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MONEY VALUE OF A PERSON (!)

1972 *Lifetime Earnings by Age, Sex, Race, and Education Level,* Research and Statistics Note No. 14—1975, Social Security Administration, Washington, D. C., pp. 12.

by Robert J. Myers

This note presents detailed data by quinquennial age groups, sex, race, and years of school completed as to the present value of future earnings based on static earnings levels (1972). It is stated that such data can be used for general analytical purposes to form policy, for court determinations of awards in damage suits, and for cost-benefit analyses in such areas as disease prevention and education programs.

The mortality used is that of the U.S. 1972 Abridged Life Tables, issued by the National Center for Health Statistics. Labor force participation rates are based on 1970 data from the Current Population Survey of the Bureau of the Census. The combination of these two elements, of course, gives the effect of a work life table such as those prepared by the U.S. Department of Labor from time to time (see A. M. Niessen's review of the latest such table in the November 1971 issue of *The Actuary*).

The earnings assumptions are based on 1972 data from the Current Population Survey plus, for females only, the estimated market value of housewives' services. One could well argue that some allowance for presumed income for housekeeping might be made for men at the older ages when they cease gainful employment outside the home and then are retired at home.

Alternative interest discount rates of 2%, 4%, 6%, and 8%, were used. As an actuary who has had considerable education and experience in the field of economics, I was both surprised and appalled to see this inconsistent combination of static salaries with interest rates that are in some cases tenable only under dynamic conditions. Based on past economic trends and on likely future ones, it would seem that a static salary scale would imply an interest rate of no more than 2%, and possibly as low as 1%. Conversely, an interest rate of 8% would imply that salaries would be dynamically increasing at an annual rate of 6-7%.

To put it another way, the real inflationless interest rate can reasonably be taken as 3%. Then, due to productivity changes, salaries would increase at a rate of perhaps 1% per year and no more than 2% per year. Combining these elements, we then arrive at a differential of only 1-2% between the interest rate and the salary increase rate. Accordingly, discount rates of 4% or more when used with a static salary scale are completely inconsistent. It is to be noted that this same type of economic consideration enters into valuation of pension plans that are on a final-salary basis and also into the benefit stability and financial status of the Social Security system as its automatic-adjustment provisions now apply.

As to the actuarial aspects of the data in the note, reference is made to a publication of the U. S. Department of Health, Education, and Welfare for the methodology (Dorothy P. Rice, "Estimating the Cost of Illness," "Health Economic Series No. 6", 1966). Although the general methodology used for this relatively simple actuarial problem follows accepted actuarial principles, a number of minor technical errors or inappropriate approximations occurred which could just as readily have been avoided.

For example, the present values of lifetime earnings were obtained by grouping the data quinquennially and then using the midpoints of each group. It would have been more accurate to use single-age values, even though this would entail more work. The present value of a series of increasing annual payments beginning 2½ years from now and running for 5 years is by no means exactly the same as 5 times the average annual payment discounted for 5 years.

The Rice report also makes an interesting attempt to obtain the loss to the economy in the form of earnings (including housekeeping "earnings") as a result of deaths in 1963. What is done is simply to multiply the deaths at each age by the present value of the discounted earnings. This arithmetical exercise is fallacious unless it were the case (which it obviously is not) that all persons who die in a particular year were in exactly the same health condition just prior to death as were those who did not die in the year. Such would be the case only for deaths due to accidents or certain communicable diseases. It does seem anomalous to compute the economic loss for deaths in a year when there is involved the probability (in the present values of discounted earnings) that they may die in the next year or subsequently. □

J. HENRY SMITH SCHOLARSHIP FUND

The Society of Actuaries has announced the first recipients of the J. Henry Smith Scholarship Fund, set up for women and minority actuarial students. Receiving awards are: Vincent Torres, Chicago, Illinois; Kathleen Knight, Austin, Texas; Shiela Chappell, Philadelphia, Pennsylvania; and Monique Tremblay, St. Cesarie, Quebec.

The awards — totalling $3,400 — are applicable for the 1976-77 academic year at a graduate school of actuarial science. Applicants must be nominated by the department chairman of their college or university and have passed Part I of the Actuarial Examinations or received credit for Part I from the Graduate Record Examination. The scholarships are awarded on the basis of individual merit and financial need.

The fund was set up last year by The Equitable Life Assurance Society as a tribute to their former Chairman and Chief Executive Officer, J. Henry Smith. The Society of Actuaries has assumed responsibility for administering the fund, selecting candidates, and determining the amount of the awards.

As part of the responsibility for the administration of the fund, the Society of Actuaries will receive all contributions for the scholarship program. Future funding will be sought through an annual appeal to employers and Society members in both the U.S. and Canada.

Any individual or organization wishing to contribute may do so by drawing a check to the order of the "Society of Actuaries' J. Henry Smith Scholarship Fund" and sending it to the office of the Society (208 South LaSalle Street, Chicago, Illinois 60604). □