

The NBER Digest

NATIONAL BUREAU OF
ECONOMIC RESEARCH, INC.

January 1989

Indexing State Income Taxes

Under a progressive tax system, in which tax rates rise with income, inflation pushes taxpayers into higher brackets even when their real incomes are constant. This "bracket creep" causes the share of income paid in taxes to increase automatically unless the tax system is adjusted or indexed regularly for inflation.

To eliminate bracket creep, ten states indexed their personal income tax systems between 1978 and 1982. However, seven of those ten states subsequently suspended their indexing laws for one or more years. NBER Research Associates **Daniel Feenberg** and **Harvey Rosen** find that states with more progressive marginal tax rates were more likely to index and stick with it than other states. On the other hand, states with high levels of per capita debt were less likely to index and more likely to renege on their promises to adjust their tax systems for inflation than other states.

In **Promises, Promises: The States' Experiences with Income Tax Indexing** (*NBER Working Paper No. 2712*), Feenberg and Rosen observe that states under financial stress are not likely to abandon so potentially important a source of revenue as bracket creep. Also, 60 percent of the states with indexing recently had passed laws limiting taxes or spending. Thus, Feenberg and Rosen conclude that indexing may be one of several means that states use to curtail the size of their public sectors.

Feenberg and Rosen find few obvious differences between the states that chose to index and those that did not. Indexing states are located in each ma-

ior geographical region and belong to varying political traditions—liberal states, like Minnesota and Oregon, and conservative states, like Arizona and South Carolina. Population, personal income per capita, general expenditures per capita, and deficits per capita are not correlated with indexing.

"States with high levels of per capita debt were less likely to index and more likely to renege on their promises to adjust their tax systems for inflation than other states."

The states that adopted indexing are Arizona, California, Colorado, Iowa, Maine, Minnesota, Montana, Oregon, South Carolina, and Wisconsin. Surprisingly, a number of them overindexed their income taxes. This overindexing occurred because federal income taxes paid are deductible on some state income tax returns. Since the federal tax system had no indexing before 1985, when dollar income went up, so did the federal tax deduction. Thus, real state income tax revenues would decrease during inflation.

Feenberg and Rosen speculate that the current high levels of federal debt, combined with the decrease in marginal tax rates associated with the Tax Reform Act of 1986, may lead to the repeal of indexing at a federal level. Other national governments, as well as U.S. states, have reneged on promises to index in the past, they point out. DF

Discrimination Against Married Women

Policies against hiring married women, or requiring that single women be dismissed when they marry, flourished when they saved firms money and disappeared when they were no longer cost-effective, according to a study by NBER Research Associate **Claudia Goldin**. The rise and fall of these "marriage bars" in part explains why most of the increase in the labor force participation rate of married white women occurred after World War II.

Marriage bars were adopted by firms and local school boards from the early 1900s until around 1950. In **Marriage Bars: Discrimination Against Married Women Workers, 1920s to 1950s** (*NBER Working Paper No. 2747*), Goldin reports that about 12 percent of the office firms in a 1931 sample had a formal policy of firing women workers when they married. One in four female office workers was affected by this policy. In that same sample, 29 percent of the firms had policies against hiring married women. Another 24 percent had policies that were less formal and more discretionary to bar the hiring of married women.

Surveys of local school boards beginning in 1928 show that 61 percent would not hire a married woman and 52 percent would not retain a woman who married, Goldin reports. These bars increased during the Depression so that by the eve of World War II, 87 percent of the school boards would not hire married women and 70 percent would not retain them. Goldin estimates that, at its height, the practice of not employing married women affected 75 percent of local school boards and more than 50 percent of all office workers.

"The practice of not employing married women affected 75 percent of local school boards and more than 50 percent of all office workers."

Large firms were more likely to have marriage bars than smaller firms, Goldin finds. She explains that "the bar against retaining single women at marriage emerged, in part, from the various policies of modern personnel departments." The large firms tended to have centralized hiring, promotions from within, and salary schedules that were often fixed and based on tenure with the firm. While young, single women could be hired at fairly low salaries, the firms' personnel policies guaranteed that their wages would rise if they stayed with the firm. Modern employment practices "made discretionary firing costly, and re-

sulted in salary scales and promotion procedures that severed the relationship between wages and productivity," Goldin writes. Therefore, firms may have used marriage bars to encourage turnover; if women's earnings could rise more rapidly with tenure than their productivity, firms would save money by encouraging them to leave. "There were few costs, and much to gain, from . . . the marriage bar in the 1920s, and the possible benefit grew during the Depression," Goldin concludes.

However, demographics put an end to this form of discrimination. Goldin calculates that the percentage of single women who were aged 16-24 and not in school was 3.6 times as great in 1900 as it was in 1960. In other words, the supply of young, female employees dipped dramatically during the first half of this century. Without an oversupply of labor, firms dropped the bars: from 1940-60, employment among married women aged 45-54 quadrupled, while the increase among women aged 25-34 was less than half as great.

Job Shopping, Job Training, and Wage Growth

During a typical 40-year career, the average American man holds ten jobs and doubles his pay. Most of the job and wage changes occur in the first decade after he enters the work force. In **Job Mobility and the Careers of Young Men** (*NBER Working Paper No. 2649*), NBER Research Associate **Robert Topel** and **Michael Ward** find that frequent job changes largely account for early pay gains. Those gains, in turn, encourage longer tenure. They comment, "the process of job changing, while apparently haphazard, is a critical phase in workers' moves toward the long-term, stable employment relations that characterize mature careers."

Attachment to the labor force is initially very weak, Topel and Ward observe. The average young worker changes jobs seven times in ten years. A typical job of a new entrant to the labor force lasts only about a year and a half. It ends, as often as not, in unemployment or exit from the labor force.

Pay is a key motive for switching employers at this stage, Topel and Ward find. They estimate that job shopping contributes more than one-third of early-career wage growth. Further, larger wage gains from switching jobs are associated with subsequent declines in mobility. Tenure lengthens with experience as well, they observe.

The pattern of on-the-job pay gains also influences mobility. Workers usually stay in jobs that have high wage growth and leave ones that do not. According to Topel and Ward, "Good matches tend to survive, and the decline in average mobility as experience accumulates is mainly attributable to locating such a match." In their view, job switching is an investment that enables young workers to gather information about job opportunities. More information leads to better employee-employer matches and therefore to stronger productivity and wage growth.

"The process of job changing, while apparently haphazard, is a critical phase in workers' moves toward the long-term, stable employment relations that characterize mature careers."

In contrast to Topel and Ward's focus on job shopping among young workers, NBER Research Associate **Jacob Mincer**, in his new study **Job Training, Wage Growth, and Labor Turnover** (*NBER Working Paper No. 2690*), emphasizes the role of on-the-job training for workers of all ages. He finds that workers who invest more on the job have steeper wage profiles and move less often than workers who engage in less training. This effect is considerably stronger for workers with more than 12 years of experience (around age 30) than for less experienced workers. Moreover, workers with more training have steeper wage growth than those who move more frequently, both on the job and over the longer run. Comments Mincer, "If . . . [matching] plays a role, it is a factor in addition to training."

Mincer demonstrates a link between in-house training, an investment in human capital by both the employer and the employee, and subsequent turnover and wage growth. He argues that workers who invest in training that is likely to be in part specific to the firm will find it costly to change jobs, since such training would raise wages in the firm more than elsewhere. Mincer does point out, however, that "training is more likely to be undertaken the more successful the match."

Topel and Ward track the careers of nearly 10,000 young workers selected from the Longitudinal Employee-Employer Data. The youngest worker in their sample is 18 and the oldest is 34. The database consists of quarterly reports of Social Security earnings and employment of one million individuals between 1957 and 1972. Mincer draws his sample of 1500 white men from the Panel Survey of Income Dynamics, a longitudinal database that reports the employment histories of several thousand individuals for intervals of up to 15 years. The 1976 and 1978 panel surveys include a measure of on-the-job training for the cur-

rent job. The measure is based on each employee's answer to the question, "On a job like yours, how long would it take the average person to become fully trained and qualified?" SN

Business Cycles and Exchange Rates

In 1973 there was a dramatic change in the world economic system, as many countries moved from the pegged exchange rate system of Bretton Woods to a floating rate system. The choice of an exchange rate system could be expected to affect macroeconomic quantities and economic fluctuations within a country, and the relationship among the economies of different countries. However, NBER Research Associate **Alan Stockman** and **Marianne Baxter** find that few of the changes in the world's economies over the last 15 years are in fact attributable to the change of exchange rate system.

In **Business Cycles and the Exchange Rate System: Some International Evidence** (*NBER Working Paper No. 2689*), Baxter and Stockman show that business cycles changed significantly in the 1970s, but those changes seem to be uncorrelated with the shift to floating exchange rates.

"Business cycles changed significantly in the 1970s, but those changes seem to be uncorrelated with the shift to floating exchange rates."

When Baxter and Stockman compare the characteristics of business cycles before and after 1973 in the major OECD countries, they find slower growth and higher volatility of both industrial production and consumption in the later, flexible rate period. They also find that, for most countries, fluctuations in production are correlated more highly with fluctuations in consumption *within* the country, but correlated less highly with fluctuations in production in other countries. In other words, business cycles after 1973 are more country-specific. Baxter and Stockman point out that "this appears to be contrary to theoretical predictions that, other things equal, increased openness of financial markets should lead to increased international correlation of business cycles."

One possible explanation for the country-specific cycles is that the "shocks" that induce cycles have become more country-specific, but this seems unlikely: the largest shocks in the 1970s were the international oil price shocks. A second possible explanation is that government policies have changed in a

way that isolates national output movements. However, Baxter and Stockman find that year-to-year changes in real government spending are *more* highly correlated across countries after 1973 than before. It seems unlikely, therefore, that government policies can explain the greater independence of cyclical movements.

Baxter and Stockman also study the behavior of the real exchange rate, imports, and exports for a large number of countries before and after 1973. The original sample of industrialized OECD countries is expanded to include many less-developed and industrializing countries. They find that only two of 41 countries had a significant decrease in the volatility of exports or imports after 1973, while this volatility increased in 19 countries. All of the industrialized countries with more volatile exports also had more volatile imports, but that was not true for most developing countries, perhaps because of their more specific export bases. The industrialized coun-

tries that belong to the European Monetary System (EMS) seemed to have lower trade volatility, but that could be caused either by their special exchange rate system or by some other aspect of the European Economic Community. The developing countries with fixed exchange rates show neither more nor less volatility in real trade than those countries with floating rates. Baxter and Stockman conclude that changes in the variability of real exchange rates and changes in the variability of trade are essentially independent of each other and of the exchange rate system.

For further evidence on the effect of exchange rate systems on macroeconomic performance, Baxter and Stockman study two historical episodes in detail: the switch in the Irish peg from Britain to the EMS in 1979, and the Canadian float against the U.S. dollar from 1951-62 and starting again in 1970. They conclude that real economic aggregates in those periods also were affected substantially by the exchange rate system.

NBER

The National Bureau of Economic Research is a private, non-profit research organization founded in 1920 and devoted to objective quantitative analysis of the American economy. Its officers are:

Chairman—Richard N. Rosett
Vice Chairman—George T. Conklin, Jr.
Treasurer—Charles A. Walworth

President and Chief Executive Officer—Martin Feldstein
Executive Director—Geoffrey Carliner
Director of Finance and Administration—Sam Parker

Contributions to the National Bureau are tax deductible. Inquiries concerning contributions may be addressed to Martin Feldstein, President, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138.

The NBER Digest summarizes selected Working Papers recently produced as part of the Bureau's program of research.

Working Papers are intended to make preliminary research results available to economists in the hope of encouraging discussion and suggestions for revision. The Digest is issued for similar informational purposes and to stimulate discussion of Working Papers before their final publication. Neither the Working Papers nor the Digest has been reviewed by the Board of Directors of the NBER. Preparation of the Digest is under the supervision of Donna Zerwitz. The articles indicated by DF and SN were prepared with the assistance of David Francis and Sylvia Nasar, respectively.

Individual copies of the NBER Working Papers summarized here (and others) are available free of charge to Corporate Associates and other supporters of the National Bureau. For all others, there is a charge of \$2.00 per paper requested. Prepayment is required for all orders under \$10.00. Please do not send cash. For further information, please contact: Working Papers, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138; (617) 868-3900. Abstracts of all current National Bureau Working Papers appear in the NBER Reporter.