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U.S. Gender Pay Gap Reflects Overall Wage Inequality

On average, American women working full time got paid 69 percent of the weekly wage of men in 1988. Although improved from 58 percent in 1971 and 62 percent in 1981, this ratio is still lower than in most other industrialized countries.

According to a new NBER study by **Francine Blau** and **Lawrence Kahn**, this larger U.S. gender gap is not the result of more intense discrimination against U.S. women, nor of their having fewer job qualifications. Rather, it stems from greater overall pay inequality in the United States than in other countries, for men as well as women.

In **The Gender Earnings Gap: Some International Evidence** (*NBER Working Paper No. 4224*), Blau and Kahn report that, in the late 1980s, the ratio of female-to-male hourly wages was 80 to 90 percent in Australia, Denmark, France, New Zealand, Norway, and Sweden. Other countries in western Europe, and the United States, had ratios of roughly 65 to 75 percent, with the United States on the low side. Only Japan, with a ratio of 50 percent, had a consistently larger gap than the United States.

Blau and Kahn note that U.S. women compare favorably with women in other countries in terms of human capital and occupational status. In fact, American working women have greater labor force participation (except for Sweden's), and are more likely to work full time, than women in the other nine industrial countries in their study. Also, American women are less segregated into traditional female occupations, and the United States has had a longer and often stronger commitment to equal pay and equal employment opportunity than have most of the other industrialized countries.

Blau and Kahn explain that women are more likely to interrupt their careers to raise children than men are, so they fall behind men in years of work experience, training, and promotions. Their lower levels of labor skills and employment in less-favored sectors are then penalized by the U.S. wage structure to a greater degree than in other countries.

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Between 1971 and 1988, overall wage inequality grew markedly in the United States. Al-

though women's relative skills and treatment improved in those years, the growing overall inequality retarded the potential growth in women's relative wages by about 25 percent, Blau and Kahn estimate. They also find that the U.S. gender gap would be similar to that in other countries—such as Sweden, Italy, and Australia, the countries with the smallest gaps—if the United States had had their level of overall wage inequality.

Further, Blau and Kahn find that the labor market institutions that affect overall wage inequality have an extremely important effect on the gender earnings gap. The paysetting system in the United States is far less centralized than in the other countries, for example. U.S. unionization rates of 20.5 percent for male workers and 12.5 percent for female workers are considerably lower than elsewhere in the sample. Further, the U.S. collective bargaining process itself is very decentralized, with an emphasis on single-firm agreements, and the U.S. government exerts minimal intervention in wagesetting.

By contrast, in Sweden and Norway, where the great majority of workers are unionized, collective bargaining and wagesetting are very centralized. The major union federation signs agreements with the employers' federation covering a major portion of the labor force. These agreements have leveled the wage structure to a considerable degree. About 46 percent of employed Swedish women and 53 percent of employed Norwegian women work part time, versus only 24 percent of employed U.S. women. Yet despite this difference in labor market commitment, the centralized wagesetting system results in a considerably smaller gender gap in Sweden and Norway than in the United States.

Wage determination in Germany and Austria is also highly centralized. In most Austrian cases, collective bargaining agreements cover an entire industry or group of industries. There appears to be little room for interfirm differentials in negotiated wages among union workers, Blau and Kahn observe. Further, the terms of collective bargaining agreements extend to nonunion workers.

In Australia, minimum wages for various occupations are set by government tribunals. In Italy, about 40 percent of the labor force is unionized, and labor courts in Italy often extend the terms of collective agreements to nonunion workers. British workers are more than twice as likely to be unionized as those in the United States. But only 26 percent of all British workers had their wage set in multi-employer contracts or by wage councils. The remainder were covered by single-firm agreements, or had their wages determined by management. Thus, while wagesetting in the United Kingdom is less centralized than in most OECD countries, it is still more centralized than in the United States.

DRF

Delaying Tax Changes Allows Firms to Avoid Taxes

When tax rules change, taxpayers often shift their income and expenses to avoid paying some of the new taxes. Now an NBER study by **Myron Scholes, Peter Wilson,** and **Mark Wolfson** estimates that, through the early reporting of expenses and delayed reporting of sales, a typical publicly traded corporation was able to reduce its tax liabilities by about 2 percent when corporate tax rates were lowered during 1986–8.

> **"By postponing sales and accelerating pension contributions and spending on advertising and R and D, firms were able to move their reported profits into years when they were taxed at lower rates."**

In **Firms' Responses to Anticipated Reductions in Tax Rates: The Tax Reform Act of 1986** (*NBER Working Paper No. 4171*), Scholes, Wilson, and Wolfson examine the revenues and expenses of 812 publicly traded firms in 1986–8 when corporate tax rates fell from 46 to 34 percent. They note that, by postponing sales and accelerating pension contributions and spending on advertising and R and D, firms were able to move their reported profits into years when they were taxed at lower rates.

The authors estimate that the average firm in their sample shifted about $23 million in sales and

expenses, and avoided paying about $500,000 in taxes. Large firms were much more successful than small firms at this strategy. The average firm in the top 20 percent of their sample reduced its tax bill by $2.2 million. These firms had 88 percent of total sales of all the firms examined, and 98 percent of taxes avoided.

Scholes, Wilson, and Wolfson note that these estimates are probably conservative, since they do not include shifting of capital gains realizations or interest income. Also, these estimates include only shifting of sales or expenses during the quarters immediately surrounding the tax reduction, and not over longer periods.

Faster Disinflation Means Less Lost Output

Nations that act quickly to reduce inflation suffer smaller losses in total output than those that try to reduce inflation gradually, according to NBER researcher **Laurence Ball**. In fact, he finds, the "sacrifice ratio"—the ratio of the cumulative loss in output to the reduction in the inflation rate—is only half as high when disinflation is carried out twice as quickly.

Deliberate disinflations undertaken by central banks are a major cause of recessions in modern economies, perhaps the dominant cause. In **What Determines the Sacrifice Ratio?** (*NBER Working Paper No. 4306*), Ball notes that a significant tightening of monetary policy occurred near the start of every decline in inflation that he studies. Thus the choice of how fast to disinflate —the choice between gradualism and "cold turkey"—is a key issue for macroeconomic policymakers.

To decide which approach is less costly in terms of lost output, Ball examines all episodes of disinflation during 1960–91 in OECD countries for which reliable data are available and where trend inflation has stayed below 20 percent. Although there is wide variation in the ratios of lost output to reduced inflation, Ball finds that disinflation has significant costs in all but about 10 percent of the episodes.

The United States and Germany have the highest sacrifice ratios, with averages near 10. This means that each percentage point of reduction in the inflation rate results in the loss of 10 percent of a year's GNP. The United Kingdom, France, Japan, and Australia have low ratios, ranging from 3 to 4. Italy, Switzerland, and Canada, at 6 to 7, are in the middle.

Ball finds that the speed of disinflation is a significant determinant of the sacrifice ratio whether one looks at quarterly or annual data. In quarterly data, a 10 percentage point disinflation carried out over 10 quarters produces a sacrifice ratio of 2.6. Over 20 quarters, the sacrifice ratio is 5.7. Thus, faster disinflation produces substantially lower output losses.

Ball also examines the influence of different wagesetting institutions—such as the frequency with which wages are adjusted, the degree to which they are indexed, and the synchronization of adjustment across sectors—on the sacrifice ratio. Some authors have argued, for instance, that three-year staggered wage contracts in the United States make wages rigid, whereas one-year synchronized contracts make Japanese wages flexible. Ball finds that wage rigidity is in fact an important determinant of the sacrifice ratio.

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Three other factors have negative or inconclusive effects on the sacrifice ratio: the initial level of inflation in a country; the existence of "income policies" designed to control increases in wages and prices; and the relative "openness" of an economy: that is, the share of imports in total spending.

Although the sacrifice ratio is lower when disinflation is quick, Ball notes that policymakers still might choose gradualism in order to spread output losses over a longer period. At a minimum, he argues, his findings refute the view that gradual disinflation is costless. Ball's results also suggest that governments could lower the costs of disinflation considerably by encouraging flexibility in the wagesetting process, especially by limiting the length of labor contracts. RN

New NBER Book

Studies of Supply and Demand in Higher Education

Edited by Charles T. Clotfelter and Michael Rothschild, this is the second volume from the NBER's project on the economics of higher education. This book examines how colleges and universities compete within a marketplace; the trends in college enrollment, with special attention to race and ethnicity; the quality of students enrolling in graduate programs; and, how universities manage their endowments. It should be of interest to anyone concerned with higher education, and is priced at $45.

Clotfelter and Rothschild are both NBER research associates in public economics. Clotfelter is also a professor of public policy studies and economics at Duke University. Rothschild is a professor of economics and dean of the division of social sciences at the University of California, San Diego.

This volume may be ordered directly from the University of Chicago Press, Order Department, 11030 South Langley Avenue, Chicago, IL 60628. Academic discounts of 10 percent for individual volumes and 20 percent for standing orders for *all* NBER books published by the University of Chicago Press are available to university faculty; orders must be sent on university stationery.

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