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Do Lower Tax Rates Mean Less Revenue?

Lower tax rates do not necessarily mean lower tax revenues, according to NBER Faculty Research Fellow **Lawrence Lindsey**. Lindsey finds that the 1982 tax cut, which lowered the top rate from 70 to 50 percent, actually increased the taxes paid by upper-income individuals. Taxpayers in lower brackets also responded to the 1982 tax cut, but only enough so that about half of the potential cost in revenue of the tax cut was recovered.

In **Taxpayer Behavior and the Distribution of the 1982 Tax Cut** (*NBER Working Paper No. 1760*), Lindsey finds that the top 180,000 taxpayers (those with incomes over \$200,000) reported total income of \$58 billion. This was \$9.6 billion, or 20 percent, more taxable income than they would have reported under the pre-1982 higher tax rates. They paid \$27 billion in taxes on this income, or about \$600 million more with the new top rate of 50 percent than they would have paid under the earlier rates that ranged up to 70 percent.

In total, 47 percent of the potential cost of the tax rate reductions of 1982 was recouped because taxpayers increased the amount of taxable income they reported. Models of tax revenue and tax rates typically do not take this behavioral response into account; therefore, they overestimate the revenue effect of both increases and decreases in tax rates.

Estimating the Revenue-Maximizing Top Personal Tax Rate (*NBER Working Paper No. 1761*) extends this analysis to estimate the overall responsiveness of taxable income to tax rates and to find the top tax rate that would produce the most revenue. In this paper, Lindsey shows that the revenue-maximizing tax rate depends on the progressivity of the tax schedule. Under our current schedule, and with existing provisions for sheltering income

from taxation, a top rate of 43 percent would maximize revenue.

Lindsey cautions that the fact that taxable income responds to tax rates does not necessarily imply that labor supply or personal saving will also respond. The tax code covers many discretionary items such as business travel and entertainment, retirement contributions, and charitable giving. These items help to determine taxable income and are independently responsive to tax rates. Conversely, labor supply does not respond to tax rates sufficiently to account for increases in income of the magnitude that occurred in 1982. Therefore, much of the behavioral response to the code does not imply the kind of supply-side effects that are likely to increase the real growth of the economy.

Tax cuts also have important distributional consequences. When all tax rates are cut by the same percentage, reported income will increase by a larger proportion in the high tax brackets than in the low tax brackets. Thus, an across-the-board cut in rates will increase the share of total taxes paid by upper-income groups, as well as increasing their share of total reported income.

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After the 1982 tax rate cuts, for example, the share of taxes paid by the top 180,000 taxpayers rose to 9.7 percent from 8.5 percent. On the other hand, the share paid by taxpayers earning under \$20,000 fell from 15.9 percent under the high tax rates to 15.1

percent under the lower set of rates. The overall effect of the Economic Recovery Tax Act of 1981 was thus to increase the share of taxes paid by upper-income groups.

Upper-income groups paid higher taxes largely because they reported increases in three kinds of incomes: wages and salaries, business and professional income, and capital gains. The amount of wages and salaries reported is probably fairly discretionary for taxpayers in the top brackets because they may structure their total compensation package carefully to shift income between taxable salary and untaxed fringe benefits. The top 180,000 taxpayers reported salary income that was 20 percent, or \$5 billion, higher than before the tax cuts. Moreover, business and professional income for the same taxpayers was 88 percent higher than before the rate reductions.

Capital gains also turned out to be highly responsive to the tax rate. Groups with incomes over \$75,000 reported higher levels of capital gains while other groups reported lower levels of capital gains. Lindsey's analysis suggests that the top tax rate on capital gains that would generate maximum revenue is below the current 20 percent level. Reported interest and dividend income, on the other hand, does not appear to respond to the taxpayer's marginal tax rate.

Lindsey's analysis of the 1982 reductions in tax rates used NBER's TAXSIM model. Like the Tax Calculator at the Department of the Treasury, this computerized model relies on a detailed data base of actual tax returns. The NBER model is sufficiently flexible to analyze the effects of changes in the tax code, varying macroeconomic conditions, and parameters that describe the behavioral response of taxpayers to their tax situation. This flexibility permits comparison of the actual reported income of taxpayers to income levels that would have occurred with no behavioral response by taxpayers and macroeconomic conditions that stayed constant. The analysis therefore separates out the macroeconomic feedbacks of tax cuts from the behavior of individual taxpayers and measures only the effect of the tax cut based on individual responses.

Determinants of IRA Contributions

Congress passed the Employee Retirement Income Security Act in 1974 in part to encourage employees not covered by private pension plans to save for their retirement in individual retirement accounts (IRAs). The Economic Recovery Tax Act of

1981 extended the availability of IRAs to all employees with earned income, hoping to enhance the economic well-being of future retirees and to increase national saving. Now many individuals not covered by private pension plans have established IRAs.

However, NBER associates **Steven Venti** and **David Wise** find that persons without private pension plans are no more likely to contribute to an IRA than are those with pensions (if income and other individual characteristics are equal). If anything, those with private plans contribute more than those without them, the authors note in **The Determinants of IRA Contributions and the Effect of Limit Changes** (*NBER Working Paper No. 1731*). IRAs in general are not a substitute for private pension plans, the authors conclude.

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The question of contributing to an IRA and the amount of contribution are both determined in large part by income and to a lesser extent by demographics, Venti and Wise note. Persons with low incomes are unlikely to have IRAs: only 5 percent of those with income less than \$10,000 made IRA contributions in 1982. If they do have IRAs, they tend to contribute less than wealthier individuals do. Although 32 percent of employed persons in the United States have incomes below \$10,000, this group is responsible for only about 10 percent of total IRA contributions. Indeed, most IRA contributions are made by middle-income employees. Those with incomes between \$10,000 and \$50,000 account for about 80 percent of total IRA contributions. Individuals with incomes above \$50,000 contribute only about 10 percent of the IRA total.

Under current law, any employee with earned income of \$2000 or more can contribute up to \$2000 to an IRA each year; tax on the principal and interest is deferred until the money is withdrawn. An employee and a nonworking spouse who file joint federal tax returns may open a Spousal IRA, in addition to the employee's IRA; they may contribute as much as \$2250 a year to the two IRAs. If a married couple are both working, each spouse may have a separate IRA and contribute up to \$2000 per year.

IRA contributions on average range from \$75 per person (with or without an IRA) for the lowest income group (less than \$10,000) to \$1116 for those with incomes above \$70,000, Venti and Wise find. However, the average IRA contribution is between \$1157 and \$1883. This suggests that among IRA contributors, a large proportion of each income group contributes at the limit, Venti and Wise conclude. Indeed, at very high income levels, 85 to 90 percent contribute the maximum allowable amount. Moreover, individuals covered by private pension

plans are likely to make somewhat larger contributions than those who are not and are more likely to contribute the maximum allowed.

Venti and Wise point out that a \$2000 contribution to an IRA will yield a future pension benefit greater than many employer-provided private pension plans. In addition, they note, the availability of IRAs may substantially stimulate national saving. According to Internal Revenue Service data, total IRA contributions in 1982 were over \$29 billion.

The authors go on to simulate the effect of potential changes in contribution limits on the amount that is contributed to IRAs. The original Treasury tax reform plan for 1984 and the modified plan of the spring of 1985 both proposed substantial boosts in the maximum amount an individual could contribute to an IRA. If the less generous, modified Treasury plan became law, it would increase the limit faced by married-one-earner families by \$750 to \$3000. (The original Treasury plan would have increased the limit to \$5000.) This would increase average contributions of one-earner families by about 75 percent, an amount about one-third as large as simulated under the original Treasury plan.

Despite the large size of the IRA program, and its potential economic significance, surprisingly little was known about what determines IRA contributions before the Venti and Wise study was published. They used data from a special supplement to the May 1983 Current Population Survey to find out the attributes of those persons contributing to IRAs and the effect of those attributes on how much is contributed. They also compared the results of a similar analysis based on Canadian data with their results for the United States; the Canadian numbers yield similar findings to those based on U.S. data, Venti and Wise report.

DF

Changing U.S. Marriage Patterns

Since the late 1960s, the rate of first marriage has declined substantially in the United States. Some social scientists believe that people are simply delaying marriage, while others are convinced that the incidence of marriage is falling. In a study for NBER, **David Bloom** and **Neil Bennett** find that both theories are correct: fewer people are marrying *and*, among women who eventually marry, there is some tendency to delay the first marriage. In **Marriage Patterns in the United States** (NBER Working Paper No. 1701), Bloom and Bennett also report that race is highly correlated with whether a woman marries,

while education is strongly associated with the timing of a woman's first marriage.

Bloom and Bennett find, for example, that, by 1982, 95 percent of women born between 1937 and 1941 had married at least once; for these women, the average age at first marriage was 21.2 years. In contrast, only 87 percent of women born 15 years later (1952-56) had married or were expected to marry. Their average age at first marriage was 21.8 years.

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Bloom and Bennett also find that the more education a woman has, the less likely she is to marry. Among women born between 1952 and 1956, 16.4 percent of those with more than a high school education are expected never to marry, while only 9.0 percent of those without a high school diploma are expected to remain single.

Over the past few decades, women with some post-high school education typically married two to three years later than women without high school diplomas. However, the positive association between education and foregone marriage is a recent development. Bloom and Bennett's results show that women born before 1947 who had more education were as likely to marry as those of their age group with less education.

Race, too, is a large and increasingly important correlate of a woman's likeliness to marry. Among women in their late 30s and 40s in 1982, the probability of ever marrying is about ten percentage points lower for blacks than for whites. However, for women in their late 20s, the racial difference in lifetime marriage probabilities is over 25 percentage points.

Bloom and Bennett's data come from the 1976 National Survey of Family Growth, the 1978 National Longitudinal Survey, and the June 1982 Current Population Survey. Each sample contains detailed information on the year of birth, race, education, and marital history of thousands of women.

Unemployment in the OECD

Contractionary economic policies have been the principal cause of extremely high unemployment in Western European countries during the 1980s, according to NBER Research Associate **Michael Bruno**. Countries in the European Economic Community

ended the 1970s with unemployment rates that averaged close to 7 percent; by the mid-1980s, their unemployment rates were approaching 11 percent. In contrast, the United States is virtually the only developed country whose unemployment rate in 1984 was more or less back to where it had been five and ten years earlier. It also has been the country with the most expansive fiscal policy.

In **Aggregate Supply and Demand Factors in OECD Unemployment: An Update** (*NBER Working Paper No. 1696*), Bruno reappraises earlier studies, including his own, of the rise in unemployment. Unemployment in the 1970s was generally viewed as a consequence of the 1973-74 and 1979-80 oil shocks: the very large increases in oil prices acted as supply shocks and boosted both inflation and unemployment. As a result of these supply shocks, real wages in many countries were higher than the marginal productivity of labor at full employment. By that view, the extent and duration of unemployment in different countries depended largely on the inability of real wages to adjust: the larger the gap between real wages and labor productivity at full employment, the higher the unemployment rate.

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Bruno's analysis indicates that this “wage gap” rose slightly in most OECD (Organization for Economic Cooperation and Development) countries in the early 1970s and rose sharply during the first oil shock in 1973-74. By the end of the decade, the weighted average of the wage gaps was 11 percent. But after 1980, the wage gap declined in most countries and

the declines accelerated in 1982 and 1983. Bruno's tests indicate that the only countries that still had large wage gaps by 1984 were Belgium, France, and the United Kingdom. If the wage gap were its only cause, unemployment should have been falling.

When Bruno examines the relative contributions to employment of the real wage gap and aggregate demand, he finds that wages played an important role mainly in the mid-1970s and primarily in Belgium, the United Kingdom, and Denmark. For the period since 1978, though, most of the increases in unemployment can be attributed to declines in aggregate demand caused by contractionary economic policies.

Bruno concludes his analysis by noting that the combination of fiscal expansion and monetary contraction in the United States may, at least in part, account for the reluctance of European governments to stimulate demand. The causal link is the exchange rate, he asserts. By Bruno's analysis, the real depreciation of European currencies relative to the dollar explains why inflation declined so much less on the continent than in the United States. It may also explain why Europe as a whole was reluctant to expand demand, fearing higher inflation, and instead adopted contractionary policies until very recently. Those policies helped support a slowdown in inflation in Europe, but at a formidable cost.

A country may be reluctant to expand by itself because it risks running into balance-of-payments problems and added pressure on its exchange rate (and inflation). For all countries to expand simultaneously, though, requires more coordination than seems politically feasible. Bruno notes that a turnaround in exchange rates, as occurred in 1985, could alleviate some of the pressure. On the other hand, too rapid expansion in the OECD countries runs the risk that the relative prices of industrial materials will rise again, but Bruno argues that that trade-off may be worth considering. AE

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