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UNITED STATES GENERAL ACCOUNTING OFFICE
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STATEMENT OF

WILLIAM J. ANDERSON, DIRECTOR

GENERAL GOVERNMENT DIVISION

BEFORE THE

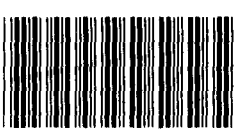
SUBCOMMITTEE ON CIVIL SERVICE, POST OFFICE AND

GENERAL SERVICES

SENATE COMMITTEE ON GOVERNMENTAL AFFAIRS

ON

OPTIONS FOR CONDUCTING A FEDERAL PAY EQUITY STUDY



Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss our recently issued report entitled Options for Conducting a Pay Equity Study of Federal Pay and Classification Systems (GAO/GGD-85-37, March 1, 1985). As you know, the report was prepared at your request and at the request of 10 other Chairpersons and Members of Congress.

Our report discusses the pay equity issue, describes two general methodological options--economic analysis and the job content approach--for conducting a federal pay equity study, and concludes that use of both approaches would be the best way to conduct a comprehensive study. Our report also suggests that the Congress should establish a steering committee to direct the future course of a federal pay equity study.

Before discussing the methodological options in detail, however, I would first like to provide the subcommittee with some background information on the pay equity issue.

Background

Employment statistics from the Census Bureau and the Bureau of Labor Statistics show that on a national basis women earn about 40 percent less than men. Similarly, data on federal employment from the Office of Personnel Management indicate the existence of a wage gap between men and women. For example, 1983 data on federal white-collar workers show that men earned an average of $30,229, while women earned an average of $18,864, or about 38 percent less than men. And, this wage gap has changed little over the past decade. In 1970, for example,

women employed in federal white-collar jobs earned 39 percent less than their male counterparts. Chart I, now before you, depicts average men's and women's wages in the GS system from 1969 to 1983. (The appendix to this statement provides more detailed salary data for various federal pay systems.)

These statistics show that there is a continuing wage gap between federally-employed men and women. What is not clear is why this pay gap exists and whether discrimination plays a part. Some suggest that at least part of this wage gap is attributable to employers' failure to pay women "comparable worth" for their work. They note that because women and men usually work in different jobs, existing equal opportunity laws, particularly the Equal Pay Act of 1963, cannot end wage discrimination against women. The concept of comparable worth, however, goes beyond equal pay for equal work and suggests that there should be equal pay for work of "equal value" to an employer. Value is commonly measured in terms of skill, effort, responsibility, and working conditions. The term "pay equity" is often used interchangeably with comparable worth. However, pay equity may be viewed as a broader term and refers to any efforts designed to assure fair and objective wage setting practices.

Many states and local jurisdictions have conducted pay equity studies or have made revisions to their pay and classification systems consistent with the principles of pay equity. Chart II, now before you, shows that many states have actively pursued the pay equity issue in recent years. Nine states have

initiated preliminary studies to gather information on wage or occupational patterns. Sixteen states have initiated pay equity studies, and 5 states have started to implement study results. Seven other states have begun or completed revisions to their classification systems consistent with the principles of pay equity. Also, some private sector employers have initiated pay equity studies, and some have made adjustments to their pay systems based on study results.

Thus, pay equity studies have been done in both the private and public sectors, and pay adjustments are being made in some cases. The federal government, however, has not initiated such a study--although many public and private sector groups and individuals have called for such a study. Accordingly, as you requested, we have developed information on how such a study might be carried out at the federal level. One option involves economic analysis, and I would now like to discuss that approach.

ECONOMIC ANALYSIS

One way to analyze wage differentials by sex involves the use of economic theories and models to determine why women earn less than men. Typically, economists and other researchers have carried out such analyses by attempting to identify variables that predict wages and then seeking to determine the extent to which those factors explain wage differentials between men and women. Understanding which factors account for wage differentials may help in determining which of those differences may be justifiable.

Empirical applications of these economic theories and models tend to focus on three areas: (1) the characteristics of individual workers; (2) the characteristics of the occupations in which different workers are found; and (3) the characteristics of institutional environments, in which many wage decisions are made, including recognition of regional variations.

The first area relies on the "human capital" model of earnings levels. This model is based on a presumed relationship between certain individual characteristics (such as education and length and nature of work history) and productivity. These individual characteristics are thought to constitute an "investment" in human capital and, therefore, to affect levels of individual productivity.

Presumably, a greater investment in human capital leads to greater productivity and, in turn, to higher wages. Therefore, differences in individual productivity are seen as a partial explanation for wage differentials between different categories of workers, such as men and women.

The human capital studies that have been conducted over the years generally have been able to account for no more than one-half of the wage gap between men and women. This suggests that differences in the distribution of these characteristics explain some, but by no means all, of the wage gap. As a result, researchers have explored other means through which to explain the remaining wage gap.

One such approach focuses on reasons for and consequences of the observation that male and female workers tend to be concentrated in different occupational categories. Some contend that the concentration of women in relatively few occupations is the result of women's personal choices. Others assert that it is a result of employers not providing women access to certain kinds of work. Still others argue that the concentration of women in particular job categories results from a combination of choice and lack of access; that is, women choose to enter certain occupations because they believe they will be denied access to others or, even if allowed access, will have restricted advancement opportunities.

Regardless of why women are concentrated in particular occupations, the fact that they are so concentrated tends to be associated with lower wages for women than men. Possible explanations for this condition include (1) an oversupply of female workers with particular skills, (2) the occupational features associated with female-dominated jobs, and (3) the personal prejudices exhibited by employers.

Researchers examining the effect of occupational distribution on wage differentials use certain indicators to measure the independent effect of occupation on wages. Examples of such indicators include occupational classification, industry category, percent female in the occupation or industry, and the median income of male and female job incumbents. In general, the inclusion of occupational variables has enabled researchers

to account for some additional portion of the wage gap, although absolute percentages vary.

A somewhat different approach looks at the role played by the "internal labor markets," which exist within many large organizations. The term "internal labor market" refers to the existence of distinct administrative structures within individual firms and organizations which independently affect wage setting and job allocation. Internal labor market analysis accepts the basic premise that supply and demand plays a role in the determination of wages and occupational distribution, but notes that in many wage-setting situations those factors tend to operate imperfectly, thereby allowing for significant discretion in wage setting and job allocation. Thus, various employer practices (for example, classification and compensation systems or promotional practices) are thought to exert an independent influence on the wage-setting process.

Most of the empirical research conducted along these conceptual lines has focused on the private sector. Nevertheless, a limited body of research is available concerning the existence and extent of sex-based wage differentials in the federal government. One economist has sought specifically to assess the extent to which various human capital and other variables interact to explain wage differentials in the federal government. The sex of federal employees was found to be a strong predictor of earnings even after the effects of two key human capital

variables--education and job tenure--were accounted for. Moreover, the resulting wage gap was found to differ on an agency-by-agency basis. Additional research has at least partially confirmed these findings.

In sum, economists have generally found it possible to explain at least part of the wage gap by focusing on differences in individual, occupational, and institutional characteristics. Thus, it may be appropriate to include economic analysis in any study of wage differentials by sex in the federal government.

Despite conceptual and practical differences between the various possible economic approaches, a general study outline can be established. Specifically, an economic study within the federal government should include the

--development and articulation of a particular goal in order to guide all subsequent steps as well as the interpretation of study results (for example, an economic study might seek to identify factors that explain the wage gap),

--determination of data sources and how to obtain them, and

--selection of appropriate research methodologies and statistical techniques.

Each of these study components involves specific issues that should be addressed and policy decisions that need to be made before a federal pay equity study is initiated. For example, one key issue that needs to be addressed is whether the study should be limited to current compensable factors or whether other factors should be included in the study. Current federal

law defines certain legitimate bases of pay differences between federal employees, including job difficulty, experience, performance, and, for some jobs, locality. Economic studies have also focused on such variables as age or marital status which are believed to affect pay. If the study results are to be implemented without changing current compensable factors, variables not in those statutes should not be included in the study.

Another key issue centers on the question of whether the federal government should be viewed as a single employer or whether each agency should be viewed as a separate employer. Depending on how that and other issues are resolved, the study approach could vary substantially.

I would now like to move to a discussion of a second study option, which centers on job content analysis.

THE JOB CONTENT APPROACH

Another way to analyze wage differentials by sex is to use the job content approach, which focuses on characteristics of jobs rather than the characteristics of individuals or the workplace. Under this approach, a technique known as job evaluation is used to determine the value or worth of jobs to an employer and to identify pay differences between comparably evaluated male- and female-dominated jobs.

Job evaluation is widely used to set pay in both public and private organizations, and a form of job evaluation has been used to set pay in the federal government for over 100 years. Thus, job evaluation is not a new concept or particular to the

pay equity issue. Also, although commonly contrasted with market-based approaches in pay setting, job evaluation systems typically include some market considerations in establishing factors and factor weights and in making pay determinations on the basis of evaluation results. Pay equity studies using job evaluations also tend to incorporate adjustments which seek to remove any bias from the evaluation system to be used.

The most common type of job evaluation is the point factor method. In this method, a set of factors is selected that is intended to reflect features of the jobs that the employer values. Each job receives a certain number of points on each factor and the total number of points indicates the job's worth to the organization.

In any case, a series of steps are usually followed in conducting a job content study:

--First, a set of key or benchmark jobs is selected for study.

--Second, a system for evaluating jobs is developed or selected, involving the determination of compensable job factors, factor weights, and a scoring system.

--Third, all jobs to be evaluated are analyzed and described.

--Fourth, the job information derived is used in the evaluation process to determine the worth or value of the jobs to the employer, which is usually represented by a point score.

--Finally, the average salaries of similarly evaluated male- and female-dominated jobs are compared and any difference in salaries is noted.

Within this basic method, two general types of job evaluations can be used--an a priori or a policy-capturing system. In an a priori job evaluation system, factors and factor weights are specified in advance of the study either by choosing factors and weights believed relevant to the organization or by adopting a commercially-available evaluation system. The Washington State pay equity study using the Willis and Associates evaluation system is an example of this type of job content study. In the policy-capturing method, factors and weights are analytically derived as part of a process that seeks to replicate the organization's existing pay system. However, pay equity studies using this evaluation method should adjust the analysis to identify and remove any suspected bias. A study currently underway in New York State uses a modified policy-capturing approach. Also, many evaluation systems and job content studies include both a priori and policy-capturing features.

One advantage of the job content approach in analyzing wage differences by sex is that it attempts to address directly the issue of comparable worth--whether jobs of equal value are being paid the same. And, in fact, all pay equity studies we are aware of have used the job content approach. One way in which pay differences can be measured is by comparing the average pay of job incumbents. However, any difference in average pay for comparably-evaluated jobs should not be assumed to

be the result of discrimination, as other factors such as seniority, individual productivity differences, or local prevailing wage rates may legitimately cause pay differences. But the influence of these factors can sometimes be reduced by using other measures of pay, such as the midpoint of the jobs' evaluated grade.

Concerns about the job content approach center on the ability of the job evaluation process to measure the worth of the jobs being studied. As mentioned in the National Academy of Sciences report entitled Women, Work and Wages, job evaluation may not be useful to resolve pay disputes if:

--factors and weights are biased or are chosen simply to replicate the existing wage structure (and thereby capture any bias that may be present);

--the inherent subjectivity in the process allows cultural biases about the value of work done by men and women to be reflected in the evaluation scores;

--more than one evaluation plan is used for different sectors of the organization's workforce; and

--the statistical procedures used to develop factors and weights are not carefully applied.

Despite these and other criticisms, the National Academy concluded that job evaluation can be used to determine whether jobs are fairly compensated and can help reduce discrimination when it exists. Numerous suggestions by pay and compensation experts have been offered to improve the use of job evaluations in pay studies. For example, comprehensive job analysis using

several methods and sources of input and precise job descriptions are believed to permit more accurate determinations of job worth.

The experiences of the states in conducting pay equity studies suggest several general steps that should be followed in applying the job content approach to the federal government. They include:

--developing and articulating a specific goal (For example, one goal could be to identify any sex-based wage discrimination, but such a goal would require development of an acceptable definition of sex-based wage discrimination.),

--deciding which pay systems and jobs should be included,

--selecting a job evaluation method,

--deciding on methods for job documentation,

--deciding how the evaluation method should be implemented, and

--determining what methods should be used to compare the pay of male- and female-dominated jobs.

As in the previously-mentioned economic studies, each of these steps entails making policy decisions about the course of the analysis which will affect the nature and scope of study results. For example, if only the white- and blue-collar federal pay systems are selected for study, the results of the study would be applicable only to those systems. Similarly, in deciding on an evaluation method, any of a variety of techniques could be used, ranging from commercial or a priori systems to policy-capturing systems. And, the choice of the evaluation

system may be contingent on the pay systems to be studied or the job content information available.

I would now like to discuss our views on how the federal government can best carry out a federal pay equity study.

FEDERAL PAY EQUITY STUDY CONSIDERATIONS

In our view, each of the described study approaches--economic and job content analysis--has value as a means for addressing the pay equity issue. Economic analysis can help measure and explain wage differentials between men and women using characteristics that affect individual productivity as well as occupational and workplace characteristics. Job content analysis, on the other hand, can provide a measure of the value of particular jobs to the federal government and compares that value to existing grade or pay levels for these jobs.

Accordingly, we believe that both approaches should be used in a federal pay equity study. The two approaches can be used either sequentially or they can be combined into a single methodology. Reliance on both the job content and economic analysis approaches can provide a clearer understanding of how federal wages are set and would be less susceptible to charges that important explanatory variables have been ignored. In carrying out our analysis of the pay equity issue, we hosted a discussion by a panel of experts. These individuals had widely differing views on whether and, if so, how a study should be done. Yet, they all generally agreed that, if a study is to be done, an approach which combines both economic analysis and job content should be pursued.

Although the panel of experts recommended a combination approach, none of the states we are aware of have conducted a pay equity study using both forms of analyses. The state of North Carolina did use a form of economic and job content analysis in a preliminary study, but it is now conducting a comprehensive pay equity study using only the job content approach. One possible reason why the states have not combined the two techniques may be that the data needed for such a study was unavailable or difficult to gather.

In any case, our work to date has underscored the complexity of the pay equity issue and suggests that continued, careful planning is needed if a federal pay equity study is to be done. Clearly, a decision to conduct a pay equity study at the federal level involves concerns of national importance on which no clear consensus has yet formed. Accordingly, those selected to carry out the study must be as objective as possible and represent many sides of the issue. Because the study may involve the use of complex job content and/or economic analyses, those involved in the study must also possess or have available a high level of technical competence in these areas. Finally, because a federal pay equity study would be a demanding and difficult undertaking, those selected to carry out the study will need sufficient resources to complete the task in a reasonable amount of time.

The experiences of the states in conducting pay equity studies and the experiences of other federal studies suggest that two groups of participants should be involved in carrying out the study--a steering committee responsible for all policy

decisions and a group of technical experts to assist the steering committee.

The concept of a steering committee has particular appeal from the standpoint of objectivity, for it could be composed of a broad spectrum of individuals with differing views on the pay equity issue. Members of the committee could include experts from the fields of equal employment opportunity, compensation, classification, and economics; and representatives from the Congress, women's groups, employee organizations, and the private sector. Also, the Congress may wish to include one or more representatives from OPM on the steering committee, as it is the federal agency which would be responsible for implementing any policy changes that may arise from a pay equity study.

The steering committee could report to the Congress and could be entrusted with decisionmaking authority, subject to congressional oversight, to facilitate resolution of a number of policy issues. Those issues may include:

--deciding on a precise goal or goals for the study;

--determining what pay systems will be included in the study;

--deciding how jobs and/or job incumbents will be selected for study (e.g., simple random or stratified samples);

--deciding what general type of job evaluation will be used (policy-capturing or a priori) and, within each category, what particular system seems most appropriate; and

--determining what analytic technique will be used to interpret the study results.

To resolve these issues and to carry out the study, the steering committee will need to call upon technical experts in a variety of disciplines. Some experts may be found within the government. For example, expertise in sampling and survey design could be obtained from the Census Bureau; expertise in economics and labor markets could be drawn from the Department of Labor. Assistance could also be obtained from outside the government. Several economists and job evaluation experts have indicated to us that they would be interested in conducting analyses of wage differentials in the federal sector.

Some form of steering committee or advisory committee has been used in all of the pay equity studies that have been conducted in the states, although their roles have varied widely. In many states, though, they have been instrumental in determining the character and scope of the studies, in monitoring their progress, and in reviewing and approving study results. These committees have also helped to ensure the participation and support of a variety of interested parties--support considered crucial to the implementation of any study results.

In the state of Connecticut, for example, the state legislature required establishment of an advisory committee as part of a pilot pay equity study. This committee played a significant role in the planning and administration of the study, including selection of the consultant and refinement of the evaluation system, designation of the jobs to be evaluated, and selection of evaluation team members. In the implementation phase of the study, the advisory committee was expanded and

continued its monitoring and oversight role. Committee members included representatives from the legislature, the executive branch, the state's Commission on the Status of Women, unions, and the private sector.

In Oregon, a two-tiered committee structure was used to direct the study and to assure representation of various points of view. First, a seven-member legislative task force was established by law to oversee the study. It was composed of three appointees named by the governor, and two representatives from each house of the state legislature. The task force designed the study, selected the consultant, modified the evaluation system, communicated regularly with state employees, and was responsible for recommending ways to implement the study results. To assist in carrying out its duties, the task force established both an advisory committee, representing all the parties at interest in the study, and a technical advisory committee.

On another matter, Mr. Chairman, I wanted to point out that both you and other Members of the Congress had asked us to estimate the costs that might be associated with a federal pay equity study. But, as noted in our report, it is difficult to provide specific cost estimates until certain policy decisions affecting the scope and methodology of the study are made. Some information, however, is available based on the experiences of the states, although these studies have differed in scope. For example, Minnesota's study cost $85,000 while North Carolina's cost $650,000.

One of the most significant variables that affects study cost is the extent of the data gathering task. That is, data gathering costs increase with the size of the sample and the complexity of the data gathering instrument. A federal personnel system study could include both a complex data instrument as well as a large sample. In this regard, we would like to note that some cost estimates can be obtained from the Census Bureau, which has a great deal of experience in administering large and complex questionnaires. For example, a representative of the Bureau recently told us that, in a recent study, they had administered a questionnaire to 87,000 people at a cost of about $1 million.

Also, I would like to comment on S.519, which was introduced by Senator Evans on February 25, 1985. As you know, Mr. Chairman, this bill would establish a Commission on Compensation Equity to oversee a study of the compensation and related systems in federal executive agencies.

Consistent with our report, the bill calls for a broadly representative oversight body and imposes an 18 month deadline on completion of the study. However, the bill calls for the study to use "standard job-evaluation techniques . . ." to evaluate federal positions. As I mentioned previously, we believe that any federal pay equity study also should include economic analysis.

Section 9 of the bill also calls for the Comptroller General to submit a list of study consultants to the

Commission. The Commission is to select one consultant from this list who would do the study. While we stand ready to assist the Congress in this effort, we believe it would be undesirable for our Office to participate directly in the process of selecting a study consultant. Such participation by our Office would be inconsistent with our need for independence and objectivity in any future reviews of study results or policy changes associated with study results.

Also, as noted above, the bill calls for the Commission to select one consultant. Again, however, we believe that a federal pay equity study calls for the involvement of experts in various disciplines and, accordingly, we would suggest that the Commission not be limited to selecting a single consultant.

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In conclusion, I would like to point out that the Congress soon may face a crucial decision point on the pay equity issue. A decision to proceed with a federal pay equity study may set in motion an irreversible process with far-reaching implications. Accordingly, careful consideration needs to be given to the issues of whether and, if so, what kind of pay equity study should be done at the federal level.

This concludes my prepared statement. We would be pleased to respond to any questions you may have.

GENERAL SCHEDULE

DATE	TOTAL		MEN		WOMEN		WOMEN'S SALARY AS A PERCENT OF MEN'S
	EMPLOYEES	AVERAGE SALARY	EMPLOYEES	AVERAGE SALARY	EMPLOYEES	AVERAGE SALARY	
10/31/69	1,102,793	$10,090.42	658,772	$12,005.32	444,041	$7,247.36	60.37%
10/31/70	1,098,375	10,763.99	662,250	12,760.84	436,125	7,728.79	60.57%
10/31/72	1,426,014	12,697.26	853,748	15,113.67	572,267	9,090.95	60.15%
10/31/73	1,415,190	14,043.43	841,165	16,806.66	574,025	9,994.86	59.47%
10/31/75	1,486,107	15,516.73	866,920	18,575.32	619,187	11,235.69	60.49%
10/31/77	1,516,739	17,771.02	868,665	21,411.31	648,074	12,893.47	60.22%
10/31/79	1,520,049	20,383.93	853,612	24,611.16	666,437	14,969.89	60.83%
10/31/81	1,512,837	23,113.00	823,122	27,830.00	689,715	17,483.00	62.82%
10/31/83	1,522,329	24,980.00	819,221	30,229.00	703,108	18,864.00	62.40%

FEDERAL WAGE SYSTEM

DATE	TOTAL		MEN		WOMEN		WOMEN'S SALARY AS A PERCENT OF MEN'S
	EMPLOYEES	AVERAGE SALARY	EMPLOYEES	AVERAGE SALARY	EMPLOYEES	AVERAGE SALARY	
10/31/70	574,928	(a)	529,673	(a)	45,255	(a)	
10/31/72	543,919	(a)	501,730	(a)	42,189	(a)	
10/31/75	517,300	$12,703.00	477,334	$12,920.00	39,966	$10,112.00	78.27%
10/31/77	498,774	15,177.00	460,681	15,422.00	38,093	12,223.00	79.26%
10/31/79	492,148	17,283.00	452,763	17,580.00	39,385	13,867.00	78.88%
10/31/81	452,069	20,044.00	412,228	20,431.00	39,841	16,041.00	78.51%
10/31/83	431,792	22,054.00	392,165	22,479.00	39,627	17,848.00	79.40%

(a) Consistent data not available

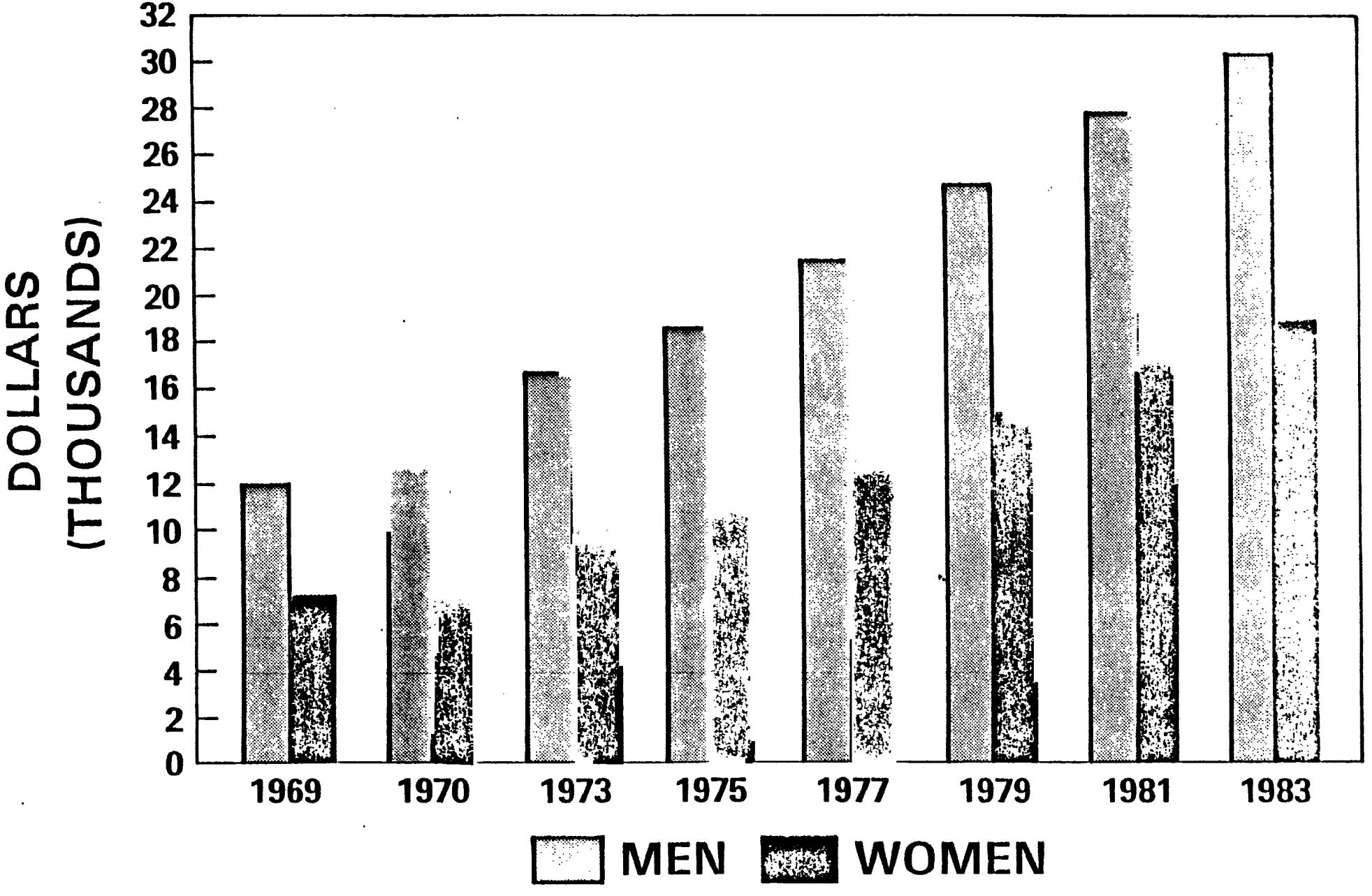
TOTAL GENERAL SCHEDULE AND FEDERAL WAGE SYSTEM

DATE	TOTAL		MEN		WOMEN		SALARY AS A PERCENT OF MEN'S
	EMPLOYEES	AVERAGE SALARY	EMPLOYEES	AVERAGE SALARY	EMPLOYEES	AVERAGE SALARY	
10/31/70	1,673,303	(a)	1,191,923	(a)	481,380	(a)	
10/31/72	1,969,933	(a)	1,355,478	(a)	614,456	(a)	
10/31/75	2,003,407	$14,790.20	1,344,254	$16,567.16	659,153	$11,167.56	67.41%
10/31/77	2,015,513	17,129.09	1,329,346	19,335.73	686,167	12,856.24	66.49%
10/31/79	2,012,197	19,625.50	1,306,375	22,174.30	705,822	14,908.35	67.23%
10/31/81	1,964,906	22,406.91	1,235,350	25,361.00	729,556	17,404.25	68.63%
10/31/83	1,954,121	24,333.46	1,211,386	27,720.07	742,735	18,809.79	67.86%

(a) Consistent data not available

Source: Office of Personnel Management

AVERAGE MEN'S AND WOMEN'S WAGES
IN THE GS SYSTEM



PAY EQUITY STUDIES AND RELATED ACTIVITIES IN THE STATES

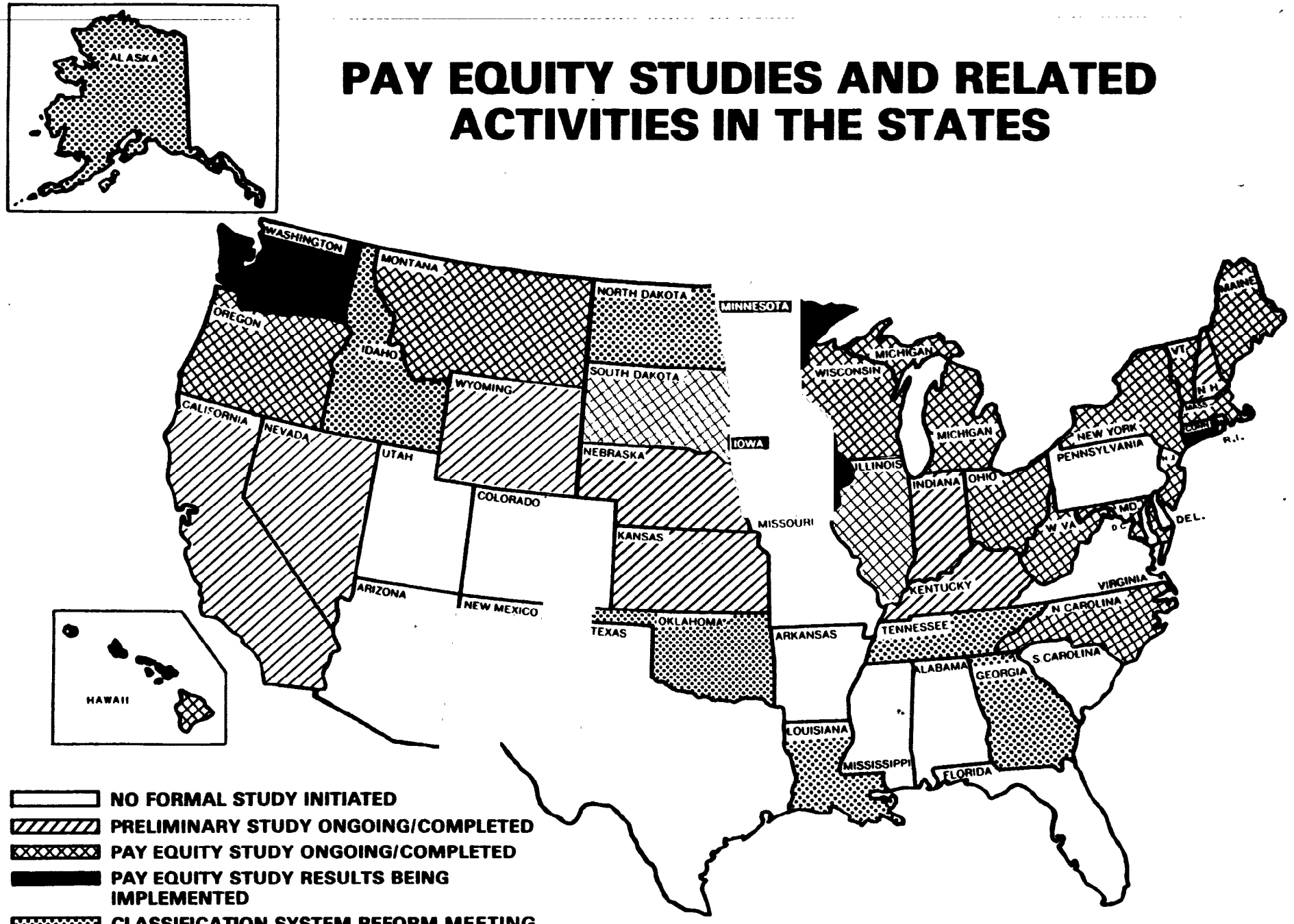


CHART II