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Is There Still a Marriage Tax?

The marriage tax is alive and well and living in the Tax Reform Act of 1986, according to a new study by NBER Research Associate **Harvey S. Rosen**. "The new tax law creates large taxes on being married for some couples, and large subsidies for others," Rosen finds in **The Marriage Tax Is Down but Not Out** (*NBER Working Paper No. 2231*).

According to his estimates for 1988, 40 percent of married couples will pay a marriage tax averaging \$1100. Under the old tax law, 45 percent of couples would have paid a marriage tax, averaging \$1463. For some married couples with children, Rosen finds, the marriage tax under the 1986 laws can amount to 10 percent of joint gross income.

On the other hand, the new law conveys a marriage subsidy to 53 percent of married couples (up from 47 percent under the old law). The subsidy averages \$600, while it was only \$269 on average under the old law.

How can you tell whether your marriage will be taxed or subsidized? In general, the tendency is for marriages to be subsidized when the spouses' incomes are relatively far apart, and to be penalized if their incomes are close.

The marriage tax did not come into being until 1969. Before 1948, there was only one schedule of tax rates for individuals, regardless of their marital status. Then, changes written into the tax law in 1948 resulted in joint tax liabilities for married couples always being lower than for two single individuals with the same income. Indeed, by 1969 a single person's tax liability could be as much as 40 percent higher than that of a married couple with the same

income. So Congress created a new rate schedule for single individuals, limiting their liability to 20 percent more than for married couples with the same income. Under this new schedule, total tax liability for two individuals could increase if they married: the marriage tax was born. To reduce the marriage tax, a two-earner deduction was introduced to the tax laws in 1981. This lowered, but did not eliminate, the marriage tax.

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With the enactment of tax reform legislation in 1986, the two-earner deduction was repealed. The justification for the repeal was the notion that the general lowering of marginal tax rates would make marriage taxes and subsidies unimportant. But Rosen shows that this is false. Even in the \$20,000-\$30,000 income range, 35 percent of couples will pay a marriage tax. About 64 percent of the couples in the \$50,000-\$75,000 range will pay a marriage tax averaging \$1765. In the \$75,000-\$100,000 range, the average marriage tax will be \$2748.

Rosen's estimates are based on a sample of over 30,000 actual tax returns filed in 1983. In order to make projections for 1988, Rosen adjusts these data for expected increases in income and population growth.

The Postwar Evolution of Computer Prices

Between 1954—when the first computer was delivered to a commercial customer—and 1984, computer prices fell at an average rate of 19 percent annually, according to a new study by NBER Research Associate **Robert Gordon**. Moreover, the prices of personal computers (PCs) have declined even faster. Gordon estimates that PC prices fell 20 to 25 percent annually between 1982 and 1986, and prices of peripheral equipment fell even more during that period.

In *The Postwar Evolution of Computer Prices* (NBER Working Paper No. 2227), Gordon reports that the first commercial computer had 20 kilobytes of memory, a machine cycle time of 2400 microseconds, and cost \$192,000. By contrast, a PC clone in 1986 had 640 kilobytes of memory, a machine cycle time of 0.2 microseconds, and cost less than \$1000.

In 1955, 150 computers were built; their total value was \$62 million. By 1965, 5350 computers worth \$1.8 billion were produced. That represents an average annual growth rate in value of 44 percent.

Before 1965, virtually all computers were mainframes; since then, mini- and microcomputers have dramatically increased their share of the market for computers. In 1969, mainframes accounted for 97 percent of the total value of computer production of \$4.3 billion. By 1984, mainframes were only 46 percent of the total value of computer production (not including PCs) of \$22.3 billion.

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Gordon notes that official government price indexes assume that computer prices were constant before 1969. Adjusting for the price declines that actually occurred before that year, and for other technical factors, he finds that government estimates of price increases for office, computing, and accounting machines overstate the annual rate of price increase by 16.4 percent during 1957–72, and by 4.4 percent during 1972–84. Because spending on computers was a small percentage of total outlays before 1972, Gordon estimates that the government’s treatment of computers causes the statistics

to overstate the true value of inflation for all producer durables by about three-fourths of a percentage point per year both before and after 1972. However, research by Gordon on a wide variety of other products points to a total overstatement of producers’ durable equipment inflation of about three percentage points per year.

Future Trends for Social Security

Under current law, the Social Security Retirement and Disability (OASDI) Trust Funds are expected to accumulate a surplus of about 30 percent of GNP by the year 2020. In each of the 30 years, the funds will run a surplus, reaching over \$100 billion (undiscounted) annually within 15 or 20 years. But as the baby boom generation begins to retire, the Trust Funds’ assets will decline, and by 2050 the funds are expected to be depleted.

In *Future Social Security Financing Alternatives and National Saving* (NBER Working Paper No. 2256), NBER Research Associate **Michael Boskin** finds that the direct effect of the Social Security surplus will be to increase net national saving by one-sixth during the next 25 years. (Boskin uses standard assumptions concerning economic and demographic trends, private saving, state and local government saving, and federal government deficits.) However, during the following 25 years, as the surplus is drawn down, the direct effect of the change in the Trust Funds will be to reduce saving by almost one-half. In the final 25 years of the projections (that is, beginning with 2036), the decline in the Trust Fund balances will reduce net national saving by five-sixths.

Boskin notes that for the first time Social Security is projected to deviate substantially and systematically from pay-as-you-go finance (that is, each year’s tax revenue paying that year’s benefits). Thus, there will be a direct effect of Social Security’s surplus or deficit on net national saving, in addition to any indirect effects on private saving or government borrowing in the remainder of the federal budget.

Boskin also explores the sensitivity of the direct impact of the Social Security Trust Fund balances on net national saving to alternative scenarios of

private saving, the evolution of the non-Social Security component of the federal budget, the status of the Hospital Insurance (HI) program, and the total surplus of state and local governments. Of course, the impact of the Social Security Trust Funds on net national saving depends upon each of these potential components of national saving, and these direct effects could be offset, for example, by changes in private saving or non-Social Security budget deficits. Boskin's main conclusion is that, both directly and indirectly, the potential systematic deviation of Social Security from pay-as-you-go finance may result in large swings in net national saving in the United States in the coming decades.

In a related study, **Boskin and Douglas Puffert** estimate possible levels of contributions and benefits for people born in different years. In **The Financial Impact of Social Security by Cohort under Alternative Financing Assumptions** (NBER Working Paper No. 2225), they report that people born between 1913 and 1922 are receiving an annual real rate of return on their (and their employers') contributions of 5.7 percent, whereas people born between 1953 and 1992 can expect real returns of only about 2.2 percent. The expected rate of return on Social Security also varies by income. Single-earner couples born in 1945 whose average annual earnings are \$10,000 (1986 dollars) can expect a return of 3.7 percent on their contributions, as compared to 2.3 percent for couples with \$30,000 in earnings, and 2.0 percent for those with \$50,000 in earnings. When both spouses work, the expected returns are only 3.2 percent, 1.6 percent, and 0.8 percent, respectively.

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These estimated rates of return are based on moderate assumptions about future economic and demographic trends. If wage growth, life expectancy, fertility, and immigration are higher or lower than anticipated, the Social Security Trust Fund instead could have a surplus or deficit. For example, the Social Security Administration's intermediate projection assumes that average real wages will grow by 1.5 percent annually. Naturally, this forecast is very uncertain. Boskin and Puffert estimate that if, instead, real wages grow by 2.5 percent annually, the present discounted value of the Trust Fund's balance will increase by \$1.37 trillion over the 75-year projection period. Analogously, real wage growth of only 1 percent per year would decrease the Trust Fund's balance by \$450 billion.

Fertility also has a large impact on the Trust Fund's long-run balances. The current fertility rate is about 1.9 children per woman in her childbearing years. The intermediate assumption is that this will rise to 2.0 children per woman. However, if the rate rises to 2.3 children, the Trust Fund balance will increase by almost \$700 billion. With a fertility rate of only 1.6 children, though, the fund's deficit would be \$840 billion higher, according to Boskin and Puffert.

Boskin and Puffert also note that, in the past, it has always proved difficult to accumulate a surplus in the Trust Funds. Whenever surpluses have started to grow, Congress and the president have increased benefits for existing recipients. Therefore, the authors consider several alternatives to their initial assumption that the OASDI Trust Funds will accumulate a surplus of almost 30 percent of GNP by 2025 that will be drawn down to zero over the following 25 years.

One alternative is to lower Social Security taxes to the level required to pay for current outlays only. Under existing law, the tax rate on workers and employers will soon rise to about 11 percent and will remain at that level indefinitely (for the retirement part of Social Security only). If we changed to a pay-as-you-go system, tax rates could fall to just over 8 percent by 2009, but then rise to over 13 percent by 2033 to pay for the benefits to the baby boom generation (well over 20 percent when Disability and HI are included).

Another alternative would be to maintain tax rates as under current law, but to raise or lower benefits to the level that would keep the Trust Fund balances near zero. Boskin and Puffert estimate that benefits gradually could be increased by up to 30 percent above currently legislated levels, but by 2025 they would fall below the levels currently specified, and by 2050 they would be less than 80 percent of the currently specified level.

Exchange Rate Expectations

For several years before the dollar actually began its fall against the yen and other currencies in February 1985, foreign exchange traders expected it to decline. Meanwhile, the dollar continued to appreciate. NBER researchers **Jeffrey Frankel** and **Kenneth Froot** find that a partial explanation of the continued rise in the dollar's value may have been the

“bandwagon” effect: that is, appreciation of the dollar one week generated the expectation that the dollar would continue to rise during the next week, despite a belief that the dollar would eventually decline. They find that a 1.0 percent dollar appreciation generated the expectation of further appreciation in the dollar of 0.24 percent over the following week, but a *depreciation* of 0.34 percent over the following year.

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In **Short-Term and Long-Term Expectations of the Yen/Dollar Exchange Rate: Evidence from Survey Data** (NBER Working Paper No. 2216), Frankel and Froot analyze several surveys of bankers, corporate treasurers, currency traders, and economists that

have been conducted as far back as 1976. Throughout the early 1980s, respondents to these surveys said that they expected the dollar to decline against the yen, even though the dollar continued to appreciate until February 1985. Frankel and Froot suggest that each respondent might have been thinking, “I know that in the long run the (dollar’s) exchange rate must (decline), but in the short run I will ride the current trend a little longer. I only have to be careful to watch for the turning-point and to get out of the market before everyone else does.”

Frankel and Froot also find that, beginning in the 1980s, survey respondents believed the yen to be a riskier currency than the dollar. To compensate for the greater risk that they might be wrong about the exchange rate, they required a higher expected return on yen assets. Although yen assets paid lower interest rates than dollar assets did, this difference was more than offset by the expected rise in the value of the yen. In earlier work, **Using Survey Data to Test Some Standard Propositions Regarding Exchange Rate Expectations** (NBER Working Paper No. 1672), the authors found similar results for other currencies against the dollar as for the yen.

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