

III

THE DISCOUNTING PROCEDURE MUST BE USED IF GOOD PUBLIC INVESTMENT DECISIONS ARE TO BE MADE

Sound investment policy in both private business and the Government requires that the decisionmaker know the expected rate of return on the alternative projects competing for a share of his budget. For the decisionmaker in private business, this knowledge enables him to allocate his budget among the competing claims so as to obtain the maximum difference between the revenues and outlays for his firm. The public decisionmaker, however, does not focus on these financial flows. Rather, he is concerned with the social returns and costs attributable to his investment undertakings. His objective is to gain the maximum difference between social benefits and costs for each dollar which he spends. For investments in which both benefits and costs are evaluated in monetary terms, procedures must be sought to capture all social returns and losses in the quantitative estimates. However, even when confronted with public investments whose benefits cannot be accurately measured in dollar terms or expenditures whose impacts spill over onto third parties in some unknown way, the public decisionmaker must undertake discounting analysis to determine the effectiveness of alternative expenditures in satisfying objectives.

A characteristic of investments—whether public or private—is that they commit resources in the future and carry an expectation of gains which only materialize over time. It is the expectation of gains and costs which will be realized only in the future which poses the crucial problem for investment analysis. Because a dollar expected a decade from now is not worth as much as a dollar expected tomorrow, even if the price level does not change, some procedure must be found for placing streams of benefits and costs with different time patterns on a common basis. Only then can they be accurately compared.

The procedure recommended by both economists and businessmen for accomplishing this common-time-basis adjustment is known as *discounting*. It works by ascertaining how much a dollar held today could be turned into in future years if invested wisely and by then applying this adjustment to dollars of gains and costs not expected to be received or incurred until future years. For example, if one could, through properly investing it, transform \$100 into \$105 next year, then it is clear that \$105 expected next year is worth only about \$100 today. In this case, dollars not expected to materialize until future years get reduced through the discounting procedure by 5 percent for each year which they are deferred. Thus, an individual who spends \$100 of his income on consumption goods today, foregoes the \$105 which he could have received and spent next year if he had foregone current consumption today.

The following table presents a simple example of the impact of the discounting procedure on the economic evaluation of an investment.