Minimizing negative distributional effects of public sector downsizing

Downsizing has different impacts on men and women. Negative distributional consequences can be minimized using the Downsizing Options Simulation Exercise (DOSE) developed by the World Bank.

Downsizing programs are an important part of many public sector reforms supported by the World Bank. Although these programs can reduce budget deficits and address inefficiencies caused by state-led development strategies, many observers are concerned about the political and social consequences of mass layoffs as well as the disproportionate share of the losses that some groups of workers may bear.

This note examines the differing possible impacts of downsizing on male and female employees and the consequences for households and the economy at large. After discussing why the distributional consequences of downsizing are important, the note introduces a simple tool that can be used in the design of downsizing programs to minimize negative distributional consequences. Although this note focuses on the differing effects of downsizing on men and women, similar concerns apply to other categories of workers (such as different ethnic groups). This tool can easily be adapted to minimize the negative distributional consequences for other groups as well.

Downsizing affects women and men differently

Downsizing can have differing effects on male and female employees for two reasons. First, layoffs are rarely distributed evenly among male and female employees. Second, there tend to be systematic differences in the welfare loss experienced by laid-off men and women. Experience in a range of countries shows that, in most cases, women suffer greater losses in both income and non-monetary benefits.

Why is one sex disproportionately laid off? In most programs, laid-off workers are overwhelmingly male or female, rather than evenly distributed. This is because:

- Female workers tend to be concentrated in the public sector.
- Within the public sector, male and female workers tend to work in different departments.
- Within departments, male and female workers tend to have different types of jobs, contracts, and levels of seniority.

In many developing countries, women are more likely than men to be employed in the public sector, even where there may be a larger absolute number of male public sector employees. Female overrepresentation in the public sector is due to a variety of factors. In some countries, such as Egypt, hiring discrimination makes finding a formal private sector job very difficult for women (Assaad and Arntz 2003). Many governments, on the other hand, have explicit or implicit affirmative action policies to increase the number of women hired. In addition, female workers in developing countries may prefer to work in the public sector rather than in the private sector. This is because the public sector tends to offer greater sex-specific benefits, such as maternity leave, as well as higher wages. In fact, the public sector wage
premium—the ratio of public sector wages to private sector wages—is often higher for women than for men (table 1).

Within the public sector, men and women tend to work in different departments and ministries. Men dominate in the military and in heavy industry state-owned enterprises. Women often dominate in education, health, and light industry enterprises. Because downsizing programs tend to focus on specific parts of the public sector, they usually involve disproportionate layoffs of one sex. For example, Vietnam’s retrenchment program of the early 1990s focused on state manufacturing. As a result, 70 percent of laid-off workers were female. In contrast, Vietnam’s more recent round of layoffs is aimed at transportation, construction, and energy—sectors dominated by men.

Within departments, workers with low seniority and low skills—characteristics common among female employees—are often selected for layoffs. In Ghana’s downsizing program of the early 1990s, women accounted for more than half of those laid off because they tended to have fewer years of experience in the civil service (Alderman, Canagarajah, and Younger 1996). Similarly, women predominate among workers on short-term and temporary contracts. Discrimination may also play a role, because of assumptions about families’ reliance on a woman’s income or about her dedication to the job versus her family.

Why are layoffs harder on women?

Women who are laid off from public sector jobs often have more difficulty than their male colleagues in finding a new job. In Vietnam, a year after layoffs, only 14 percent of women had found new jobs, compared to 22 percent of men (Rama 2002). The numbers are even more extreme in Ghana (Alderman, Canagarajah, and Younger 1996). Presumably, the same lack of satisfactory employment opportunities also contributes to individuals dropping out of the labor force. Again looking at Vietnam, 42 percent of laid-off women left the labor force, compared to 36 percent of men (Rama 2002).

Those men and women who do find new jobs generally suffer a loss in earnings as they move into the private sector. Because the public sector wage premium is generally larger for women than for men (see table 1), their loss in earnings also tends to be larger.

The wage ratios in table 1 do not control for productivity differences or level of education, but studies that control for these factors also find evidence of greater wage discrimination in the private sector, causing women to experience a greater loss in earnings than men. In Vietnam, even after the study controlled for productive characteristics, women in the public sector earned 18 percent less than men, while in the private sector they earned 26 percent less (Rama 2002). In their Uganda study, Appleton, Hoddinott, and Krishnan (1999) divided the wage gap into the part explained by productive characteristics and the unexplained remainder, which may represent discrimination. They found that in the public sector, 59 percent of the wage gap remained unexplained, while a far higher 96 percent remains unexplained in the private sector.

The most direct evidence of the relative loss in income for men versus women comes from studies of public sector downsizing. The left-hand panel in table 2 shows the determinants of earnings loss in four public sector downsizing programs. In both Ecuador and Ghana, women suffered a greater earnings loss even after controlling for worker characteristics. In Ecuador, a woman’s earnings loss was 30 percentage points higher than that of a comparable male colleague (Rama and MacIsaac 1999). In contrast, in Slovenia, women suffered a smaller loss than men and, in Turkey, their loss was the same.

As noted earlier, one reason that women are overrepresented among public sector workers is that the private sector generally

#### Table 1: Ratios of public sector to private sector wages

<table>
<thead>
<tr>
<th>Country</th>
<th>Female workers</th>
<th>Male workers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt, civil service</td>
<td>1.63</td>
<td>1.22</td>
</tr>
<tr>
<td>Egypt, state-owned enterprises</td>
<td>1.97</td>
<td>1.68</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>2.54</td>
<td>1.74</td>
</tr>
<tr>
<td>Uganda</td>
<td>1.13</td>
<td>1.05</td>
</tr>
</tbody>
</table>

*Source: Appleton, Hoddinott, and Krishnan 1999; Assaad 1999.*
Poorly designed downsizing programs can result in an economy moving from one type of labor misallocation to another. Research indicates that this is what happened in rural areas of Egypt after economic reforms eliminated guaranteed civil service employment for graduates of secondary and higher education institutions. While educated men who were previously eligible for guaranteed public sector employment have found jobs in the private sector, their female counterparts have moved into very low-productivity subsistence agriculture or have left the labor market (Assaad and Arntz 2003).

**Do the differences matter?**

There are at least two reasons to care about the disproportionately negative effects on women of public sector downsizing programs. First, the income of female workers is important to household welfare. Although male workers tend to contribute more to household income than do females, the relevant issue is the income lost. The evidence cited above suggests that laid-off female public sector employees may spend more time unemployed and the gap between the wages earned in their public sector job versus their private sector job will generally be larger. Furthermore, studies from a diverse set of countries indicate that increasing a woman’s share of household income (controlling for total household income) significantly increases the share of the household budget allocated to children’s education, health, and nutrition-related expenditures (World Bank 2001).

Second, disproportionate layoffs of women, coupled with private sector discrimination, can result in an economy moving from one type of labor misallocation (an oversized public sector) to another type of labor misallocation, in which educated female workers are forced into low-productivity activities or leave the labor force altogether. How can negative distributional consequences be minimized?

Most downsizing programs offer severance pay to make layoffs politically and legally acceptable and, often, to encourage workers to volunteer for them. Traditional severance packages are typically based on fairly arbitrary multiples of wages and seniority, with the resulting amount bearing little relation to the true losses that workers experience. In contrast, more tailored packages compensate workers in proportion to the welfare loss they experience from separation by taking into account the determinants of workers’ losses. As table 2 illustrates, wages are not necessarily a significant determinant of loss, while being female and having a lower level of education are often as important in determining loss as seniority. Tailored packages use a compensation formula that takes into account at least some of these significant determinants.

When compensating women directly for their greater losses from separation is not

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**Table 2 Determinants of Welfare Loss from Downsizing**

<table>
<thead>
<tr>
<th>Worker characteristic</th>
<th>Earnings loss</th>
<th>Total welfare loss (earnings and benefits)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ecuador, central bank</td>
<td>Ghana, civil service</td>
</tr>
<tr>
<td>Female</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Public sector wage</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Seniority</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Education</td>
<td>—</td>
<td>0</td>
</tr>
</tbody>
</table>

*Note: Statistical significance is indicated by + or –, while 0 indicates a nonsignificant coefficient and ? indicates a change in sign across specifications or groups of workers. When a variable was not included in the analysis, n.a. is reported.

*Source: Adapted from Rama 1999.*

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politically feasible, including a substantial lump-sum component in the severance package offered to all workers may be a solution. Simulations for Vietnam, using the Downsizing Options Simulation Exercise (DOSE) tool developed by the World Bank, suggest that, in comparison to packages based only on wages and seniority, a severance package involving a large lump-sum payment is less likely to penalize women (Rama 2002).

DOSE helps policymakers examine the distributional consequences of both traditional and tailored severance packages by simulating the acceptance rates that would be achieved by various packages (assuming layoffs are voluntary). The classification of “stayers” and “leavers” helps identify which groups of workers may be overcompensated or undercompensated by the packages, allowing policymakers to minimize the negative distributional consequences of downsizing operations. Predicting which workers will leave also allows policymakers to tailor retraining and reemployment programs to the needs of specific groups.

Further reading


This note was written by Susan Razzaz (Senior Economist, Social and Economic Development Group, Middle East and North Africa Region). The author is grateful to Karen Mason, Nayantara Mukerji, Gurushri Swamy, and Alexandra van Selm for useful comments. The DOSE tool is available at http://gender.worldbank.org/economics/admin.htm. For more information about DOSE, contact Martin Rama at mrama@worldbank.org.

If you are interested in similar topics, consider joining the Gender and Development Thematic Group (contact Wendy Wakeman, x33994) or the Administrative and Civil Service Reform Thematic (contact Ranjana Mukherjee, x34301). For more information, click on Thematic Groups on PREMnet.