
PUBLIC FINANCE

J. Richard Aronson



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PREFACE

I have written this book for an introductory course in public finance. It has been designed primarily to accommodate undergraduate students who have only a principles of economics course as background. It is also appropriate for graduate students who have not yet taken a course in public finance. A study in public finance requires the use of economic and financial theory, important examples of which are indifference curve analysis, consumer and producer surplus, and present value analysis. Many students taking this course may not have been introduced to these concepts, and few may have mastered them. We cope with this problem by presenting such concepts when most relevant to the text discussion but set off from it so as not to interfere with the flow of analysis for those already familiar with the concept.

The size of government is now so large that it commands attention. Public finance is a valuable course for any student. For those majoring in economics, government, and international relations and business subjects such as finance, accounting, management, and marketing it is almost a necessity. Understanding how we decide on the size and scope of publicly supported activities, how taxes affect people's behavior, and how taxes get shifted from one person to another is especially important for those who will eventually be given significant decision-making responsibility.

This book stresses institutional arrangements as well as economic and financial theory. The tools of microeconomic analysis and the use of present value analysis are indispensable to understanding public sector decision making and the economic impact of public sector activities. But we also need to know the techniques that have been devised to make public decisions. Thus significant space is given to describing and explaining fiscal institutions such as budget making, voting systems, the existing grant-in-aid system, the tax system, and the Social Security system.

The book is divided into five parts: Introduction, Public Sector Activities, Decision Making in the Public Sector, The Tax System, and Special Topics. This is a considerable amount of material for a one-semester course. A course can be

trimmed down somewhat by allowing students to handle descriptive Chapters 5, 7, and 9 on their own. If the desire is to limit the scope of a one-semester course to federal government finance and leave emphasis on state and local finance for another time, Chapters 3, 6, 16, and 19 can be deferred. A streamlined one-semester course would focus on the following chapters.

Part	Chapters
I	1, 2
II	4
III	8, 10
IV	11-15, 17
V	18

Writing a textbook yields a great deal of satisfaction. It also makes one aware of the debt owed to teachers, colleagues, and students. The impact of James A. Maxwell on this book will be clear to those who are familiar with his work. Also, many of my colleagues were kind enough to read portions of the manuscript and make many useful suggestions. It is with great thanks that I acknowledge the following people: Thomas R. Arnold, Kings College; Patricia Bowers, Brooklyn College; Michael Copeland, Montana State University; Joseph Cordes, George Washington University; Ray T. Gobin, Loyola University of Chicago; Jon T. Innes, Lehigh University; Robert J. Kirk, Indiana University-Purdue University at Indianapolis; Richard McKenzie, Clemson University; John McNamara, Lehigh University; Stephen Mehay, San Jose State University; Peter Mieszkowski, University of Houston; William Morgan, University of Wyoming; Vince Munley, Lehigh University; Peter Parker, Lafayette College; Arnold H. Raphaelson, Temple University; Kurt Rethwisch, Duquesne University; James D. Rodgers, Pennsylvania State University; Evan Sue Hoffman Schouten, Lake Forest College; Eli Schwartz, Lehigh University; Ruth Shen, San Francisco State University; Marvin Snowbarger, San Jose State University; James Suarez, Hunter College; and Randy Trostle, Elizabethtown College.

I hope there is something novel and new in this book. The main objective was to provide a synthesis of accepted doctrine in public finance. I have tried my best to acknowledge the scholarly contributions of those whose work I have drawn upon. However, I may have neglected to identify certain ideas with the people who developed them. This is only because their ideas have become so well accepted as now to be considered common knowledge. Thus, to be so neglected is the highest form of flattery. Finally, I would like to express my gratitude to Asuman Baskan, Graduate Assistant, Lehigh University, for careful reading of the manuscript and preparation of many of the tables, to Ms. Patricia Wendling who typed the manuscript, and to Anne Aronson who organized the name index.

J. Richard Aronson

CONTENTS

Preface **xi**

Section One: Introduction to Public Finance

Chapter 1 **Introduction to Public Finance** **3**

Introduction. What is public finance? Why study public finance? Why do we need a public sector? Plan of the book. Summary.

Chapter 2 **The Theory of Public Goods** **25**

Introduction. Distinguishing between pure public goods and pure private goods. Efficiency in markets for pure private goods and pure public goods. Efficiency and equity in a general equilibrium model. Externalities. Summary.

Chapter 3 **Pricing the Goods Governments Regulate and Sell** **55**

Introduction. Distributing government-supplied services: equity and efficiency. Monopoly inefficiency. Price regulation and the natural monopoly. Marginal cost pricing and the theory of second best. Regulation in practice. Summary.

Section Two: Public Sector Activities

Chapter 4 **Growth and Change in the Public Sector** **89**

Introduction. Growth of the public sector: the federal government. Trends within trends. The expenditures and debt outstanding of state and local governments. The total public sector. Hypotheses to explain the growth of the public sector. Summary.

Chapter 5	Revenue Sources and Expenditure Programs Introduction. Revenues and expenditures of the federal government. Revenues and expenditures of state and local governments. Fiscal variation among the states. Summary.	118
Chapter 6	Multiunit Finance (Fiscal Federalism) Introduction. Centralization versus decentralization. Intergovernmental fiscal relations. The dilemma of federalism and the concept of financial responsibility. Summary.	146
Chapter 7	Federal Grants-in-Aid Introduction. Types of grants. Continuing issues. The need for reform. Summary.	179

Section Three: Decision Making in the Public Sector

Chapter 8	Cost-Benefit Analysis and the Social Cost of Capital Introduction. Present value analysis. Choosing the appropriate discount rate. Measuring benefits and costs. Summary. Appendix: Linear Programming.	213
Chapter 9	Budget Terms, the Budget Cycle, and Budget Concepts Introduction. Evolution of the federal government's budget process. The federal budget cycle. The balanced budget amendment. Other budget concepts and techniques. The budget process of state and local governments. Summary.	249
Chapter 10	Voting Systems and Public Choice Introduction. The voting system. Pareto efficiency under unanimous consent voting. Majority voting. Intensity of preferences and vote trading. Vote trading and the cyclical majority problem. Voting through migration. Summary.	272

Section Four: The Tax System

Chapter 11	Analyzing the Tax System: Equity, Efficiency, and the Costs of Administration and Compliance Introduction. Financing the public sector. Tax equity. Tax efficiency. Tax administration and compliance. Public attitudes on government and taxes. Summary.	299
-------------------	---	------------

Chapter 12	Measuring Fiscal Capacity	329
	Introduction. Taxes and the economic system. Fiscal capacity. Relative fiscal capacity and tax effort of state and local governments. Summary.	
Chapter 13	The Taxation of Personal Income: An Overview of the Federal Individual Income Tax	352
	Introduction. Evolution of the federal income tax. The incidence of a tax on individual income. General overview of the federal income tax. Detailed analysis of the federal income tax. Summary.	
Chapter 14	Personal Income Taxation: Further Details	378
	Introduction. Gross income. Adjustments to income. Itemized deductions and zero-bracket amounts. Exemptions. Taxable income, the tax rate schedules, and tax liabilities. The minimum tax. Tax credits. Complications caused by progression. The negative income tax. Comprehensive income taxation and the flat tax movement. State and local income taxes. Summary.	
Chapter 15	Corporate Income Taxation	427
	Introduction. Incidence of a tax on corporate income. Structure of the U.S. federal corporate income tax. Summary.	
Chapter 16	Sales Taxes, Property Taxes, and Death Taxes	466
	Introduction. Consumption taxes. Property taxes. Estate taxes, gift taxes, and inheritance taxes. Summary.	
Chapter 17	The Overall Fiscal Structure: The Distribution of Taxes and Expenditures by Income Groups	502
	Introduction. Empirical estimating procedure. The Pechman-Okner study. The Browning-Johnson study. The interpersonal distribution of public sector expenditures. Summary.	

Section Five: Special Topics

Chapter 18	Social Security and the Pension Plans of State and Local Governments	531
	Introduction. Personal provision for retirement: voluntary and forced saving. Financing techniques for pension plans: pay-as-you-go versus fully funded approach. The Social Security system. The financing of social security: pay-as-you-go or trust fund? Unemployment insurance. State and local pension plans. Summary.	

Chapter 19	Financing Education	564
	Introduction. Fiscal overview of public school education in the United States. The quest for wealth neutrality. Private sector schools and the voucher system. The impact of fiscal limitations on the provision of public education. Federal aid for elementary, secondary, and vocational education. Summary.	
Key terms and concepts		589
Indexes		603
Name Index		
Subject Index		

section

ONE

INTRODUCTION TO PUBLIC FINANCE

Chapter 1

Introduction to Public Finance

Chapter 2

The Theory of Public Goods

Chapter 3

Pricing the Goods Governments Regulate and Sell



INTRODUCTION TO PUBLIC FINANCE

Chapter Preview

- What is public finance?
- Why study public finance?
- Why do we need a public sector?

Chapter Outline

INTRODUCTION, WHAT IS PUBLIC FINANCE? Definition of Economics, The Positive and Normative Aspects of Economic Analysis, Definition of Public Finance, WHY STUDY PUBLIC FINANCE? WHY DO WE NEED A PUBLIC SECTOR? Market Failure in Providing Society's Desired Set of Goods and Services, Market Failure in the Distribution of Income, Market Failure in Achieving Stability in Employment and Prices, PLAN OF THE BOOK, SUMMARY

INTRODUCTION

The proper functions of government

The proper size of government

The need and significance of the tax limitation movement

The interpersonal equity of the tax burden

The effects of tax rates on people's desires to work, save, and take risks

The desirability of a flat rate income tax

The need for a balanced budget amendment to the U.S. Constitution

These are some of the important issues studied in public finance. Each is hotly debated. Each is important and must be resolved. What makes these problems of continuing current interest, however, is that there is no single correct position on any one of them. The people who must decide the issues and those who will be affected by the solutions do not share the same values. Neither do they have the same interests. Moreover, the economic and political climate in which these problems must be resolved is constantly changing. The result is that the solutions to our public finance problems are not fixed but change over time. A good example is the tax structure. It should not be thought of as an immovable rock but rather as a living, evolving institution. The Economic Recovery Tax Act of 1981 and the Tax Equity and Fiscal Responsibility Act of 1982 are examples of recent significant changes in the tax law.

One can find many other examples of how our attitudes on public finance issues change. The popular view on the proper size and composition of the federal budget that is held in the early 1980s is quite different than it was just a decade ago. Another example of a changing attitude on a public finance problem is the general view of the distribution of functions between the federal government and the states. President Reagan's concept of the "new federalism" calls for a significant increase of fiscal responsibility for the states.

In the chapters to follow we discuss the problems of public finance. We explain the tools used by public finance specialists to understand their subject. We also describe important public finance institutions of which the budget process and the federal income tax are examples. We do not intend to promote a narrow ideological set of answers to our problems. Rather we wish to explore the spectrum of thought on the important issues that must be resolved.

What Is Public Finance?

Public finance is a part of the study of economics. It borders on the fields of government and political science and it deals with many of the same problems and shares many of the techniques employed in the field of corporate finance, but

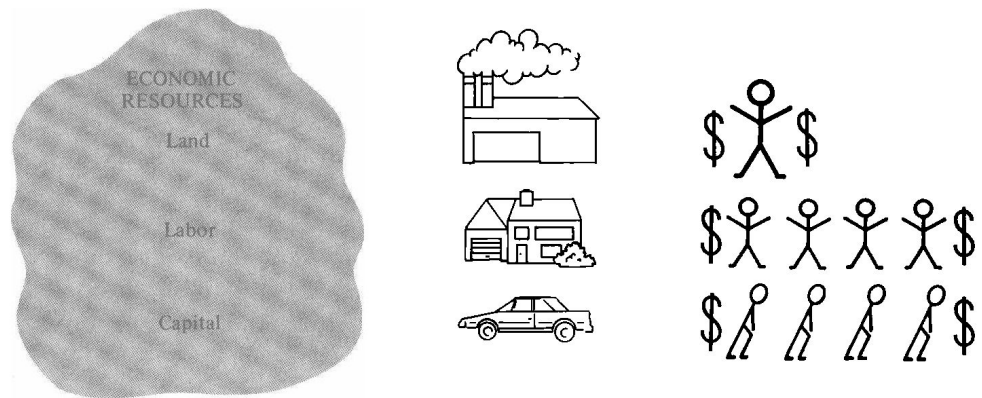


FIGURE 1-1 Society's basic production and distribution problems.

essentially it is contained within the field of economics. Thus, understanding the essence of public finance depends upon an understanding of the nature of economics.

Definition of Economics

Economics is the study of the allocation of scarce resources. The stock of productive resources is not infinite. Economic theory provides insights into the best use of these limited resources. Thus, in using economic analysis, we always talk in terms of alternatives or options. The focus of the analysis may be the entire national economy, it may be the state, or perhaps just the family unit. The approach of economic analysis, however, is always the same. To determine an economic course of action we must, as best we can, measure and compare the costs and benefits of a given activity to the costs and benefits that would occur if resources were used in some alternative fashion.

Figure 1-1 is a simple diagram that illustrates the basic production and distribution problems of any society. At the far left is an amorphous area representing the stock of economic resources. Economic resources are divided into three categories: land, labor, and capital.¹ The supply of all three factors of production is limited. Economic activity is the process of converting these resources into the final goods and services that people wish to consume and enjoy. The center of the diagram shows the final goods and services that people have produced from the resources. The resources can be used cleverly or wastefully. There is nothing to be gained by using up more than the necessary amount of resources in producing any given set of final goods.² Economics is, therefore, in part, a study of efficiency, but economic efficiency should be thought of in a broad rather than a narrow sense. Economics is not only concerned with a mechanical kind of efficiency that deals with physical production processes but it also considers the ability of an economic system to produce the mix of goods and services that people want. It is not being

¹ All resources fit into these three categories.

² Uniform quality of goods and services is assumed.

fully efficient to produce a fleet of fantastically well built and designed horse-drawn carriages if people are not particularly interested in using them. In its most general aspects the study of economics deals with the potential and ability of society to match its wants with its productive capacity.

But economics is more than a study of efficiency; it is just as much a study of equity or fairness. Who shall enjoy the goods and services that have been produced? The superficial answer is those who have the money to pay for them. But what determines the relative distribution of income among people? Moreover, does there exist a distribution of income that might be considered optimal? The far right part of Figure 1-1 portrays a distribution of income in which there are some rich people and some poor people.

Most people have well-defined feelings concerning the distribution of income. Some feel that a person's income should be a result of their productive effort. Those who work hard and well should be rewarded. In economic terminology, the return to any factor of production should reflect its contribution to output. However, not too many people believe that effectiveness in the production process should be the sole principle by which income is distributed. Most people would not consider an economic system to be distributing income fairly if, at the same time that there were a great many wealthy people, there were some who were starving. It would also not be considered very fair if, given an uneven distribution of income, it were possible to predict which people or group of people were going to wind up at the lower end of the economic scale. It is not difficult to accept the idea that there must always be some poor people. It is difficult to accept the idea that all people may not have the same chance at succeeding economically.

Another interesting issue regarding income distribution is the right to make intergenerational wealth transfers. In a free society some individuals may enjoy the benefits of great amounts of goods and services without themselves actually contributing to the production process. These are people who inherit wealth. The extent to which we are prepared to tolerate such transfers is governed by two competing values. On the one hand, there is a commonly shared belief that providing for children while they are growing up and also leaving them an estate is not only the responsibility of the parent but probably also the joy and an important motivating force behind people's economic drive. At the same time, however, it is also felt that it is somehow unfair for one set of people to be placed in a privileged position because of the success of their parents or grandparents. The issue is, of course, never completely resolved. Our tax laws provide a compromise solution. We levy estate and inheritance taxes, but the financial burden they impose is quite mild.

The Positive and Normative Aspects of Economic Analysis

There are two approaches to economic analysis: a positive approach and a normative approach. *Positive analysis* attempts to describe and explain the economy as it is; *normative analysis* describes the economy as it ought to be. The normative analysis must, of course, be based upon the ethical values we hold. The difference between the two can be brought out using the example of a unit excise tax on

Scotch whiskey. An excise tax is a tax on a single good or small group of goods. A unit excise tax would be stated as a given amount of money per quart or gallon. Positive analysis can help us predict reactions to such a tax. We could predict, for example, that the retail price of Scotch whiskey would rise. If producers were made responsible for paying the tax, we would expect that, in an attempt to pass some of this added cost on to consumers, they would state a higher retail price for their product. We might also expect that as a result of the increased price, the quantity of Scotch whiskey bought and consumed would fall. Positive analysis would also lead us to predict that the price of rye whiskey and perhaps beer would also rise. Since these goods are fairly close substitutes for Scotch, a rise in the price of Scotch can be expected to increase the demand for rye and beer. We might also be able to estimate the amount of tax revenue that will be generated by the tax. We may even go so far as to predict that some smuggling might take place, or that weekend cocktail parties might not be so much fun.

Whether the reactions anticipated above are to be considered desirable or undesirable, good or bad, involves some value judgment. Normative analysis requires us to determine what we think of as the optimal amount of whiskey drinking, Scotch drinking, or beer drinking. For those who believe that drink is evil, the predicted effects of the excise tax will be considered desirable. For those who value people's right to maximum freedom of choice, these same effects would be interpreted as undesirable.

It is important to understand that the positive and normative aspects of economics often get intermingled. The grand model of pricing and resource allocation under conditions of perfect competition offers a powerful tool for predicting the course of economic events. Yet this model itself is constructed to define perfect efficiency. The inefficiency of monopoly is established by comparing its price and output characteristics to that which would have occurred if the industry had been competitive. What is often not appreciated is that the perfect results of the competitive model are only perfect if one accepts the values of freedom of choice and voluntary exchange upon which the competitive model is built. (See Figure 1-2 on page 17.)

Definition of Public Finance

If economics is the study of efficiency and equity in the allocation of resources, what then is public finance? *Public finance* is the study of the financial activities of governments and public authorities. It describes and analyzes the expenditures of governments and the techniques used by governments to finance these expenditures. Public finance analysis helps us to understand why certain services have come to be supplied by government, and why governments have come to rely on particular types of taxes. Why, for example, is the size of our defense establishment determined in the public sector but the amount of food produced settled in the private sector? And why do nations rely on a mix of taxes rather than a single tax to provide the revenues they need for public use?

In public finance we are interested in studying the institutions and decision-making processes that help mold the observed behavior of people acting through

government. For example, what effects are budgeting techniques likely to have on the actual mix of goods and services supplied by government? Will it make a difference if a *zero-base* budgeting procedure is substituted for some other method of budgeting?³ Decisions are made in the public sector by voting. However, can voting systems reflect the true preferences of a group of citizens? Moreover, what are the efficiency and equity implications of different voting decision rules? Does it make a difference if decisions are made on the basis of majority vote or unanimous consent?

There is both a normative and a positive side to public finance. It is important to develop models of the economy that can help us define and describe what is meant by an efficient allocation of resources or an optimal state of welfare. Such models will help us determine the extent and need for a public sector.

On the positive side, we would like to be able to anticipate the potential economic and financial effects of public sector activity. There is no doubt that public sector activity is a significant component of the macroeconomy. Government spending and taxation are likely to have an important impact on the level of national income, the price level, and on the rate of unemployment. Public sector activity will also have important microeconomic effects. For example, how will a given tax affect the relative prices of goods and services? Will a tax affect how an individual distributes time between work and leisure, or income between savings and consumption? What effect will a tax have on the profitability of business enterprises?

We must be concerned with the equity as well as the efficiency aspects of public sector activity. We are always interested in trying to answer the question, "Who bears the tax burden?"⁴ Is the tax burden on rich people heavier than on poor people? Does the proportion of income paid in taxes fall, remain the same, or rise as we move from lower to higher income levels? Measuring the tax burden is no easy trick. It is important to immediately grasp the idea that someone other than the person legally responsible for paying the dollars to the tax collector may feel the burden of the tax. The owner of the apartment house receives the property tax bill and pays the stated amount. It may be, however, that some of the tax is reflected in the rents charged to those living in the building. Similarly, employers are responsible for contributing to the social security fund on behalf of their workers. In this case, it may be that it is the workers and not the employers who feel the pinch of the tax. This would occur if the wages of labor were lower than otherwise because of the tax. In short, the distribution of legal tax liabilities among people is generally not a good approximation of the true distribution of the economic burden caused by the tax system. Our study of public finance will have to consider the conditions

³ Zero-base budgeting requires public officials to periodically justify and reaffirm the particular program under consideration. This technique may be compared to incremental budgeting which accepts last year's budget as legitimate and makes decisions about small changes from that budget. The concepts and procedures of budgeting and the budget process are discussed in chap. 9.

⁴ Perhaps the most interesting recent attempt at dealing with this problem is J. Pechman and B. Okner, *Who Bears The Tax Burden?* Brookings, Washington, D.C., 1974. Also see E. K. Browning and W. R. Johnson, *The Distribution of the Tax Burden*, American Enterprise Institute, Washington, D.C., 1979.