THE ANALYSIS OF PUBLIC OUTPUT

NATIONAL BUREAU OF ECONOMIC RESEARCH

UNIVERSITIES—NATIONAL BUREAU CONFERENCE SERIES

1. Problems in the Study of Economic Growth (in mimeograph)
2. Conference on Business Cycles
3. Conference on Research in Business Finance
4. Regularization of Business Investment
5. Business Concentration and Price Policy
6. Capital Formation and Economic Growth
7. Policies to Combat Depression
8. The Measurement and Behavior of Unemployment
9. Problems in International Economics
10. The Quality and Economic Significance of Anticipations Data
11. Demographic and Economic Change in Developed Countries
12. Public Finances: Needs, Sources, and Utilization
13. The Rate and Direction of Inventive Activity: Economic and Social Factors
14. Aspects of Labor Economics
15. Investment in Human Beings
16. The State of Monetary Economics
17. Transportation Economics
18. Determinants of Investment Behavior
19. National Economic Planning
20. Issues in Defense Economics
21. The Role of Agriculture in Economic Development
22. The Technology Factor in International Trade
23. The Analysis of Public Output

THE ANALYSIS OF PUBLIC OUTPUT

EDITED BY

JULIUS MARGOLIS

The Fels Institute of Local and State Government
The University of Pennsylvania

A Conference of the
Universities – National Bureau Committee
for Economic Research

1970

NATIONAL BUREAU OF ECONOMIC RESEARCH

NEW YORK

DISTRIBUTED BY

COLUMBIA UNIVERSITY PRESS

NEW YORK AND LONDON

Library of Congress Card Number: 78-119997
ISBN: 0-87014-220-8

Printed in the United States of America

RELATION OF NATIONAL BUREAU DIRECTORS
TO PUBLICATIONS
REPORTING CONFERENCE PROCEEDINGS

Since the present volume is a record of conference proceedings, it has been exempted from the rules governing submission of manuscripts to, and critical review by, the Board of Directors of the National Bureau.

*(Resolution adopted July 6, 1948,
as revised November 21, 1949, and April 20, 1968)*

UNIVERSITIES—NATIONAL BUREAU COMMITTEE FOR ECONOMIC RESEARCH

Funds for the economic research conference program of the National Bureau of Economic Research are supplied by the National Science Foundation.

CONTENTS

INTRODUCTION

JULIUS MARGOLIS
University of Pennsylvania

In recent decades the field of public finance has become transformed and, with inputs from several other fields, has given birth to an as yet unnamed field which we shall call public economics. An early preoccupation with the incidence of taxes and taxing institutions has been replaced with a focus on the behavior of governments. This change is not based upon the internal logic of the discipline but is responsive to the dramatic growth of government and an involvement of economists with the operations of government programs. The papers of this conference do not fully represent this new field, but it is clear that many of them have been influenced by the developments in public economics.

The government, though it has accounted for a huge share of economic activity and regulated an even larger share, has traditionally been considered exogenous to the economy. Some economists are reluctant to extend economic analysis to the workings of government since they believe that the political process does not exhibit the properties of a market, but at the same time many economists recommend that the government adopt policies which they believe economically optimal. Unless such advice is given with no account to possible implementation, it is implied that there is a mechanism in government which heeds and responds to these exhortations for economic rationality. Certainly the characteristics of government are relevant to the shaping of a program. There is no wisdom in urging a government program to overcome a market failure due to informational deficiencies if it is itself encumbered by similar inadequacies. Nor would it be wise to press the government to correct an efficiency in the market and as a consequence create an unacceptable redistribution. Too often we are made painfully aware of outcomes not anticipated by the legislative architects. The indifference to government structure in design of policy or programs can lead to frustration.

The planners of the conference sought to produce a progress report on the applications of economic analysis in the formulation and implementation of public programs. We designed an orderly structure and we convinced an impressive panel of authors of the value of the product, but the output of independent scholars is a chancy thing. Though some authors performed according to expectations the resultant product has large, unplanned elements. Possibly this is to the good—the working scholars, in resisting our restraints, may better reflect the state of analysis than a committee of planners. In any case, the papers do provide a valuable set of contributions about the public economy.

A decade back Universities-National Bureau Conference 12 dealt with the general field of public finance. The links between the two conferences are strong. Some papers continue arguments begun then; others apply the analysis to specific problems; some break new ground reflecting the growth of the field. The conference planners did not refer back to the older plan but it is clear that, despite dramatic changes in the real world, continuity in science is strong.

The conference papers fall into four categories: theory of market failure and public action, the distributional aspects of public decisions, intergovernmental fiscal relations, and a set of applications of analysis to specific problems and general approaches. The division is artificial and there are important classifications which cut across the groupings. Political analysis, for example, falls into at least one paper of each category.

Kenneth Arrow's contributions lie in the analytical underpinnings of the analysis of the public sector. Studies in this area have stressed two related themes: the determinants of public intervention in the economy and the design of rules for optimal public behavior. Both sets of problems share a common theoretical base which is Arrow's concern. His paper does not deal with the forms of public behavior; it is a basic reappraisal of the analysis of the failures of the market that give rise to the necessity of intervention. His approach is "natural" to economists—a perfectly competitive utopia which fails and therefore necessitates the sinful tampering by government. In Arrow's paper, externalities retain their central role of confounding the market but he generalizes them to the more ubiquitous phenomena of transaction costs. Since transaction costs are universal, almost all private commodities become potential candidates for public intervention; of course the possible advantages of public supply or regulation will be subject to evaluation in terms of the same private, and often other public, transaction costs which may exist even in government decision making.

Arrow turns to other questions (e.g., political process, social codes), but the analysis is always in the context of economic theory. Individuals, though they are acting in the political sphere, are the same individuals who are purchasing goods and working for wages. Rather than partitioning their behavior into separate worlds he suggests that a general theory would be applicable. This section of analysis in the paper is little more than a suggestion though it is highly illuminating. Sidney Alexander, in discussing the paper, took exception to this conventional approach which relies on the preferences of individuals and instead appealed to a very different frame of reference for public policy—the choices of reasonable and moral men with information adequate to judge among alternative states. The different approaches to public action are drawn sharply in the paper and discussion; they are less visible in the many other debates about public policy but nevertheless they are present.

Jerome Rothenberg's paper deals with a specific problem, decentralization of government within a metropolitan area; however it presents a useful foil to Arrow's very general, theoretical paper. Instead of the unitary government assumed in the body of theory, Rothenberg applies the analytical concepts of externalities and welfare economics to the set of local governments. The units of government are specified by fixed territories, their service areas and tax bases are confined within their territories, but transactions flow across borders, and residential and business populations move in response to economic advantage and the decisions of government. The shift of orientation to the behavior of a set of governments, rather than the single government with minimum organizational characteristics, opens a whole new direction of research.

The problem of an objective function takes a very different form when individuals can choose residence among territories with different packages of services and taxes. Redistributional functions can be dealt with in greater richness by considering the incentives and barriers to the movement of population of different income levels. Though Rothenberg focuses on the spatial division of a metropolitan area into a set of governments, the extension of the arguments to deal with special function and higher level governments not only adds realism to the model but it may prove to be an appropriate mechanism by which to incorporate the political and moral elements suggested in the Arrow paper.

The next two papers, by Williamson and Downs, deal with that most difficult of subjects—the distributional aspects of public behavior. Anthony Downs is concerned with the "damages" imposed on individuals by a government program involving a forced sale as for urban highways or urban renewal. An exhaustive listing of possible harmful consequences yielded the impressive number of twenty-two categories, ten of which he believes should be compensated for and only two of which are actually compensated. The inequity is aggravated by the selectiveness of the two programs which focus on the dilapidated slum housing surrounding the inner core of the city and occupied by low-income minority groups. The criteria by which to judge whether a damage should be compensated are not formally developed; however they provide usable guides to administrators and they are suggestive for the more formal treatment in Williamson.

While Downs appeals unabashedly to a concern with equity, Oliver Williamson casts his arguments in terms of allocative effects. Uncompensated damages, in his framework, can cause severe efficiency losses because of the demoralizing effects on the potential recipients. Their investment patterns may be inhibited by fears of arbitrary public acts, they may resort to political restraints on government, even be driven to political disorder. The analysis does not conclude that all damages should be compensated but that an efficiency calculus should be made of the gains and costs of compensation. It would be intriguing to extend his arguments to the more general problem of distribution policy. In that case the redistributive aspects of a program would not be the reflection of a social welfare function but a cost to the system in order to achieve acceptance of its general structure. Distributional rules would be comparable to institutions for enforcing contracts and preventing monopoly—procedures whose merits are judged by their consequences for efficient output. Of course one need not reject any role for equity judgments in order to explore the role that self-interest may play in a willingness to redistribute.

The papers of Buchanan-Wagner and Break deal with intergovernmental relations; they continue the debate of the conference a decade back and it is clear that the issues will remain of lively interest in the coming decade. Buchanan-Wagner examine the possible efficiency bases for the introduction of equalizing elements into a program of bloc or unconditional grants. Their analysis bears a relationship to the Rothenberg paper; they also assign a major role to migration and to externalities. Individuals respond to average tax costs and public benefits in making their locational decisions but the averages diverge from the marginals, therefore leading to misallocations in population. They do not analyze the many forms of intergovernmental fiscal relations, but they focus on general policies.

George Break's paper places the policy alternatives about intergovernmental fiscal relations in an historical perspective. He examines the record of expenditures by function and level since the turn of the century. The analysis of the trends is the basis of his evaluation of the likely developments in intergovernmental fiscal structures and the choice among them of those it would be sensible to encourage.

The last set of papers are applications of economic analysis to a set of problems of the public sector. Three of them deal with general phenomena and the remaining two examine one agency and one program in depth. Henry Rowen, on the basis of experiences in the Bureau of the Budget and RAND, evaluates the sectors where systematic analysis is likely to be successful. Dimensions like knowledge of technological process, prominence of distributional objectives, ignorance of users, availability of data, and fragmentation of administrative responsibility are considered in providing guides to the areas amenable to the PPBS framework. It would be instructive to subject Rowen's judgments to the analytical concepts developed by Arrow. Will the transactions costs which create inefficiencies in the private market have a counterpart in the public sector which create even greater inefficiencies?

Fisher provides a very useful survey of the conceptual framework and the practical problems involved in establishing cost analysis capabilities. Where Rowen's paper deals with the strategy of systematic analysis Fisher summarizes the techniques used to overcome the many problems facing the analyst. He does not solve any new problems, but he illustrates the techniques with hypothetical and military problems.

Hufschmidt addresses a problem which repeatedly crops up—an assumed underestimation of costs of public investment projects. He finds that the bias towards underestimation was true in earlier decades, but it has been disappearing; improvements in planning procedures have had desirable consequences. The critics of engineering agencies have assumed a bureaucratic bias to strengthen their position before budgetary authorities and Congressional committees. Hufschmidt's results imply that this cynical approach to the engineering agencies is too simple. An extension of the investigations to other public works and a more detailed study of the errors will go far to overcome these problems.

Vickrey's paper greatly broadens the concept of public service. He deals with the public highway and with the accidents which arise with congestion but his analysis is not restricted to conventional tools of increasing capacity, changing geometry, imposing driving rules or tolls. Instead he ingeniously treats of alternative insurance and tax schemes by which to discourage accidents.

Haldi's paper on the postal services was commissioned because we wanted an example of the influence of political and social criteria on the output of a commodity which most closely approximated a commercial good. We were not disappointed. Haldi demonstrates many of the "inefficient" practices and certainly these are attributable to political factors. Are these political influences the signs of a venal government responding to special interests? Are they clues to the public goods aspects of the postal services? Are they the results of a log-rolling process where postal services enter as one of many trading items? Should the monopoly position of the postal services be chopped and will the ensuing competition lead to more efficient production and pricing? Haldi argues, after surveying cost and demand data, that a corporate structure for the Post Office and competitive supply would lead to an increase in social utility; that there exists no public goods features in the Post Office though its facilities have been means by which other social values have been furthered. Capron takes exception to some of Haldi's conclusions, and though debate did not lead to a reconciliation of views, it is clear that a continued systematic analysis of this service will permit us to resolve the policy issues being debated.

The set of papers touch on theory and policy, speculation and fact, economics and politics. They do not make a neat, integrated set of arguments, but they do reflect the range of analysis and studies now pursued in public economics.

The text was prepared for publication by George Santiccioli. The charts were drawn by H. Irving Forman.

THE ANALYSIS OF PUBLIC OUTPUT