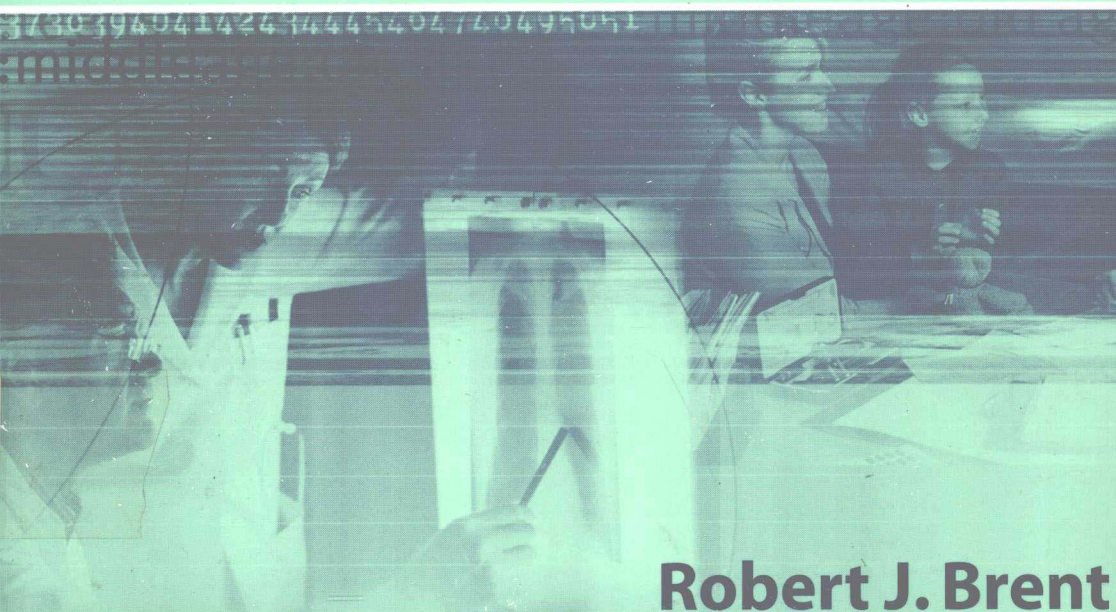




Cost–Benefit Analysis and **Health** Care Evaluations



Robert J. Brent

Cost–Benefit Analysis and Health Care Evaluations

Edited by

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*To my nieces and nephews: Eleanor, Olivia, Richard, Judith, Helen,
Vienna and Eliot*

Abbreviations

AC : Average cost per unit
AFDC : Aid to Families With Dependent Children
CA : Conjoint analysis
CBA : Cost–benefit analysis
CEA : Cost-effectiveness analysis
CM : Cost minimization
CUA : Cost–utility analysis
CV : Contingent valuation
DALY : Disability adjusted life year
DRG : Diagnostic related group
 E : Effect from an intervention
 ε_p : Price elasticity of demand
 g : Growth rate of per capita income
 η : Society's aversion to income inequality
 λ : Growth rate of life expectancy
LEDR : Life expectancy discount rate
LOS : Length of stay
MB : Marginal benefits
MC : Marginal costs
MCF : Marginal cost of public funds
 MU : Marginal utility
 NHS : National Health Service (UK)
 P : Price of a good or an effect
PACT : Program for Assertive Community Treatment
PTO : Person trade-off
 Q : Quantity of a good or service
QALY: Quality adjusted life year
Q–F : Quantity–frequency index
QoL : Quality of life
QWB : Quality of Well-Being Scale
 r : Interest rate used for discounting
RBRV : Resource based relative value
RC : Regular care
RCC : Cost-to-charge ratio
RS : Rating scale

RVU : Relative value unit

SG : Standard gamble

STPR : Social time preference rate

t : Time or year

TTO : Time trade-off

WS : Worksite program

WTP : Willingness to pay

Y : Income

Preface

Why write a third text on cost–benefit analysis (in addition to *Applied Cost–Benefit Analysis* (1996) and *Cost–Benefit Analysis of Developing Countries* (1998)), and why devote this text to just one area of application? First, as I regard CBA (cost–benefit analysis) as covering half of economics (the half that deals with how the economy should be changed, as opposed to the other half that explains how the economy operates in theory and practice), it would be silly to claim that everything that needs to be said is included in two volumes. Even though the previous texts are, like this one, geared to the basic principles of social evaluation (and how many basic principles can there be?), this does not mean that, because the basic principles do not change much, therefore the field does not change much. CBA is inherently an applied one; as applications grow in number and diversity, one's understanding and appreciation for the basic principles develops. In this context, a new set of applications is sufficient to help the discipline progress. Reassembling the same basic principles in new ways can also provide useful insights.

Second, the health care field is all encompassing. Matters of life and death are central to the field and it is hard to imagine any important policy issue not appearing here in some guise. Perhaps because of the recognition of its importance, the health care field is not content to leave matters in the hands of economists. Probably most of the applications in this area are done by non-economists (for example, psychologists, sociologists, statisticians and political scientists). This has (as one may now have expected) benefits and costs. The advantage is that insights from many different disciplines have been incorporated that look at ingredients anew and in creative ways (especially quality of life issues). The disadvantages are that there has been some 'reinventing of the wheel' whereby basic principles are rediscovered (for example, measuring costs and allowing for discounting) and, worse still, some basic principles have been ignored. For example, income distribution weights and the welfare cost of financing public expenditures are rarely included.

The aim of this text is therefore to build a bridge between the evaluations that occur in the health care field and those that take place in other areas of application. We attempt to achieve this by reinterpreting the work done by the non-economists and putting this into a common evaluation framework.

Then we add to that framework the missing necessary ingredients that economists have utilized in other areas. The level of economics introduced is at the introductory level (and not the intermediate level as with the other two texts). The material is intended to be self-contained with all the key concepts explained as and when required. These key concepts (such as demand, supply and elasticity) are used frequently and become mutually reinforcing. Given the applied nature of the book, some fundamental statistical concepts (such as confidence intervals) are included in as non-technical a fashion as is feasible. The content should be accessible to non-economists as well as economists. Researchers and practitioners in health institutes and hospitals may especially benefit from the approach taken and base courses or workshops on this material. For health economists looking for a second, policy-based, course to complement the standard health economics course, the book should be especially attractive.

The book is structured in the same way as the pioneering text by Drummond et al. (1986, 1997) that opened up the evaluation field to non-economists. Hence there are parts that cover cost-minimization (CM), cost-effectiveness analysis (CEA) and cost-utility analysis (CUA) as well as CBA. In this way the reader is placed in a familiar setting. The big difference in our approach, however, is that from the outset, and at all stages, CBA is imposed as the foundation stone for economic evaluation. In reality, there is only CBA. The other three methods CM, CEA and CUA are, at best, short-cut CBAs or, at worst, incomplete CBAs. The nature of the short-cuts and what is necessary to complete the evaluation are made clear. At the same time, the legitimate concerns of non-economists with traditional CBA are discussed fully. Hopefully, the reader will reach the same conclusion as the author: that CBA may have many weaknesses, but it is still the best evaluation framework. Should readers wish to go deeper into the economic theory underlying CBA, I can refer them to my other two CBA texts.

I wish to thank the many students at Fordham University who participated in the health care evaluations courses I taught. It is from them that I learned the costs and benefits of the simplification of economic explanations. I started the project when I worked part-time at the Nathan Kline Institute of Psychiatric Research (NKI) and much of my work on mental health evaluations was initiated there. I would like to acknowledge the three years of support I was given at NKI. I also wish to thank Fordham University for giving me a semester off to write the book, and Georgetown University School of Nursing and Health Studies where I visited and completed the book.

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