

systematize the evaluation of investment programs by consistent application of discounting procedures. And there are other examples where agencies have applied varying rates for the analysis of projects which impact on particular private sectors. For example, a recent Department of the Interior study of shale oil tested the economic attractiveness of oil shale development at alternative discount rates of 12 percent and 20 percent.

I believe that there is a good deal more that we can and should do to improve the evaluation of investment programs. However, I view this as a part of the overall problem of increasing and improving the analysis of Government expenditures as part of the development of the PPB System. Until analysis has been strengthened and extended considerably, it will be difficult to assign a great impact on resource allocation decisions to improvements in the discounting process alone. Differences in discounting procedures can only have an effect when costs and benefits of alternatives are systematically compared and when uncertainties or arguments over the definition and measurement of costs and benefits do not swamp the difference due to discounting. Because of the conceptual difficulties in comparing outputs of unlike government programs, I do not believe that improvements in discounting procedures, desirable though they are, will directly exert a major effect on allocations among different programs. In the case of the two manpower training programs—Job Corps and MDTA, OJT—variations in discount rate did not eliminate the need to weigh the importance of selected target groups.

To sum up, the evaluation of public investments is complex, and raises serious conceptual and measurement problems not usually confronted when evaluating private investments. Analysis can and does help to identify better ways to allocate public resources through cost-benefit analysis and cost-effectiveness analysis. Discounting is an important element in both types of analyses.

A desirable procedure would:

1. Require display over the expected life of the costs and benefits or physical outputs of alternative programs as part of the analysis for decision making (as is now required in Program Memoranda and Program and Financial Plans).
2. For programs which have both costs and benefits expressible in dollars and which directly displace private investment in a specific sector, the rate of return in that sector is an appropriate rate for calculating present value of costs and benefits.
3. For most public investment, use the private returns foregone over the economy as a whole to release funds for public investments, as the appropriate rate. This rate should eliminate allowances for risk providing that costs and benefits are explicitly adjusted to allow for the risk of the public project.
4. Reflect the fact that a riskless rate of return in the private sector should *not be less than* the rate of return on Government bonds. Studies should be undertaken to develop a more reliable basis for estimating the riskless rate of return in the private sector.
5. Test for sensitivity to variations in the discount rate above the yield of Government bonds where the results of analyses may be affected by small changes in the discount rate of return.
6. Where subsidies are regarded as socially desirable, express them explicitly in cost-benefit calculations rather than in the discount rate.

I believe that the above points represent the direction in which we have been moving and will continue to move and that this movement will produce significant improvement in the analysis of Government investment programs. In the coming months the Bureau of the Budget will be continuing its work in cooperation with the Federal agencies and departments to improve the application of discounting in the evaluation of public investment programs.

Chairman PROXMIRE. Thank you, gentlemen.

Does that complete the statements by you gentlemen?

Mr. HOLUM. Yes, sir.

Chairman PROXMIRE. First, I want to apologize for being tardy. I cannot be in three places at once, and I was supposed to be on the floor, in the Appropriations Committee, and here. The Appropriations Committee was having a markup of a bill in which I am deeply involved.