



BOOK REVIEW

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Teaching Benefit-Cost Analysis, Tools of the Trade

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Teaching Benefit-Cost Analysis, Tools of the Trade makes a significant contribution to the understanding of issues in methods of economic analysis that can be beneficial to the academics and students of public economics, public services and public administration across Europe. Also, practitioners and professional economists might find useful hints and recommendations here on economic analysis, evaluation and nonmarket valuation methods, as well.

How much and where to invest is a fundamental question applying equally well to the public sector as to the private sector. Benefit-cost analysis (BCA) is the cornerstone of the economic analysis of public policy and is closely aligned with basic rational choice and market concepts from microeconomics. It is an established tool for assessing the economic benefit of investments. Using BCA can help to identify the highest and best return on an investment based on the cost, resources, and risk involved. BCA is used everywhere, but its techniques are particularly prominent in fields where there is some kind of ethical dimension or market failure. As such, it can support decision-making on whether a public project is beneficial or not. Due to the complexity, systematic capture and analysis of BCA-related factors, methods and conceptual framework is a desirable goal.

This book has been designed primarily for teaching BCA and covers all the main problems that arise in a typical cost-benefit exercise. It is entirely up-to-date, reflecting the most recent research in the area. Each chapter is a teaching module presenting a favorite topic of its contributors and providing key insights in conveying difficult topics. This makes the book an original learning tool suitable for a wide range of readers.

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The book consists of two main parts and 19 chapters from 24 experienced international authors with teaching, research, and practical skills of the BCA. The book begins with an extended elementary preface written by the editor.

The first part of the book, *The Big Picture*, which contains seven chapters, summarizes the main themes and offers a complex theoretical insight into the concept of BCA. The first chapter, *Decision Rules*, begins by reviewing marginal and non-marginal concepts and measures for policy-making and then discusses a set of basic policy decisions that can be informed by these concepts. Student exercises are included and answered in the appendix to the chapter. The book follows this up with the chapter *Triangles and all that*, focused on a simple exposition of general equilibrium applied welfare economics. It focuses first on the efficiency costs of a set of tax distortions on different goods and then explores the efficiency effects of adding a new tax to a set of already existing ones. In addition, it deals briefly with several strategic issues involved in implementing a national system for the benefit-cost analysis of public investments and other expenditures. The following chapter, *Defining the Baseline*, addresses the baseline which determines the basis of comparison, which is key for evaluating the benefits and costs. This baseline is neglected in textbooks and journal articles about BCA. The chapter addresses this gap by discussing some of the nuances of defining and constructing a defensible baseline and illustrates these nuances with examples from the US Environmental Protection Agency (EPA). The book follows this up with the chapters *The Concept of Standing in Benefit-Cost Analysis* and *Partial Equilibrium versus General Equilibrium Evaluations or Small versus Large Projects*, focused on counting preferences and differences between small and large projects and between partial and general equilibrium evaluations. The last two chapters of the first part show how BCA is applied in the USA and EU.

Individual chapters of the first part have a consistent structure, and their text is supplemented by various interesting examples and exercises illustrating the main ideas behind the concept of BCA. This makes the presented text more enjoyable. The first part is appropriately supplemented by a valuable discussion of US regulatory practices and the role for markets in allocating resources efficiently that was lacking in the other books addressing BCA. The first part is concluded by the role of BCA of investment projects expanded in the framework of the EU Regional Policy and discusses the methodology of BCA for EU that brings valuable insight into the objectives and scope of BCA, the role of BCA in the decision-making, long-term perspective, monetary evaluation, the principles and application of BCA in an intensive short course.

The second part, *Challenging Concepts and Examples*, which contains 12 chapters, deals with more practical themes and brings complex insight into the practical issues and possible difficulties in preparing CBA.

The chapter *Valuing Statistical Lives*, which is the first chapter of the second part of the book, offers a conceptual framework of the value per statistical life (VSL) as an important parameter in BCA and shows the differences between approaches of valuation (WTA, WTP and benefit transfer). The following chapters – *The Arithmetic of Efficiency – Or the Value of Marginal Analysis*; *Treatment of Employing and Disemploying Workers*; and *Uncertainty and Risk* – focus on marginal effects in the practice of BCA and the importance of marginal analysis, problems of employment and their impact on BCA results and methods and practices to take uncertainty into account in BCA. All chapters are appropriately supplemented with practical examples.

The book follows this up with chapters focused on practical case studies in healthcare, transport, and land use, research and development and education. Concerning healthcare, differences between BCA and cost-effectiveness analysis (CEA) and cost-utility analysis (CUA) are shown and discussed. The following chapter is devoted to models for transport, trade, and land use decisions and compare static and dynamic models of evaluation. In the case study of R&D projects it is also discussed how difficult it is to set a value of the number of patents, PhD students attracted, number of publications and their impact, number and value of the spin-offs and so on and how realistic the forecasts are. Concerning education, the emphasis is on the ingredients method as a simple but formal way to estimate costs for the purposes of BCA.

Separate chapters are dedicated to harmful addiction and distributional accounting in BCA. Harmful addiction because, as the authors say, it poses a challenge to conventional BCA as it involves sovereign consumers apparently making mistakes and BCA often reduces valuation in terms of external effects when internal effects are neglected. The chapter *Distributional Accounting in Benefit-Cost Analysis* demonstrates how to integrate distributional effects within the public evaluation and benefit-cost analysis, using the Kaldor-Hicks Tableau format for distributional accounting.

The last two chapters, *Case Studies in the Classroom: Lessons Learned* and *Simulation: Incorporating Uncertainty*, bring out aspects of the practice of BCA, such as experience using Regulatory Impact Analysis (RIA) or how precision can mask inaccuracy and represent simulation like an increasingly accessible method to investigate uncertainty in an analysis.

So is the book a comprehensive introduction and teaching tool of CBA? As a teacher and practitioner, I must say yes. It is a fresh new textbook with a different concept and approach to BCA teaching. The main strength of the book is, at least in my opinion, that it combines the current knowledge from the field and attempts to link main theories and practical concepts and issues that were developed in contexts of developed countries (USA, EU). And this is done in a clear and a consistent way across the whole book. This is beneficial for students pursuing their interest in

BCA, but also for practitioners who can obtain a summary of up-to-date knowledge on the complexity of BCA in a reader-friendly package.

The eBook version is available, for example, from *Google Play*, *ebooks.com*, but also from other eBook vendors, while in print the book can be ordered from the *Edward Elgar Publishing website*.