Confidential Memorandum

TO: John Robertson, HR Development Services Assistant Director
Washington State Department of Personnel
FR:
DA: March 11, 1999
RE: An Analysis of Pay Discrepancies in the Public Sector

Executive Summary:

For years surveys after surveys have revealed that women are paid less than men are paid. As time has progressed that difference has decreased. That decrease can be attributed to many factors including more women working in higher paying jobs, more women working full time or, as, many would hope is the real reason, that the sectors are remedying pay inequities, giving women equal pay for equal work. Washington State's Department of Personnel has the opportunity to set an example for the private sector in its state by showing that public sector employees are paid similar wages regardless of sex. Before the Department of Personnel can claim that the public sector is eradicating pay inequities it must examine wage data for men and women in the public sector. This study examines the pay differences of men and women in the public sector and compares that difference to those in the private sector. However, this study hypothesizes that there are wage discrepancy between men and women in even the public sector and the government still has work to do in eliminating pay differences between men and women.

This study utilizes the 1998 Washington State Wage Survey data. The data show that men in the public sector do, in fact, make more money than women do as hypothesized. However, the difference in wage rates is not as high as first anticipated it would be. The average annual wage for men was from $3,817.98 to $9,700.31 higher than women annually. The pay spread increases as you compare wages for men and women in the private sector.

These results suggest that while the public sector has not completely eliminated pay disparities between genders, the difference is not huge. The Department of Personnel should be impressed with the substantively smaller wage differences between the sexes in the public sector. The Department should look into doing a follow-up survey to ensure that accurate comparisons of similar jobs and work schedules for men and women were done so that the difference is reliable. A follow-up survey can also help determine which

1 Based on a .05 significance level.
segments of government are reducing the pay differences most effectively; those segments can serve as examples not only to other government agencies, but also to the private sector on how to adequately reduce pay inequities between men and women.

**Introduction:**

The United States' Department of Labor has said that government, on the federal, state and local level, should set an example for the private labor market on pay equity issues not only between different ethnicities but also between men and women.

Washington State's Department of Personnel should take an active role in promoting wage equity in our state and local governments and report to the federal Department of Labor any apparent wage disparities in Washington State's federal employees. The Department of Personnel can begin this process by examining our state population data to determine whether or not government employees (on the federal, state or local levels) are paid equitably regardless of their sex. After examining the wage information we should conduct a follow-up wage survey to identify which segment of the government a survey respondent works for. Department of Personnel should conduct a detailed study of our state and local employees to make sure that we are following the federal Department of Labor's directive. This survey could be used to detect any possible wage discrimination between men and women.

In examining the data we must compare not only the wage information but compare the number of men and women working full time versus part time jobs. Whether an individual works full time or part time will affect annual pay rates, therefore it is important to compare wage information across similar work schedules. The Department of Personnel should also examine the scope of the jobs that men and women hold. In other words, Department of Personnel should detect if there are positions that are more typically occupied by women, such as administrative assistants, or by men, such as department directors. As with work schedules, the annual wage rates will differ based on the kind of position held.

Many surveys have been conducted on wage differences between men and women encompassing both sectors. This study narrows the comparison to just government positions. This study contends that there is also a pay difference between men and women in the public sector; that discrepancy must be remedied. This study also suggests that while there is a pay difference between men and women in the public sector that difference is
smaller than in the private sector and that on the whole women in the public sector are paid more than women in the private sector. Washington State should want to make sure that there are no pay inequities between men and women in the government and that they are setting an example for the private sector. The details of the study follow in the study overview below.

**Study Overview:**

This study looks at the pay rates for men and women in the public sector. For this study the public sector is defined as purely governmental positions. The government positions include people who work for federal, state and local governmental entities. Conversely, the private sector is made up of non-profits, for-profits, self-employed individuals and family-owned businesses. The analysis uses the wage information found in the 1998 Washington State Population Survey. In the survey, 17.7% of the respondents work for the public sector or 468,420 people. Of those government employees 1348 revealed their gender, 634 were men and 714 were women. Only 551 women and 485 men indicated what their annual wage earnings were; this survey examines the wages of those respondents.

![Respondents by Sector](image)

The private sector accounted for 82.3% of the respondents (61.3% work for for-profit businesses; 6.2% work for non-profits; 12.6% are self-employed; 2.2% work in the family business). Only 3965 respondents, 2210 men and 1756 women, disclosed what their annual pay rates were. This survey also examined their pay differences, but concentrates on the pay differences between men and women in the public sector.

Private sector pay differences were calculated to compare the gender pay gap to the public sector and determine if the public sector is setting an example on pay equity or if improvements need to be made so that women are paid equal pay for equal work.
Wage Rates for Men and Women in the Public Sector:

Analysis of the Washington State Population Survey data revealed that individual's sex does significantly affect his/her pay rate in the public sector\(^1\). The women's average annual income in the public sector was $32,149.17 while men earned $38,908.32. While, statistically, the pay difference is significant, substantively, the difference does not seem large. This might suggest that while there still are wage disparities between men and women that the government sector is on the right track to remedying the inequity and is serving as an adequate example to the private sector on such matters. It is important to note though, that men, on average are paid anywhere from $3,817.98 to $9,700.31 more than women annually. That difference is still large enough to interest the Department of Personnel in conducting a follow-up survey of government workers in Washington State.

Public Sector Income: Women vs. Men

![Bar chart showing mean 1997 personal earnings](chart)

Mean 1997 PERSONAL EARNINGS (constructed)

**Cases weighted by WEIGHTS2**

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\(^1\) Based on a two-tailed t-test at a .05 significance level. The t-value for male income versus female income in the public sector was 4.51 with a p-value of 7.24101E-06, meaning that it is unlikely we would get these results if it were true that men and women in the public sector were paid the same rate.
Initial tests revealed a much larger pay discrepancies between the sexes. Those differences suggested that men made anywhere from $10,970.75 to $47043.80 more than women did. These results seemed somewhat alarming, but not totally unexpected since the survey data was not broken down for work schedules or job scope. At that point, the data was re-examined and recoded for public and private sectors to make sure no mistakes were made. When the average annual wages of men and women in the public were compared one more time it was indicated that the difference was much smaller, but still statistically significant.

As noted before, Department of Personnel should conduct a follow up of the Washington respondents to determine which government agency the public sector respondents belong to. It is important to separately examine the wage information for federal, state and local governmental entities. On the federal level almost all employees are subject to the General Services (GS) wage levels and pay steps. Part of the reason the GS levels were instituted was to avoid pay discrepancies between men and women. All jobs are tied to beginning GS levels of pay. If a new employee has the civil service required experience they will start at the slated GS level whether male or female. Given that fact, federal government employees may be skewing the results to show a more equitable distribution of wage rates. The disparity may increase if the federal employees were removed from the survey. The constraints on the data set will be discussed in more detail later in the paper.

It also important that the Department of Personnel do a follow up survey to determine the number of men and women in the public sector that are working full time versus part time. The data set did not allow for such a comparison. A direct comparison of similar work schedules would allow our office to better assess any differences in pay.

**Wage Rates for Men and Women in the Public Sector:**

Prior tests indicated that the wage differences between men and women in the public sector were significant, although appearing less significant, substantively speaking. In order to determine if, indeed, the public sector was addressing the pay inequity issue this study compared the average annual wages of the private sector based on gender. The table on the following page outlines the results.


<table>
<thead>
<tr>
<th>Pvt. Sector: Avg Annual Income by Sex</th>
<th>Gender</th>
<th>Sample Size</th>
<th>Average Annual Wage</th>
<th>Std. Deviation From Avg Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997 PERSONAL EARNINGS (constructed)</td>
<td>Men</td>
<td>2210</td>
<td>$50,213.90</td>
<td>$124,430.13</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1756</td>
<td>$27,220.00</td>
<td>$39,407.16</td>
</tr>
</tbody>
</table>

The results also revealed that men in the private sector make on average between $16,943.88 and $29,043.92 more than women did on an annual basis. As with the public sector, this study was not able to compare wages based on work schedules or job scope in the private sector. Admittedly this could have made a difference in the pay difference from men to women. Another matter to address is that more individuals in the private sector were willing to disclose their wage information in the survey. The larger sample for the private sector may lead to a more accurate comparison of wages across genders than the wage comparison for the public sector.

On the whole, though, what these results seem to suggest is that the public sector has much less of a pay disparity between the genders. While the Department of Personnel does not have direct control over the private sector it may want to use the government pay differences as an example that the private sector should strive for.

The best thing to do at this point to stress a need to increase female pay rates would be to compare women's wages across both sectors to show the differences in pay rates. This study found that what sector a woman worked in significantly affected her wage rate. That is to say that if she worked in the public sector she earned more than if she worked in the private sector. Women who worked in the public sector made on average $1,391.87 to $8,466.47 more than women in the private sector do. Specifically, women in the public sector make $32,149.17 while women in the private sector make $27,220.00. Substantively this may not appear to be large, but when this information is combined with the wage difference between the sexes in the private sector the value of the dollar difference rises. It begins to suggest that the private sector is not addressing the wage disparities between men and women.

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2 Based on a two-tailed t-test at a .05 significance level. The t-value for male income versus female income in the private sector was 7.451 with a p-value of 2.04E-14, meaning that it is unlikely we would get these results if it were true that men and women in the private sector were paid the same rate.

3 Based on a two-tailed t-test at a .05 significance level. The t-value for public sector female income versus private sector female income was 2.74 with a p-value of .0063, meaning that it is unlikely we would get these results if it were true that women in the public and private sector were paid the same rate.
Data Set Constraints:

The Washington State Population Survey attempted to cover many aspects of the citizens it surveyed. There are some points of information that the data set failed to reveal. The data set did not allow for a direct comparison of full time and part time employees in either sector. This study tried to re-code the weekly hours to generate a full time/part time comparison but found the information inadequate. The wage comparisons between genders and across sectors would be more meaningful if we could account for work schedules.

The data also failed to address the scope of a position. Without any reference to the kind of job an individual holds it is difficult to discern if we are comparing wages for positions with similar duties and responsibilities. For example, we were not able to examine the wage rates for a male administrative assistant versus a female administrative assistant. Comparing the wage rates for similar positions be far more revealing about kind of wage rates paid to men versus women.

Another constraint of the data set is the number of respondents willing to disclose their wage information. The survey indicated that a total of 468,420 respondents worked for the government but only 1035 of them gave wage information. The wage comparison would have been more reliable if more government employees responded to the wage question. As for the private sector, while the absolute number of respondents who disclosed their wage figures was larger than the public sector, they too lost a large number of respondent information to compare wage data against. Specifically, 2,175,297 private sector employees responded to the survey, but only 3,965 provided wage information. This is not to say that the wage comparison by gender are invalid because of small sample sizes, simply the larger the sample the stronger the results would have been.

As discussed before the data set does not breakdown the government respondents into federal state and local. This breakdown would have allowed a more detailed study of the wage rates paid to men and women at each level. It may be that most of the respondents that reported their wage rates were federal employees subject to GS levels of pay. It would behoove the Department of Personnel to study the pay rates at each level to determine if wage disparities tend to occur at the state, local or federal level. It may be that wage differences are more apparent at the local level and must be addressed more aggressively at that level.

Also, this survey does not address the issue of jobs that are typically held by women versus those jobs that are typically held by men. For example, are
there more female administrative assistants than male administrative assistants. Or are there more males in management positions than females in management positions. Since management positions tend to pay more than administrative position whichever gender tends to dominate the management position will end up with a higher average annual salary information.

Level of education might also affect an individual's wage rate, but this study was not able to account for it while comparing wage information for men and women in the public sector.

**Recommendations:**

As stated before the Department of Personnel should conduct a follow-up survey to determine pay differences between men and women based on what level of government he or she works in. It is also recommended that during the follow-up survey the Department obtain the hours associated with the annual pay rates. Hourly wage rates would allow for a better comparison of rate differences. The Department of Personnel should also collect information on job scope so that future studies can compare like occupations. Similar studies are done on the national level by organizations like the Bureau of Labor Statistics which is proof that such comparisons can be done therefore such studies can be used as models. If our further analysis reveals wage discrimination between male and female public sector employees at the state or local level we must demand action from our Department. We must issue a directive that corrects the pay differences for comparable occupations. Such a directive will not be easy to enact or enforce, but it is our duty as a public office to serve as an example to the private sector on pay equity.

Good follow up info - but you should include some recs on what to do w/ this information you found. Also, be careful about using sample info as if it's pop data. Need a conf. Int. every time you talk about all public sector or all women.