Cost–Benefit Analysis

THEORY AND PRACTICE

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THEORY AND PRACTICE

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Preface

THIS book has been divided into four Parts. The first, on 'objective functions', deals with the cost-benefit objective of maximising gains to social welfare. Chapters 1 and 2 discuss the welfare foundations of cost-benefit and Chapter 3 is devoted to the problems of defining and deriving a social welfare function in terms of individual preferences. The second Part deals with 'accounting' or 'shadow' prices, beginning with a general chapter, Chapter 4, on the meaning and derivation of accounting prices in the context of Pareto optimality. Chapter 5 discusses the important phenomenon of externalities and raises some of the problems of finding accounting prices for non-marketed goods. Chapter 6 looks at the social discount rate as the accounting price which reflects society's intertemporal preferences.

Part 3 completes the theoretical analysis of cost-benefit with a discussion of the appropriate 'normalisation' techniques – net present value, internal rate of return and so on – while Chapter 8 looks at the complex problem of risk and uncertainty.

Part 4 details two applications of cost-benefit, one to a project in an advanced economy, and one which, while applicable to many advanced economies, is used to illustrate the relevance of cost-benefit for underdeveloped economies. We have deliberately chosen to discuss only two applications. This choice obviously risks giving the impression that cost-benefit is not a widely applicable approach to decision-making, when the very opposite is true. On the other hand, we felt that highly superficial outlines of the possible applications of CBA would not provide the reader with a proper insight into the many problems which arise when cost-benefit is actually applied.

Bibliographies are grouped at the back of the book. These are necessarily select, but we hope that they will act as a guide to the reader who wishes to investigate the subject in more depth.

Lastly, we have done our best to avoid complex discussions and to avoid mathematics beyond that which can reasonably be expected of the general undergraduate.

A. K. D.
D. W. P.

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The ideas outlined in section 5 of Chapter 6 on the relationship between the shadow price of savings and the social discount rate are developed from an earlier formulation in Ajit Dasgupta's Ph.D. thesis on 'The Theory and Application of Optimum Investment Decisions with Special Reference to the Indian Fertiliser Industry' (Cambridge University, mimeo). A grant from the United Kingdom Ministry of Overseas Development from 1967 to 1969 financed much of the research upon which the ideas presented in Chapter 10, on the Damodar Valley scheme, are based. Especial thanks are due to Richard C. Cornes for research assistance relating to this chapter which was read in an earlier version to the Annual Meeting of the Canadian Economic Association in Winnipeg, 1970. Chapter 9, on the location of London's Third Airport, partly reflects the written and oral evidence presented to the Roskill Commission by Professor John Wise, Christopher Chapman and David Pearce in 1970.

Miss Lise Brault, Mrs Mary Mundy, Mrs Trish Bloxham and Mrs P. Dunn typed the manuscript, and bore with infinite patience the task of retyping some chapters several times. We owe them a considerable debt of thanks.

Despite this wealth of assistance and advice, errors must surely remain. These are our responsibility alone.

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