

increases which are consistent with this plan, assuming that they are also consistent with wage-pension preferences, can be considered sustainable increases.

From our *continuous growth model* we draw the following conclusions:

1. Total benefits paid by the system should increase at a rate which is the sum of the rates of increase of wages and the work force.
2. The obligation of this system—that is, the present value of the total debt of the system to the working generation—should be in the long run increase at the same rate.
3. Any equity rule that systematically pays more or systematically pays less in benefits than total contributions plus interest at the combined rate of growth of wages and the work force will be either unstable or socially inadequate in the long run.
4. The status of social security as an alternative to private provision of retirement income depends on the relationship of the combined rates of growth of wages and the work force to the riskless lending interest rate. If this market rate is systematically below the combined rates of growth in wages and the work force, then social security may offer a better alternative than private saving per dollar invested as a means of providing for retirement income. This would provide a new justification for social security. If the market lending rate were systematically above the combined rates of growth in wages and the work force, then a corresponding (per dollar) cost of social security both exists and is calculable.

We contend that our *linear programing model* is a planning tool. It is directly useful as a rational, disciplined mechanism for detailed planning in terms of empirical data and requirements. It has immense direct value because it provides an ideal junction through which general theory may be used to shape detailed and specific plans. The linkage between theories and plans is through the parameters of the linear programing model.

Informal planning methods, however competently and effectively employed, typically do not separate questions of fact, value, and logical implication. For the outsider at least it is frequently difficult to distinguish analysis and intuition, objective and subjective information, personal and general value judgments. This does not mean that informal planning is necessarily chaotic or irrational; we only contend that it is generally incomprehensible to outsiders and only partially understood by many insiders. Moreover, planning efforts on problems that involve considerable intrinsic complication are frequently accomplished by circumscribing the problem to a point where attention may be confined to a small manageable subset of the potentially relevant variables and relations.

Simplification of the planning problem and the shift of attention to parameter specification should have two important effects. A more efficient allocation of the planner's effort in estimating the important unknowns in the problem should result. A more portentous result is that application of general theories (economic, statistical, sociological, etc.) to the problems of parameter specification is quite immediate, while the application of such theory in informal planning procedures is much less direct and obvious. Thus by adopting programing meth-