

sound financial investment or whether he is being taken—whether he could invest his money elsewhere more wisely.”

The stress in the basic model is on average taxes and benefits per worker under assumed growth patterns and it is assumed that the average worker pays the average tax. This per capita approach abstracts temporarily from the ceiling on taxable earnings and variations in the relative position of different types of earners and focuses on earner-beneficiary transfers. It also must be acknowledged that introduction of assumptions concerning growth of the system introduces an element of arbitrariness into the analysis. However, it seems likely that almost any plausible growth assumptions will provide a more realistic analytical basis than the static assumptions concerning taxes and benefits accepted reluctantly in previous studies. Similarly, it is believed that a proportional imputation of the employer tax is preferable to ignoring its burden altogether. However, at this stage the only imputation is at the aggregate level, since only average taxes and benefits per worker are being considered. Assuming that workers as a whole bear the entire tax, it follows that the average tax per worker must include the tax nominally assigned to employers, regardless of how it is distributed among workers.

The model to be suggested approximates certain features of the current and developing social security system and incorporates available official data such as projections by the Social Security Administration of the population by age group and mortality rates by sex. The result is a mixture of theoretical and empirical elements. It abstracts from many of the details of the present tax-benefit structure in an effort to focus on the key effects of the growth process. The present analysis also departs from earlier work in another way. Instead of assuming particular rates of return, the criterion stressed is the estimated yield to a particular type of participant on his “investment” in social security.

The basic assumptions of this simple growth model are (1) real earnings per employee grow at a fixed rate r ; (2) real retirement benefits per beneficiary grow at the same rate r and therefore are related to average earnings by a fixed factor k ; and (3) the system is financed on a pay-as-you-go basis.

The real rate of interest on contributions is defined as the particular rate of return which would equalize the real accumulated tax (plus imputed yield) and the present value of real benefits discounted at the same rate at the point of retirement. This is the yield which produces a tax-benefit ratio of unity. The projected rate of growth of average real earnings is put alternatively at 2 percent and 3 percent. Two alternative sets of population and mortality projections developed by the Social Security Administration are also used. One set was prepared on “low cost” (high birth rate and high mortality) assumptions and one on “high cost” assumptions. Another factor in the total tax accumulation is the age when work is begun. Even if all workers paid the average annual tax it would be necessary to distinguish between those starting early and those starting late. The taxes were accumulated from two alternative starting ages. One earner was assumed to start work on his 18th birthday at the beginning of 1966 and pay the average tax over his working career; the other was as-