Technical Affairs

by Mike Aamodt, Associate Editor

I am excited to start this month's column with the news that the fall issue of *Applied HRM Research*—the new online journal sponsored by IPMAAC and Radford University—is up and ready to go. You can view the journal at www.radford.edu/~applyhrm or you can use the link from the IPMAAC homepage (www.ipmaac.org). This month's column answers a reader's question about pay equity and contains another piece of HR humor.

Question

In our organization, male employees make more than female employees. I say this is a sign of pay discrimination, but my boss (the HR director) says it is not. Who is right?

Answer

Both of you could be right. The first step in conducting a salary equity analysis is to see if the average salary for males differs from the average salary for females. This analysis is conducted for each pay grade, not the organization as a whole. Whether you choose to analyze differences in **mean** or **median** salaries is a function of the number of employees in each grade. A good rule of thumb is to use the median when there are few employees in a grade and the mean when there are 20 or more employees in the grade and at least 4 males and 4 females in the grade. A *t*-test would then be used to test the significance of the differences between the means and a Fischer's exact test to test the significance of the differences between the medians.

If your statistical tests indicate no significant differences between males and females, you can conclude that pay discrimination probably does not exist. If the differences in salaries are statistically significant, you need to determine if these differences can be explained by such merit factors as the amount of time an employee has been with the organization, education level, or performance ratings. If there are at least 30 employees in the grade (this is my rule of thumb), this can be done through a hierarchical regression. If there are fewer than 30, a DuBray Analysis can be used.

With the hierarchical regression, the first step is to enter your merit variables into the equation to determine what percentage of individual differences in pay they explain. The second step is to enter sex (coded 0 for males, 1 for females) into the equation to determine if after controlling for the merit variables, an employee's sex is still related to pay. That is, suppose that the average salary for males in Grade 8 is $27,000 and for females $24,000. It may be that this $3,000 difference can be explained by the fact that the average male in the grade has been with the organization five years longer than the average female in the grade. The results of your regression will determine if your salary differences can be fully explained, partially explained, or not explained by differences in the merit variables.

With the DuBray Analysis, you visually compare the degree of gender differences in salary with the degree of gender differences in the merit variables using a chart such as that shown below. As you can see in the chart, the 12.5% difference in salaries can be explained by the 13.9% difference in average tenure. In grade 7, however, differences in tenure and performance ratings are too small to account for the 14.3% difference in salary. Though the DuBray analysis is easy to use, it ignores relationships among variables and thus can result in inaccurate interpretations.

Variable				
	Males	Females	Difference	% Difference
Grade 6				
Average salary	$27,000	$24,000	$3,000	12.5
Average tenure	12.3	10.8	1.5	13.9
Average performance rating	4.3	4.1	0.2	4.9
Grade 7				
Average salary	$31,000	$28,000	$4,000	14.3
Average tenure	8.3	8.1	0.2	2.5
Average performance rating	4.4	4.4	0.0	0.0

If the results of the regression or DuBray analysis indicate that the merit variables do not explain gender differences in salary, one still cannot conclude that discrimination has occurred. It could be that there are valid explanations for the differences (e.g., the economy at the time of hire) that were not entered into the equation. However, in the absence of a valid explanation, salary adjustments may be in order.

Salary adjustments are done by entering the merit variables for each employee into a regression equation to estimate what the employee "should" be making. For this approach to be reliable, the merit variables should account for a statistically significant percentage of the

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individual differences in salary. Any employee whose actual salary is two standard errors (my rule of thumb) below his or her predicted salary is a potential candidate for a salary adjustment.

Mike Aamodt, a Professor of Psychology at Radford University serves as our Associate Editor for the Technical Affairs column and as our unofficial humor editor. If you have a technical question you want answered/discussed, wish to comment on this month's article, or want to share a humor item please contact Mike. He may be reached by email (maamodt@runet.edu), phone (540) 831-5513 or fax (540) 831-6113. —ACN

HR Humor

Why Cross-Training is Important

On his way to work a County HR director stopped at a traffic light. As he waited for the light to turn green, he watched two men working. One man would dig a hole two or three feet deep and then move on. The other man came along behind him and filled in the hold. While one was digging the hole, the other was about 25 feet behind filling in the old hole.

The HR director walked over asked the men "Can you tell me what's going on here?"

"Well we work for the county government," said one of the men.

"But one of you is digging the hold and the other is filling it up. You're not accomplishing anything. Aren't you wasting the taxpayers' money?"

"You don't understand, mister." one of the men said, leaning on his shovel and wiping his brow. "Normally there are three of us: me, Joe, and Fred. I dig the hold, Joe sticks in the tree, and Fred here puts the dirt back."

"Yea," piped up Fred, "Our supervisor told us that just because Joe is sick, doesn't mean that we can't do our jobs, does it?"