

# The NBER Digest

NATIONAL BUREAU OF  
ECONOMIC RESEARCH, INC.

April 1981

## Alternative Tax Treatments of the Family

There have long been so-called sin taxes on liquor, tobacco, and legal gambling. More recently, some controversy has centered on what could be called a *virtue* tax: the U.S. federal income tax is so structured that it sometimes is more expensive for a couple to get married than for them to simply live together.

However, until recently, the nation's tax authorities have had little knowledge of the potential impact on government revenues, personal incomes, or levels of work effort that any relevant change in this aspect of the tax system would prompt. **Daniel Feenberg**, a research economist with NBER, and **Harvey S. Rosen**, a research associate of the Bureau, have recently done a study of this subject, **Alternative Tax Treatments of the Family: Simulation Methodology and Results**, *Working Paper No. 497*. This work is part of NBER's Study of Behavioral Simulation in Tax Policy Analysis.

The selection of a taxable unit—the individual or the family—has been a source of controversy since the personal income tax was introduced in the United States in 1913. The choice has fluctuated over time, the authors note, and even now there is no strong societal consensus.

At present, single and married people face different tax schedules. The tax liability of married individuals is ordinarily based upon the couple's joint income. Consequently, when a couple gets married or divorced, tax burdens typically change. But one cannot predict automatically whether the tax load will go up or down. In general, the closer the incomes of a husband and wife, the more likely their tax liabilities will increase as compared to their tax liabilities before marriage.

One difficulty with the current system of joint tax filing is that each spouse is taxed, in effect, at the marginal rate (the highest tax rate) of the marriage partner. This, the critics say, discourages married women from entering the labor market.

In this paper, Feenberg and Rosen examine the im-

pact of alternative tax treatments of the family on the distribution of family income, government revenue collections, and the nation's labor supply. They use the TAXSIM file of the National Bureau of Economic Research—a detailed sample of 2,339 tax returns filed in 1974 that is adjusted to 1979 levels of income, deductions, and so on. A unique aspect of Feenberg and Rosen's study is that they allow changes in the tax system to influence women's labor market decisions. (In conformity with a number of earlier studies, it is assumed that husbands' hours of work are largely independent of the tax system.)

Feenberg and Rosen simulate the effect of four alternative tax policies:

- a. An exemption from taxation of 25 percent of the first \$10,000 of secondary workers' earnings.
- b. A tax credit of 10 percent on the first \$10,000 of secondary workers' earnings.
- c. Taxation of the husband and wife as single individuals with the tax base of each being half of total family income ("income splitting").
- d. A choice between taxation of the husband and wife as single individuals, with the tax base of each spouse being his or her own earnings plus one half of family unearned income; or the status quo.

The first two alternatives maintain the existing general framework for taxation of the family. They are attempts to ameliorate what some regard as an unduly high tax burden on the second income in a family. The last two, (c) and (d), are more serious departures from the status quo. Under regime (c), the tax unit is the individual, but the tax base is half of family income. Thus, all family income is split. Regime (d) attempts to make individuals rather than families the units of taxation and thus only unearned income—from stock dividends, interest, and the like, rather than wages—is split.

In general, the study finds that modest tinkering

with today's tax system, as shown by the first two alternatives, does not stimulate much extra work. The last, more dramatic alternatives have a greater impact.

Under alternative (a), the secondary worker would work thirty-four more hours per year, on average, than under the current tax system. This is especially true for families with high incomes, as these have greater tax savings. For example, in the case of families with gross adjusted incomes ranging from \$50,000 to \$100,000, annual work hours increase by slightly more than fifty hours. On average, tax collections from couples fall by about 5 percent with this alternative. However, the extra work stimulated by the tax break increases the tax base sufficiently to restore one fifth of the shortfall in tax revenues. This is a substantial amount, but a far cry from the claims of some that tax reductions on earned income will be self-financing, the authors find.

Under alternative (b), work effort changes only slightly and mostly in a negative direction. It turns out that in this case, the tendency of people to work less hard when their income rises cancels out any encouragement from reduced taxes to work longer hours. Further, government revenues drop a little more with this tax credit alternative than with the tax exemption in alternative (a).

---

**“One difficulty with the current system of joint tax filing is that each spouse is taxed, in effect, at the marginal rate ... of the marriage partner.”**

---

With alternative (c), complete income splitting using today's tax tables, tax revenue from couples drops substantially—about \$28 billion for 1979. On average, secondary workers are willing to work about forty additional hours. This tendency is particularly strong for upper income groups. In some of the lower income groups, the tendency to work less if income rises overcomes the incentive to work longer because of lower taxes. Thus, comment the two economists, it is not safe to assume that labor supplies for different income groups will change in the same direction with a specific tax change. This tax-splitting alternative, incidentally, provides greater tax savings for families with one earner than for families where both husband and wife work. This is because the nonearner takes half the earner's income for tax purposes, putting the income in a lower tax bracket.

Under the fourth alternative, tax revenues from couples fall by more than 10 percent, since about half the families take advantage of individual filing to lower their tax liabilities. However, the system does generate a considerable amount of extra work—an average of about eighty hours per year.

In this case, the tax break, on average, for families with two earners is about 13 percent and only 8 per-

cent for families with one wage earner. Thus, the major advantage goes to couples no longer having to pay the “marriage tax.”

An important lesson of the Feenberg-Rosen study is that “back of the envelope” analyses of tax changes can easily prove misleading. With rough calculations, it is too difficult to take into account all the various tax intricacies that are incorporated in the simulation model. DF

## **Lifetime Jobs in the U.S. Economy**

Although high turnover and unemployment are serious problems in the U.S. labor market, an important fraction of workers have stable, near-lifetime jobs, according to a recent study by NBER Research Associate **Robert E. Hall**, who is professor of economics and senior fellow of the Hoover Institution, Stanford University. The finding of extensive long-term employment in the U.S. labor market adds to our interest in understanding long-term employment arrangements, Hall writes in *Working Paper No. 560, The Importance of Lifetime Jobs in the U.S. Economy*.

Hall uses data on job tenure—that is, the length of time workers have been employed in their current job—collected in six Current Population Surveys conducted in the postwar period. Roughly 100,000 workers are surveyed each time. In these surveys, a job is defined as continuous employment, possibly including different occupations, with the same employer.

In 1978, median job tenure was 3.6 years, with 40 percent of workers having less than two years and 9.5 percent with twenty or more years. However, the median figures include a large proportion of young workers who could not possibly have accumulated long tenure. So, Hall looks at workers aged 35 and over and finds that “only about a third of older workers are currently in jobs which have lasted a large fraction of their careers.” This observation, though, does not take account of middle-aged workers whose jobs will last twenty to twenty-five years, although their tenure (in 1978) was not yet twenty years.

Hall therefore proceeds to calculate eventual tenure—that is, actual reported tenure plus projected additional time on the job—by estimating the probability that certain workers will stay on their jobs. He discovers that all but the youngest workers, who are still in the process of finding lifetime jobs, have a good chance of keeping their current jobs for ten years or more. On average, in 1978, the job held by the typical worker

lasted for a total of eight years. A clear majority of workers, 58 percent, held jobs that would last five years or more.

Most workers, Hall finds, hold about ten jobs in the course of their career. Up to age 24, workers shop for the right position and average four different jobs. Between ages 25 and 39, workers hold an average of four more jobs, and after age 39 they have less than three jobs.

---

**“Although high turnover and unemployment are serious problems in the U.S. labor market, an important fraction of workers have stable, near-lifetime jobs...”**

---

When Hall examines the tenure patterns of blacks and women, he finds some surprising results. Even though blacks typically have lower status jobs that pay them less than whites’ jobs, their jobs are no briefer. In fact, “lifetime employment is almost as common among blacks as among whites, and long-term employment is actually more common.”

Women’s jobs, on the other hand, are briefer than men’s jobs. But women also spend more time out of the labor force, on average, than men. So, the number of jobs held over a lifetime is about the same for men and women.

In sum, over one fourth of all workers are in jobs that will last twenty years or more, and among workers age 30 and above that figure rises to 40 percent. In the group over 30, though, half of the men and only one fourth of the women are in near-lifetime jobs.

## **Monetary Policy and Long-Term Interest Rates**

A new study by NBER Research Associate **Frederic S. Mishkin** of the University of Chicago indicates that conventional macroeconomic models may be wrong in assuming that increases in the money supply cause long-term interest rates to fall. Mishkin’s study, part of NBER’s Program in Economic Fluctuations, has important implications for monetary policy: the conventional view of the relationship between the money supply and interest rates is the major factor behind the frequent pressures on the Federal Reserve to keep money growth high, and Mishkin’s research raises doubts about this view. His findings are reported in

### **Monetary Policy and Long-Term Interest Rates: An Efficient Markets Approach, Working Paper No. 517.**

Milton Friedman and other monetarists criticize the conventional view of the link between money growth and interest rates on the grounds that it ignores the dynamic effects of monetary policy. They acknowledge that the “liquidity effect” of an increase in the money supply tends to reduce interest rates. Market participants bid the prices of securities up—and interest rates down—as they adjust their cash balances back to desired levels. However, two other effects may offset the liquidity effect. Over time, faster money supply growth will have expansionary effects on both real incomes and the price level that will tend to reverse the decline in interest rates. Most important, an unexpected increase in the money supply may raise inflationary expectations. The expectations of higher inflation could overpower the liquidity effect and actually cause interest rates to rise in the short run.

---

**“...the empirical evidence provides no support for the conventional assumptions about the effects of monetary policy on long-term interest rates.”**

---

As the title of this paper suggests, Mishkin explores the issue in the context of an efficient markets model. Efficient markets theory holds that markets use available information correctly in assessing the probability distribution of future prices. In an efficient market, bond returns would deviate from the short-term interest rate plus a liquidity premium only when new information—such as an unanticipated increase in the money supply—hits the market. When that happens, bond returns will inversely reflect changes in interest rates. That is, an increase in long-term rates will cause bond returns to fall.

Mishkin estimates the relationship of monetary policy and other variables with interest rates by examining the correlations between unexpected changes in the variables and quarterly bond returns over the period from 1954 through 1976. A basic issue underlying Mishkin’s study is, of course, the validity of the efficient markets theory itself. Prior studies by Mishkin and Eugene Fama indicate that the bond market is in fact efficient, and further tests that Mishkin performs on the data in this study confirm the earlier results.

In Mishkin’s model, bond returns are a function of changes in inflation and real incomes (measured by industrial production), as well as changes in monetary policy. Increases in either of the first two variables should give rise to higher interest rates and lower bond returns. Since the critical factors in an efficient market are unanticipated developments, Mishkin first has to separate out the expected rates of real income gains, inflation, and money supply growth. He does this in

two ways, using what are known as univariate and multivariate time-series estimates of anticipated changes in the variables.

Tests using the univariate time series and seasonally adjusted data find statistically significant relationships between bond returns and unanticipated changes in both inflation and real incomes. As expected, increases in inflation and incomes are associated with higher bond interest rates. However, the apparent effect of monetary policy on long-term interest rates is remarkably slight; the tests indicate that an unexpected increase of 1 percent in M1 growth is associated with only a 5 basis-point decline in long-term interest rates. Moreover, the relationship is not statistically significant at the 5 percent level.

Tests using the multivariate time-series estimates are quite similar, with a surprising 1 percent increase in M1 leading at most to a statistically insignificant 4.1 basis-point decline in long-term interest rates. In contrast, a simulation that Mishkin performs using a Keynesian macroeconomic model (the MPS Quarterly Econometric Model) implies that a 1 percent increase in M1 should give rise to an 18.1 basis-point drop in long-term rates.

Mishkin repeats the tests using seasonally unadjusted data, and those results are even more damaging to the view that faster money growth is associated with lower interest rates. The relationships among interest rates, income, and inflation are stronger and more significant statistically than in the tests with seasonally adjusted data. But five of the eight coefficients on money supply growth are negative, implying that faster money growth is associated with rising, not falling interest rates. Moreover, two of the five negative coefficients are statistically significant.

Mishkin concludes that the empirical evidence provides no support for the conventional assumptions about the effects of monetary policy on long-term interest rates. He notes, however, that the interpretation of his results is clear-cut only if monetary policy is exogenous. If it is endogenous—in the sense that the Federal Reserve responds to unanticipated changes in interest rates by increasing or decreasing money growth in order to smooth out rates—the results are ambiguous. Even so, Mishkin contends that we should question the conventional view until we have more evidence to support it. AE



*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—*Eli Shapiro*

Vice Chairman—*Franklin A. Lindsay*

Treasurer—*Charles A. Walworth*

President and Chief Executive Officer—*Martin Feldstein*

Vice President—*Charles E. McLure, Jr.*

Director of Finance and Administration—*Sam Parker*

*Contributions to the National Bureau are tax deductible. Inquiries concerning contributions may be addressed to Lawrence B. McFaddin, Director of Development, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138.*

*The NBER Digest summarizes selected Working Papers recently produced as a part of the NBER research program by researchers*

*associated with the National Bureau. Working Papers are intended to make results of NBER research available to other economists in preliminary form to encourage discussion and suggestions for revision before final publication. For similar reasons the Digest is issued solely for informational purposes and to stimulate discussion prior to final publication. It has not been reviewed by the Board of Directors of NBER. Preparation of the Digest is under the supervision of Donna Zerwitz. The articles indicated by AE and DF were prepared with the assistance of A. F. Ehrbar and David Francis, 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 \$1.50 per paper requested. Prepayment is required for all orders under \$10.00. For further information, please contact: Working Papers, NBER, 1050 Massachusetts Avenue, Cambridge, MA 02138. Abstracts of all current National Bureau Working Papers appear in the NBER Reporter.*