

Pay System Gender Neutrality

I wrote my first paper on the gender wage gap the year before my daughter's birth, but as she now contemplates attending college, I contemplate her post-graduation work life.

Will she enter a gender-neutral labor market embodying no gender wage gap? Or, simply stated, will she be paid fairly at work?

The biblical book of Leviticus may offer the earliest acknowledgement of a wage gap between men and women: "thy estimation shall be of the male ... fifty shekels of silver ... if it be female, then thy valuation shall be thirty shekels" (King James version, Leviticus 27:1-8). But it was Fran-

cine Blau's "Equal Pay in the Office" (1977) that laid out some of the seminal research on gender differences in labor market outcomes. Blau and other pioneering researchers established decades ago that the gender pay gap (then around 40 percent) could not be ignored by academic economists. A generation of workers later, the gender pay gap in the United States is narrowed. But, according to Blau and Lawrence Kahn, gains stalled in the mid-1990s ("Gender Differences in Pay," *Journal of Economic Perspectives*, 2000, 14, Fall).

Many organizations are concerned with whether their individual pay systems are gender neutral, but it is not easy to test robustly a pay system's gender neutrality (or neutrality with respect to any dimension of diversity for that matter). To build such a test requires consideration of several issues, including control variables, occupational patterns, statistical specifications, and the often-overlooked difference between wage and salary income and total compensation.

An Example

Consider an organization of 1,000 employees where the average pay of female employees is \$50,000 and that of male employees is \$60,000. On average, male employees of



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the company earn 20 percent more than female employees. But this simple and unadjusted wage gap calculation is just the start. Until we adjust for each employee's occupation, rank, productivity and other factors, along with gender, we haven't learned much about the neutrality of the pay system.

Control Variables, Including Occupation and Rank

Suppose that the organization in our example has three ranks of employees — assistant, associate and senior — and is arranged into divisions such as finance, technical, creative and sales. Rank and division may be factors that explain why some employees earn more and others less. The impact of gender must be separated from other explanations; in statistical jargon, we must condition on or control for rank and division.

Suppose that after statistically removing the impact of rank and division, there is no difference in average male and female pay. Does this mean that conditional (only) on rank and division, men and women are paid the same? Yes. Does that mean that there is equality and no discrimination? Not necessarily.

There are many complicating factors. Men could be congregated in higher-paid ranks (e.g., senior) and divisions (e.g., finance), and women in lower-paid ones. Controlling for rank and division reveals whether men and women are paid the same within these measurable job characteristics, but a measured zero wage gap does not prove there is no discrimination in promotion, recruitment or selection.

Statistical Specifications

Of course, there are also important but nuanced statistical issues to consider when testing whether pay systems are

gender neutral. For example, should pay be measured in levels (as many organizations do) or in logarithms (as most economists do)? Should employee age and hours worked be measured in a continuous way or lumped into categories (e.g., decades for age or part time/full time for hours worked)? And, how might these decisions affect the estimate of neutrality? Many statistical issues are not complicated. Most can be explained in simple, intuitive language, and handled right if confronted objectively.

Wage and Salary Income Versus Total Compensation

Let's suppose that your company has a strong system for considering pay gaps, including command of the occupational and statistical issues discussed, appropriate and credible control variables and compatible HR systems. There is still something more to consider. Everyone agrees that total rewards should be the real focus of compensation, not just wage or salary (cash) pay. Yet, most organizations fail to consider whether there are gaps in total compensation by gender.

A very interesting new study to estimate the U.S. gender compensation gap is under way by Cornell Ph.D. student Chen Zhao ("Is the Gender Compensation Gap Smaller Than the Gender Wage Gap?", unpublished manuscript, Cornell University, February 2011). Zhao uses publicly available data to estimate employer-provided health and other benefits for a more complete measure of total pay. Obviously, individual organizations have much better measures of total employee compensation than researchers like Zhao can get from aggregated national survey data.

A company I worked with differentiated itself in the talent market by assigning the total pay level of each of its employees but then letting the employees pick the mix of pay (e.g., how much in cash, at-risk bonus and stock options). Let each employee choose the kind of pay he/she values most, as long as it all still costs the same to the company. In this case study, I determined that women and men chose to receive their compensation in a significantly different mix.

I look forward to more organizations concentrating on this in the years to come, and a further advanced world of work for the coming generation of employees. **WR**

Hallock to Chair New Cornell-Wide Economics Department

Beginning with the 2012-2013 academic year, Professor Kevin F. Hallock, author of *workspan's* Research for the Real World, Joseph R. Rich '80 Professor and director of the Institute for Compensation Studies, will become chairperson of the newly formed Cornell University Economics Department. The new departmental structure will, for the first time, combine all economics faculty from the College of Arts and Sciences and all labor economists from the ILR School, along with selected distinguished professors from Johnson, the Charles H. Dyson School of Applied Economics and Management and the College of Human Ecology's Department of Policy Analysis and Management (PAM), who will hold joint appointments.



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