

The comparative ratios relative to different earnings bases, to alternative employer tax shifting assumptions, and to various family statuses are shown in the upper half of tables 1 and 2. Some interesting contrasts may be mentioned.

(a) Maximum versus average earner: Considering only employee taxes, the maximum earner is estimated to contribute less than 17 percent if he just receives his retirement benefits (a ratio of 0.17); for the average earner, the ratio is about 0.13.

(b) Full backward shifting versus half-backward shifting of the employer taxes: Assuming full backward shifting, approximately 33 percent of the maximum earner's retirement benefits come out of his contributions (a ratio of 0.33); if only one-half of his employer's taxes is assumed to have shifted to him, his contributions amount to 25 percent of his benefits (a ratio of 0.25).

(c) Employee's retirement benefits versus maximum family payments: Under the assumption of no backward shifting, if he receives only his retirement benefits, the maximum earner contributes less than 17 percent toward his benefits (a ratio of 0.17), but if he has a family eligible for the maximum benefit payments, his contributions amount to about 7 percent (a ratio of 0.07).

The above ratios are based on current dollars. The effect of price inflation is indicated in the ratios in the lower half of tables 1 and 2, where total taxes and total benefits are both calculated in terms of constant dollars.

The formula for the total compounded value of taxes in real terms is—

$$T = \sum_{i=1}^m E_i t_i (1+r)^{m-i} (1+p)^{m-i}$$

where the actual Consumer Price Indexes from 1937 to 1965 are used.

The formula for the total discounted value of benefits in real terms is—

$$B = \sum_{j=1}^n \frac{b_j / (1+p)^j}{(1+r)^j}$$

where the annual rate of price inflation of 2 percent is assumed for 1966 through 1979.

The compounded value of taxes in real terms is greater than the compounded value of taxes in money terms, since the multiplicands in the formula (the taxes) have been enlarged by the rates of price inflation. Therefore, the taxes are being accumulated at a higher rate when taxes in real magnitudes, rather than taxes in money magnitudes, are compounded. The discounted value of benefits in real terms is smaller than the discounted value of benefits in money terms, as the dividends in the formula (the benefits) have been reduced by the rates of price inflation. As a result, the benefits are being discounted at a higher rate when benefits in real terms, as opposed to benefits in money terms, are converted to present values. Consequently, tax-