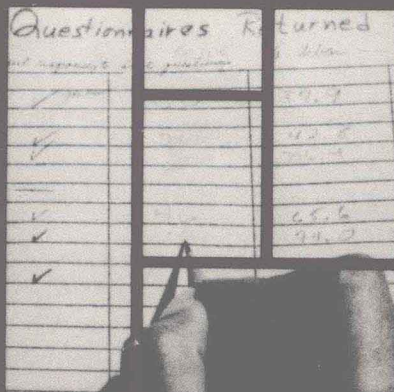


PROGRAM ANALYSIS FOR STATE AND LOCAL GOVERNMENTS

by Harry Hatry
Louis Blair
Donald Fisk
Wayne Kimmel

The Urban Institute



Second Edition

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SECOND EDITION

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PROGRAM ANALYSIS FOR STATE AND LOCAL GOVERNMENTS

SECOND EDITION

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Foreword

State and local government officials are continually faced with proposals for new or revamped programs and services. These proposals can have substantial effects on future costs and program performance. Grappling with these proposals, however, is often akin to gazing at a crystal ball.

Often officials receive insufficient information on the options available to them, the complete costs of these options (long-run as well as short-run), and the expected effectiveness and feasibility of each option in providing quality service. The information provided frequently is highly subjective and judgmental.

Can better and more useful information be provided to public officials for their program and policy decisions, and if so, how? The first edition of this book addressed these questions in 1976; the resulting volume stimulated such interest that a decade later The Urban Institute has prepared a second edition, revised and updated. This second edition addresses the same questions. The authors develop a series of suggestions and guidelines for improving the available information and for enriching government officials' understanding of issues underlying today's proposals.

The suggestions are presented with government analysts and contractors in mind. The book also should be of considerable interest to students planning careers in the public sector. For readers who are more administratively than analytically oriented, this volume may raise their enthusiasm for quality program analysis.

Program analysis is still as much an art as a science. Because we at The Urban Institute believe that the nation and its citizens deserve the best in decision making by public administrators, we offer this volume with the hope that it will contribute to improved program analysis by informed officials.

William Gorham
President
The Urban Institute

Preface

When we began preparing this second edition of *Program Analysis for State and Local Governments*, we expected that after ten years we might have to start from scratch. To our surprise, we found that much of the material in the first edition still applies after a decade. The state-of-the-art of program analysis has not changed substantially, but then perhaps one should not expect basic principles to change. Certainly the technology for processing data and making calculations has advanced tremendously in the past ten years. Almost every analyst now has ready access to powerful data processing programs. Computers make the collection and analysis of data considerably more feasible—and this is an important advance. Governments now have much weaker excuses for not seeking needed data.

But the key problem remains: “garbage in, garbage out.” We need reliable data on costs and program effectiveness, and good thinking to ensure that these data are collected and analyzed in the right way.

The single greatest change in this second edition is the inclusion of chapter 8. We believe that program analysis needs to be related to three particular activities that state and local governments frequently address. First, governments regularly have to make choices about actions for maintaining and expanding their infrastructure, their capital facilities such as roads, bridges, water and sewer facilities, and public buildings. Second, some governments regularly review their programs for possible improvement in productivity and efficiency—and if they do not, they should. (Governments may refer to these efforts as management analyses, productivity improvement efforts, and so forth.) Third, in recent years many public agencies have begun to consider ways in which greater use can be made of the private sector; contracting is the example most often employed. Too often decisions on such moves are made without systematically considering a full range of the available options

and the implications of each option on service quality and cost. Chapter 8 relates program analysis to each of these topics.

We found the program analysis case studies presented in the appendix still timely. These particular examples provide good illustrations of many program analysis principles, and we were not able to find better ones.

We have made numerous other, smaller changes. We have updated the references and tried to include many excellent materials written in the past several years.

The reader looking for a detailed, step-by-step “how-to-do-it” book will not find it here. We believe, however, that the material presented will provide insights and at least a few suggestions for improving state and local government program analysis. We hope that this work will encourage analysts to take steps to improve the methodology of program analysis.

We hope our readers will find this new edition to be timely and useful.

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Chapter 1

Program Analysis: What It's All About

Executive and legislative officials in government have to make difficult decisions about how to use limited resources to meet the needs of the people the government serves. Throughout the year, but particularly at budget time, they have to decide whether to continue an existing program or to adopt new proposals or some alternative to an existing program. Short of guesswork or relying on "the way things have always been done," how should government officials decide?

There has always been an acute shortage of crystal balls, but a more systematic approach to program analysis can help. Program analysis is, in its simplest terms, the systematic, explicit examination of alternative ways to reach public objectives. The process takes in the steps of estimating the future costs, effectiveness, and other significant impacts of each alternative.

This volume indicates to state and local government personnel how program analysis might help them and describes steps for conducting useful analyses. It concentrates on the types of analysis that a state or local government is most likely to need and will have the capability to undertake. It does not delve into highly technical approaches to analysis. There are many good textbooks on technical procedures, but few basic guides written for state and local government personnel on how to establish, strengthen, or use a capability for program analysis.

Some Definitions

Let us look more closely at the definition of program analysis by defining certain key terms used in this volume.

Costs consist of expenditures of money and other resources, such as manpower, facilities, and land to carry on a program. They include both

operating and maintenance expenses and investment expenses, such as training personnel, constructing facilities, and acquiring land.

Effectiveness is the extent to which a program meets specific goals or objectives. The term also connotes a program's beneficial and detrimental effects on the general public, or on specific parts of that public, called "client groups."

Alternatives are different ways of accomplishing a goal or providing a service. Alternatives may differ by the type of equipment or technology used, by the processes or procedures involved, by the levels of service provided, or by combinations of these.

Techniques of analysis are typically applied to "programs," that is, to government activities or groups of activities that provide direct services to the public, such as crime control, education, health, transportation, recreation, and waste disposal. Program analysis techniques can also be used for analyzing government "support" activities, such as purchasing, finance, and personnel.

An activity related to program analysis is program evaluation. While program analysis focuses on *future* activities, program evaluation assesses the *past* performance of existing programs. The findings of program evaluations may provide important information for program analysis, which normally considers an existing program to be one of the alternatives to be examined.¹

An Illustration of Program Analysis

Examples of the outputs of program analysis and of the steps typically taken to reach those results are presented in exhibits 1 and 2. Exhibit 1 relates to this problem: County government officials in a northeastern state were concerned about their maternal and infant care program, in part because the infant mortality rate at the county hospital was higher than the national average. They requested an analysis of the likely costs and effectiveness of alternatives for reducing infant and maternal mortality rates and infant birth defects. Exhibit 1 shows the findings for each of three alternatives examined. Exhibit 2 summarizes the steps in the analytic process, which are typical of the basic steps in any program analysis. These steps will be discussed in more detail in chapters 3 through 6.

1. Program evaluation is described in a companion report, Harry P. Hatry, Richard E. Winnie, and Donald M. Fisk, *Practical Program Evaluation for State and Local Governments* (Washington, D.C.: The Urban Institute, 1981).

A discussion of the history, concepts, problems, and guidelines for evaluation can be found in Wayne A. Kimmel, "Putting Program Evaluation in Perspective for State and Local Government," Human Services Monograph 1B (Project Share, Rockville, Maryland, April 1981).

Exhibit 1. ILLUSTRATIVE SUMMARY TABLE:
MATERNAL AND INFANT CARE PROGRAM
ANALYSIS IN A COUNTY

Evaluation Criteria	Effectiveness and Costs		
	Alternative 1: Current Program Extended	Alternative 2: Increased Prenatal Care Emphasis	Alternative 3: Increased Postnatal Care Emphasis
1. Annual maternal death rate ^a	0.40	0.36	0.40
2. Annual infant death rate ^a	47	41	47
3. Annual infant defect rate ^a	44	37	27
4. Annual cost	\$1,000,000	\$1,250,000	\$1,200,000

Source: Adapted from Harry Hatry, "Overview of Modern Program Analysis Characteristics and Techniques" (Washington, D.C.: The Urban Institute, 1969).

a. Rates per 1,000 births.

Contents

Chapter 2 focuses on the institutional aspects of program analysis. It discusses organizing and staffing for analysis and includes suggestions for selecting issues, scheduling, and reporting findings. Chapters 3 through 7 cover technical aspects of analysis that are of primary interest to staff analysts. They may also give decision makers a better perspective on what they should expect from program analysis. Chapter 3 discusses the overall framework for an analysis and some of the first steps in analysis. Chapter 4 discusses the estimation of program costs. Chapter 5 discusses what is probably the most difficult technical issue—the estimation of effectiveness. Chapter 6 suggests that estimating how feasible an alternative is (implementation feasibility) should be considered part of the program analysis process. This aspect has received little attention in most analyses of governmental programs. Chapter 7 presents some miscellaneous technical topics, such as "needs assessment,"