

assistance is indicated by the fact that about four-fifths of the old-age-assistance recipients also are OASDI beneficiaries.³¹ At the low end of the income scale, the distinction between old-age assistance and OASDI benefits is tenuous. Although the OASDI benefit is technically paid without a "means test," the record of covered wages, as noted earlier, becomes essentially a means test for those receiving minimum benefits.

A two-tier system of "social insurance" has substantial possibilities for more equitable and more economic use of resources. An insurance portion, more strictly defined, would be limited to risks not covered by private insurance and pension plans. A welfare element, to be economic (in contrast with the wasteful type of universal old-age pension plan used in several countries), would have to be related to a measure of need, as minimum benefits under OASDI in effect now are. Separate financing of these elements would appear to be feasible on lines already used in supplementary medical insurance.

APPENDIX

A DIAGRAMMATIC ANALYSIS OF SOCIAL INSURANCE TAXES FOR RETIREMENT BENEFITS¹

A simplified model of the economy can serve to highlight the major issues of financing social insurances. The main question examined here is the relationship between a pay-as-you-go social insurance tax rate and an "actuarial" insurance tax rate. To put the problem another way, what is the relationship between a collective or aggregate view of social insurance financing and an individual's cost-benefit view?

Let us assume that—

- (1) The population grows at a constant rate per year.
- (2) Every individual enters the labor force at a given age, a_1 , works through age a_2 and dies at age $a_3 + 1$.
- (3) Everyone gets the same wage. (This is a useful simplifying assumption that serves to separate problems of financing over time from the problem of redistribution by income levels.)
- (4) Everyone retires with a social insurance pension equal to the current wage, or some fraction of the current wage. (In the case of an increasing wage assumption—i.e., a model with increasing productivity—the individual's pension increases at the same annual rate as the wage.²)
- (5) Full employment is continuously maintained.

POPULATION AGE DISTRIBUTION AND THE SOCIAL INSURANCE TAX

Under the above assumptions, the population age distribution is shown in chart A-1. Since the population increases at a constant rate, the age distribution shows up as a straight line on a semilog chart. Although there is no zero boundary on such charts, area L can be taken as representing the labor force, and area R as representing the retired population.

³¹ *Ibid.*, p. 143.

¹ This analysis is largely based on Henry Aaron, "The Social Insurance Paradox," *Canadian Journal of Economics and Political Science*, vol. 32, No. 3, August 1966, pp. 371-374.

² In this case we will be using "double dynamic" assumptions, as Dr. Myers has referred to them: namely, a level of benefits tied to an increasing level of wages. (See above, pp. 25, 26, and *The 1966 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Trust Funds*, H. Doc. No. 392, 89th Cong., 2d sess., Feb. 28, 1967, pp. 39, 40.)