil service system, and where achieving pay equity between women and men was only one of several objectives.

Of the sixteen states for which we were able to collect data, we found twelve states—California, Connecticut, Iowa, Maine,[44] Massachusetts, Michigan, Minnesota, New Mexico, New York, Oregon, Vermont, and Washington—spent one percent or more of their wage bills on pay equity adjustments. The remaining four states spent less than one percent. In the context of the pay equity adjustments that were made during the time period of this study, 1983 to 1992, spending one percent of payroll is a substantial pay equity remedy. Some states that spent one percent of payroll experienced a significant improvement in their female/male pay ratios, particularly when the funds were targeted at underpaid, female-dominated jobs.

FIFTH, in all fourteen states that implemented some type of wage adjustments, and for which we have outcome data, the female/male wage ratios improved. Improvement occurred even in those states that targeted only a few occupations and spent only a small amount of money relative to their annual payrolls. We use improvement in the female/male wage ratio as the single most useful indicator of the success of a pay equity program.[45] Pay equity is designed to improve the wages of women in female-dominated jobs.[46] If it is successful, the overall female/male wage ratio should be increased and the wage gap between women and men should be reduced. The percentage point improvement in the state female/male wage ratios ranged considerably, from one to eight percentage points. For some states, the changes were especially significant. Minnesota, Oregon, Washington, Michigan, and Connecticut saw their female/male wage ratios increase by at least four percentage points. Wage gaps in these states were reduced by 25 to 33 percent. In California, which also had at least a four percentage point increase in the wage ratio, the wage gap was reduced by only eighteen

44. We collected data from Maine's University system, not the state as a whole.

45. We estimated the "before" female/male wage ratio in each state one year prior to the beginning of the pay equity implementation period. We estimated the "after" female/male wage ratio one year after implementation was completed, or, where pay equity was still ongoing, in the latest year for which data were available.

46. Information was unavailable on the gender composition of the affected occupations for all the twenty states in the study, so we could not determine the extent to which pay equity implementation affected women in female-dominated occupations. Instead, the study looked at how women overall fared during the period of implementation. For the three states studied more extensively, wage effects were calculated separately for female-dominated and other jobs.

percent. This smaller reduction is due to the fact that California had a bigger gap to close. In the end, all fourteen states increased their wage ratios to between 74 and 88 percent, higher than the national wage ratio of 71 percent in 1992.

Generally, states that spent the most money on pay equity implementation registered the largest gains in women's earnings relative to men's as reflected in their female/male wage ratios. However, as can be seen in Table Two, two states that spent considerable money—Iowa and Vermont—saw very little change in their wage ratios, while three that targeted undervalued, female-dominated occupations—Minnesota, California, and Michigan—had large increases in women's relative earnings with much smaller expenditures.

It is important to note that because other economic and political changes were occurring simultaneously with pay equity implementation, the changes observed in the states' female/male wage ratios may not be due to the pay equity implementation alone. Multivariate modeling is needed to estimate the cause and effect of observed wage changes. For three states for which we had more complete data—Iowa, Minnesota, and Washington—we estimated the extent to which the observed wage changes were associated with pay equity. We performed regression analyses of male and female wages with control variables representing change in wages in the overall economy. This exercise suggests that most of the observed change in those three states was, in fact, the result of pay equity implementation; in other words, pay equity remedies increased women's wages relative to men's. In Iowa, the model estimated that pay equity policies increased the female/male wage ratio by one percentage point. In Minnesota, pay equity implementation was responsible for a nine percentage point increase in the ratio.[47] Lastly, in the state of Washington, pay equity was responsible for five out of the seven percentage points of the wage ratio increase.[48]

SIXTH, pay equity programs generally worked as designed; women were more likely to receive pay equity adjustments than were men. In ten out of

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47. The regression analysis upon which this figure is based covers slightly different years than the descriptive analysis. Based on the data used for the regression analysis, Minnesota experienced a nine percentage point increase in the female/male wage ratio, all of which was due to the pay equity program. Our descriptive data, cited in the rest of the report, found an eight percentage point change in the wage ratio, with an undetermined amount attributable to the pay equity adjustments.

48. Minnesota's program was particularly successful for two reasons. Unique among the states using targeting, Minnesota implemented a program that affected all underpaid female-dominated jobs. At the same time, Minnesota sought to bring the pay of women's jobs up to the standard for male-dominated jobs. In contrast, Iowa and Washington both sought to bring underpaid jobs (whether female-dominated or not) closer to the pay standard for all jobs (which is generally lower than the pay standard for male-dominated jobs alone). As a result of their design, pay equity programs in Iowa and Washington affected a greater proportion of men and did not attempt to raise the salaries of female-dominated jobs to the same level as comparable male-dominated jobs, leading to smaller wage gains for women relative to men. It is important to note, however, that the Washington data does not include the final three pay adjustments. When the final payments are included, it may be that Washington's program will have had a larger impact on the female/male wage ratio than shown here.

the twelve states for which we have data, 59 to 98 percent of the workers who benefitted from pay equity programs were women. In the remaining states, Connecticut and Oregon, only 49 percent of those affected were women. However, women comprise a smaller percentage of the overall labor force than men. Thus, when separating the workers by gender, a greater proportion of the total women received benefits as compared to the proportion of total men.

Women constituted by far the largest proportion of those affected by programs that used occupational targeting. In those programs that used system-wide approaches (job evaluation, reclassification or compensation system modification), lower proportions of women were affected. It is not surprising that system-wide reform affected greater proportions of men. In these large-scale reforms, broader criteria are often used to adjust the classification and pay of a greater proportion of the workforce, opening the way for more men to receive pay adjustments. Women are more likely to receive the greater proportion of the benefits of wage reform when gender-based wage inequality is the basis for reform.

Of the three states studied in greater depth, Washington and Iowa undertook system-wide re-evaluation, while Minnesota targeted underpaid job classes. The results of the analysis, obtained through statistical estimating procedures, show that in Minnesota and Washington, workers in female-dominated jobs gained more than workers in non-female-dominated jobs as a result of pay equity. The difference was especially large in Minnesota. In Iowa, the opposite occurred; women in the non-female-dominated jobs gained significantly more than women in the female-dominated jobs, and men gained nearly as much as women overall. The wages in female-dominated jobs did not increase relative to the wages in other jobs.

In other words, of the three states studied in depth, Minnesota was the most successful in concentrating its wage increases in the underpaid, female-dominated jobs, Iowa was the least successful, and Washington appears to be somewhere in between. It is also important to note that men in female-dominated jobs experienced wage gains in all three states. This should be expected; all workers in underpaid jobs should benefit from pay equity policies. Somewhat surprisingly, women in Iowa and Washington gained considerably in non-female-dominated jobs, as well as in female-dominated jobs, almost as if the pay equity process stimulated wage increases for women in all jobs. Except in Iowa, men in non-female-dominated jobs did not experience substantial gains. Therefore, despite varying effects on men, the pay equity programs in general did have a greater impact on women.

SEVENTH, if a criterion of cost-effectiveness is used and the sole goal is pay equity, targeting approaches are superior to systemic approaches. Given the variety of methods used and goals pursued in the wage adjustment programs, it is not surprising that the states achieved varying degrees of "cost-effectiveness." Which methods are judged most effective depends very much on the goals of the reform. Measures of success would ideally be related to all the goals. This study, by design, is limited primarily to the

TABLE TWO. COST VS. SUCCESS OF PAY EQUITY PROGRAMS IN FOURTEEN STATES

(Arranged by type of plan implemented and increase in wage ratio)

Targeting States[1]				Systemic States[2]			
Cost as a Percent of Wage Bill	Percent of Wage Gap Closed	Percentage Point Increase in Wage Ratio	States that Targeted Adjustments	States that Made System-Wide Changes	Percentage Point Increase in Wage Ratio	Percent of Wage Gap Closed	Cost as a Percent of of Wage Bill
3.5%	31	0.08	Minnesota	Washington	0.07	30	7.0%
1.0%	26	0.05	Michigan	Oregon	0.06	27	9.8%
1.0%	18	0.05	California	Connecticut	0.04	25	7.2%
0.7%	11	0.02	Illinois	New Mexico[3]	0.03	19	5.2%
0.4%	4	0.01	New Jersey	Maine (Univ.)	0.03	9	2.7%
0.3%	14	0.02	Pennsylvania	Vermont	0.02	12	11.8%
				New York	0.02	9	1.0%
				Iowa	0.01	4	7.6%

Source: Data collected by the Institute for Women's Policy Research (IWPR) from states and other sources, as adjusted by IWPR.

Notes:

1. States that relied exclusively on targeting as a remedy. Hawaii and Massachusetts are not included on Table Two due to a lack of data.
2. States that used systemic types of remedies (job evaluation, reclassification, compensation plan changes), sometimes in addition to targeting.
3. Because of lack of data, the change in the female/male wage ratio reflects only the effects of the systemic program and not the prior targeted adjustments.

goal of achieving pay equity and assessing success from that standpoint. From a policy standpoint, the criterion of cost-effectiveness can be added, and then the question becomes whether gains are achieved at a reasonable cost.

If judged solely on the basis of how much it costs in dollars to achieve a given degree of pay equity, then some states' pay equity programs were more cost-effective than others. Table Two shows that targeting is clearly cheaper when the percentage point improvement in the female/male wage ratio is compared to the type of program implemented—system-wide change versus targeting female-dominated occupations. No state that used targeting spent over 3.5 percent of its wage bill on pay equity programs, yet three of the six targeting states achieved wage ratio improvements of five percentage points or more. For these three states, the "average" improvement was six percentage points, at a cost of 1.8 percent of wage bill. States that used the more comprehensive methods spent up to twelve percent of their wage bills, yet only two out of eight achieved wage ratio improvements of five percentage points or more. These two states, Washington and Oregon, experienced an "average" gain of seven percentage points at a cost of 8.4 percent of the wage bill.

Looking at the low end of relative wage gains for women, the data indicates that two of the states using systemic reform, Vermont and Iowa, spent substantial amounts (11.8 and 7.6 percent of their respective wage bills), yet experienced only modest gains in their wage ratios, two and one percentage points, respectively. Targeting states (Illinois, New Jersey, and Pennsylvania) that achieved such small wage gains (one or two percentage points improvement in the female/male wage ratio) spent an "average" of less than half of one percent of payroll. The systemic-approach states with such small wage gains (including New York, Vermont, and Iowa) spent an average of seven percent of pay roll—fourteen times more than the targeting states spent to achieve the same one and two percentage point increases in their female/male wage ratios. The cost-effectiveness of Vermont's program cannot be judged based on the small pay equity increase given their large expenditure. Vermont's program had the larger goal of re-evaluating and re-classifying the entire civil service to increase consistency; pay equity between men and women was incorporated in that larger effort. However, the qualitative information gathered and reviewed for New York and Iowa suggests that these states had pay equity as their primary goal, and that their small wage ratio improvements were due to a displacement or watering down of the pay equity programs. New York spent only limited funds, while Iowa spent a relatively large amount of money that was not targeted towards women. For Iowa and New York, it is not unreasonable to apply a cost-effectiveness standard based on their success in improving pay equity alone.

Across all sixteen states for which we collected data, it is clear that targeting achieves an equal wage ratio increase for lower expenditures. While it may be tempting to conclude that targeting is the best method for achieving gains for women, it is important to note that pay equity never occurs in a vacuum. Obtaining any kind of pay equity program may involve

including other goals in the process and spending some money on those goals, as well as on pay equity. Fewer states used targeting than the more comprehensive approaches, and, of the six that chose to target selected occupations, three states—Illinois, New Jersey, and Pennsylvania—affected only a small number of occupations. Of the three that achieved relatively large gains for women—California, Michigan, and Minnesota—only Minnesota targeted every female-dominated job class. In Michigan and California, gains were achieved as a result of unions negotiating pay equity increases for a high proportion of underpaid female-dominated job classes during collective bargaining.

Of the eight states that used systemic approaches, all but three achieved wage ratio gains of greater than two percentage points. Therefore, although the costs of those gains were relatively greater than in the successful "targeting" states, more pay equity gains overall were achieved by these methods than by targeting.

In summary, based on the criterion of cost-effectiveness (and assuming pay equity is the only goal) targeting clearly is superior; it costs less than systemic approaches. However, the more expensive systemic approaches to pay equity have two benefits. They address more issues, and therefore garner more support for pay equity objectives. Furthermore, systemic approaches may be the only practical route to achieve pay equity, if the state does not have a sound enough personnel system on which to base specific targeting.[49]

EIGHTH, it is unfair and unnecessary for pay equity to come at the expense of a small group of workers. In states such as New York and Iowa, where the original pay equity plans included reductions in the wages of some men's jobs, the programs failed to gain broad support. In the compromise plans that were implemented, pay equity funding was redistributed so that reductions did not occur. In these two states, the compromises apparently provided male workers with opportunities to press claims for wage increases so that a significant portion of the pay adjustments that were awarded went to men. As a result, pay equity in Iowa and New York had a much smaller effect on the wage gap than in states whose plans did not originally include pay reductions for male workers. Given the tight financial situation in which many states find themselves, it is understandable that states would try to pay for comparable worth reform with cuts elsewhere in the system. The examples of Iowa and New York demonstrate that targeting workers in male-dominated job classes for pay freezes or cuts is not only unfair, but also a poor strategic decision, because it reduces support for pay equity and ultimately diminishes the success of the program.

Employment loss may be another cost of pay remedies that could fall disproportionately on a small group of workers. Here again, the pay equity

49. A sound personnel system is one in which all jobs are thoroughly and consistently described, classified, and paid according to uniform criteria. The soundness of a system is constantly in flux as existing jobs change and new job classes are added to the system, requiring states to revise their systems every few years.

programs can be designed in a way that will likely minimize employment loss, preventing a small number from bearing an unfair burden. Phasing in pay increases over several years tends to minimize employment loss that might occur if large increases were to take place in one year. Minnesota and Washington, which implemented pay equity over a number of years, suffered less employment loss than Iowa, where an expensive pay equity program was implemented all at once.

FINALLY, examination of the secondary effects of pay equity shows that pay equity did not have the substantial negative effects, such as employment loss in the public sector or wage change in the private sector, that some analysts and opponents predicted.

Critics of pay equity have hypothesized that implementation could have negative side effects. The fear is that pay equity could lead employers to hire fewer women because it raises the wage of employees in female-dominated job classes and therefore their cost to employers. Furthermore, critics predict that raising the salaries of employees in female-dominated job classes in the public sector could impact the wages of employees in female-dominated job classes in the private sector in one of two ways. Either the increase in wages could force the private sector to increase wages, or the decreased employment in the public sector could increase the supply of labor in the private sector, thus depressing wages. However, this study found that the effects of pay equity on public sector employment were minimal, and we did not identify any "spill-over" effects of pay equity in the private sector.

In Minnesota, the state for which the statistical model is likely to be the most accurate because it had the best data available, pay equity implementation was shown to have had virtually no effect on employment growth. Employment declines due to pay equity implementation were estimated to amount to only three-tenths of one percentage point. Overall, employment grew by 4.8 percent; the model estimated employment would have grown by 5.1 percent in the absence of pay equity.

The statistical analyses of pay equity's impact in Iowa and Washington did show negative employment growth effects, for both women and men in Iowa and for women in Washington. For women in Iowa and Washington, employment continued to grow, but at a slower rate. For the men in Iowa, employment growth was negative. Due to the lack of data for Iowa and Washington, these models included fewer controls for other factors that may have been changing at the same time that pay equity policies were implemented.

These findings, however, correspond to findings from our review of the size and timing of pay equity adjustments. Of these three states, Iowa experienced the greatest negative employment effects. Concurrently, Iowa had the largest program (in terms of expenditures relative to wage bill) and the adjustments were awarded largely in one year, with a small follow-up two years later. Minnesota, which phased in the adjustments over four years, spent the least money of these three states and was estimated to have experienced the least negative employment effects (not statistically different from zero). Washington's program was less expensive than Iowa's and more

costly than Minnesota's, and the adjustments were phased in over seven years. The study estimates that in Washington, employment loss for women was small, while men actually gained employment as a result of pay equity implementation. Thus, it appears from our study of these three states that the implementation of pay equity programs can be managed in such a way as to minimize potential negative effects, such as employment loss. Programs that phase in adjustments over time are less likely to result in employment loss than those that administer a large wage "shock" in one year.

The analysis of pay equity's impact on private sector wages showed no effect, positive or negative, for the wages of female clerical workers, the group whose wages were studied in the analysis. That is, the wage increases that were observed among civil service workers in the pay equity states were not associated with larger (or smaller) increases in female clerical wages in the private sector of those states considered together (as compared to private sector wages in the non-pay equity states). This suggests that there was no "spill-over" effect, positive or negative, from pay equity implementation in the state governments onto the salaries of private sector clerical workers. In short, the catastrophic side effects that many predicted did not occur.

V. CONCLUSIONS

What do these findings suggest for the future of pay equity as a means to improve the economic status of women? The findings show that pay equity has been successful. Women employed in state governments that implemented pay equity programs have made significant absolute wage gains relative to their male co-workers, and relative to the national experience for all women. In all the states studied, the female/male wage ratio improved during the period of pay equity implementation. In two-thirds of these states, more than half of all female workers received pay increases through pay equity programs.

But all pay equity programs did not have the same impact. Closer examination of the programs indicates that the design of the pay equity program, including the amount of money spent, the proportion of women affected, the standard to which female wages were raised, and the rate at which adjustments were implemented, all have a significant impact on the extent to which women benefit, the cost-effectiveness of pay equity measures, and the size of any side effects. Not surprisingly, programs that focused money on employees in female-dominated job classes and spread the reform over a long period of time were more likely to raise women's wages with fewer disruptions to employment. At the same time, the variety of programs implemented by the states indicates the need for flexibility in program design to account for differences in the extent of the wage differences identified, the civil service and collective bargaining structures, and the political and administrative exigencies. From the experiences in these pioneering states, pay equity advocates can learn to avoid the political and administrative traps that delay and dilute pay equity goals and, instead, focus on maximizing gains for women.

The early 1990s have seen a renewed emphasis on economic issues, stimulated by high, lingering unemployment after the recession and the Clinton administration's focus on such issues as international competitiveness, job training, and high performance workplaces. As advocates strive to make women's concerns part of the economic agenda, this report indicates that pay equity has proven itself a strategy capable of making a significant difference in the lives of affected women. In fact, had all female workers in the United States received the average pay equity adjustment observed in this study, each would be earning an additional $1,400 annually, and the national female/male wage ratio in 1990 would have improved from 71 to 76 percent (five percentage points). Such advances would represent an important contribution toward improving women's economic well-being.