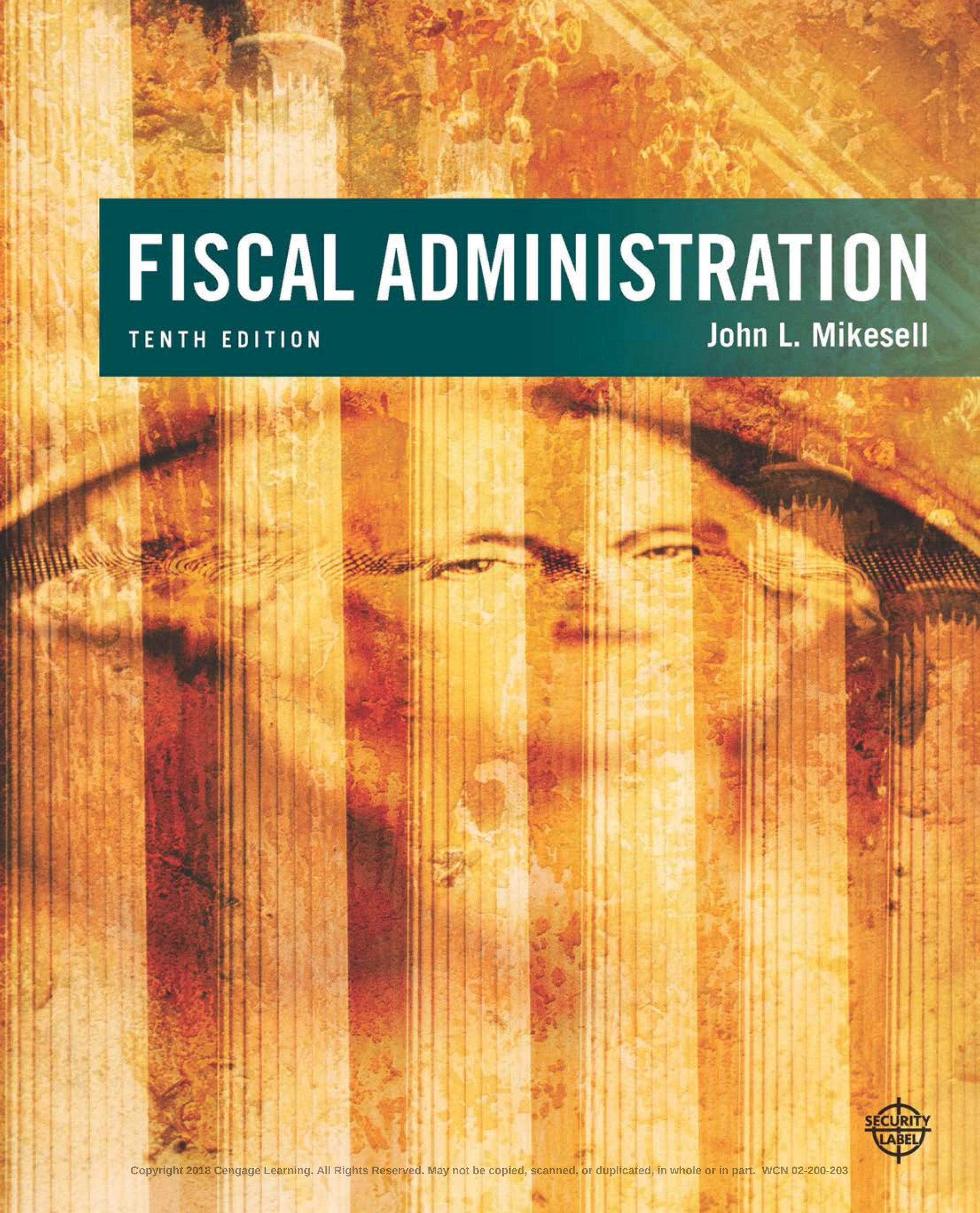

FISCAL ADMINISTRATION

TENTH EDITION

John L. Mikesell

SECURITY LABEL

Fiscal Administration

Fiscal Administration

ANALYSIS AND APPLICATIONS FOR THE PUBLIC SECTOR

Tenth Edition

John L. Mikesell
Indiana University

CENGAGE Learning®

Australia • Brazil • Mexico • Singapore • United Kingdom • United States

CENGAGE Learning

Fiscal Administration: Analysis and Applications for the Public Sector, 10e
John L. Mikesell

Product Director: Paul Banks

Senior Product Manager: Bradley Potthoff

Project Manager: Julia Giannotti

Content Development Project Manager: Matt Gervais, Lumina Datamatics, Inc.

Product Assistant: Staci Eckenroth

Marketing Manager: Valerie Hartman

Senior Content Project Manager: Margaret Park Bridges

Art Director: Brian Malloy, Cenveo® Publisher Services

Manufacturing Planner: Fola Orekoya

IP Analyst: Alex Ricciardi

IP Project Manager: Erika Mugavin

Production Service: Cenveo® Publisher Services

Compositor: Cenveo® Publisher Services

Cover Designer: Cenveo® Publisher Services

Cover Image: Gary S Chapman/Getty images

Library of Congress Control Number: 2016949726

Student Edition:

ISBN: 978-1-305-95368-0

Loose-leaf Edition:

ISBN: 978-1-337-39394-2

Cengage Learning
20 Channel Center Street
Boston, MA 02210
USA

Cengage Learning is a leading provider of customized learning solutions with employees residing in nearly 40 different countries and sales in more than 125 countries around the world. Find your local representative at **www.cengage.com.**

Cengage Learning products are represented in Canada by Nelson Education, Ltd.

To learn more about Cengage Learning Solutions, visit **www.cengage.com.**

Purchase any of our products at your local college store or at our preferred online store **www.cengagebrain.com.**

Printed in the United States of America
Print Number: 01 Print Year: 2016

About the Author

John L. Mikesell is Chancellor's Professor of Public and Environmental Affairs Emeritus at Indiana University. His work in government finance, budgeting, and taxation has appeared in such journals as *National Tax Journal, Southern Economic Journal, Public Finance Review, Public Budgeting & Finance*, *Public Finance and Management, State Tax Notes, Public Choice, International Journal of Public Administration, Tax Notes,* and *Public Administration Review* and he is internationally regarded as an expert in general sales taxation. He is coauthor with John F. Due of *Sales Taxation: State and Local Structures and Administration*, a standard guide for policy discussions about that tax. He was editor-in-chief of *Public Budgeting & Finance*, the journal of the American Association for Budget and Program Analysis and the Association for Budgeting and Financial Management for fifteen years. He has served on the Revenue Forecast Technical Committee of the Indiana State Budget Agency for over thirty years, has been a David Lincoln Fellow in Land Value Taxation with the Lincoln Institute for Land Policy, has been Senior Research Fellow, Peking University–Lincoln Institute Center for Urban Development and Land Policy, Beijing, People's Republic of China, and has been visiting scholar at the Congressional Budget Office. He has served as chief fiscal economist and chief of party with the USAID Barents Group/KPMG Peat Marwick fiscal reform project with the Government of Ukraine, as Moscow-based director for assistance in intergovernmental fiscal relations with the USAID Georgia State University Consortium Russian fiscal reform project, and has worked as consultant on World Bank missions to the Kyrgyz Republic, Kazakhstan, Azerbaijan, Tajikistan, and Turkmenistan, He has been the sales tax expert on tax reform research and discussions in Indiana, Hawaii, Nebraska, Minnesota, and New York. He holds a BA from Wabash College and MA and PhD in economics from the University of Illinois and is a member of Phi Beta Kappa. He received the 2002 Wildavsky Award for Lifetime Scholarly Achievement from the Association for Budgeting and Financial Management and the 2015 Steven D. Gold Award for Outstanding Contributions to State and Local Fiscal Policy from the National Tax Association.

To Karen, Elizabeth, Thomas, and Daniel

Preface

This book seeks to provide a perspective on how and why fiscal systems have developed, to build a basis for understanding the principles and structural dynamics that promise to shape the future of fiscal systems, and to develop a foundation of techniques necessary to become a practitioner of fiscal administration. It is not a training manual, but it does provide the foundation for becoming a functional practitioner and does develop the skills appropriate for a midlevel public manager. The skills in budgeting and finance it develops are equally applicable to governments, nonprofit organizations, and private entities because, in many respects, budgeting is budgeting and finance is finance and it doesn't matter what the context is. Because of the nature of the topic, the text uses elements from economics, political science, law, accounting, business management, and bits of other stuff as it goes along, but it is not a text for any of these disciplines. It is directly aimed at those studying public administration, public affairs, and public policy, all areas that require an understanding of applied public budgeting and finance.

This edition sticks with two distinguishing features. First, a public affairs student and practitioner of public finance needs to understand from where the money comes and to where it goes—not just in general, but quite specifically—and that the ultimate focus should be on service results. Quoting an earlier edition: "If armies move on their stomachs, then governments certainly crawl on their purses." Public administrators who do not understand revenue systems, options, and policies, who do not understand the basic concepts of borrowing and debt management, who do not understand that they are spending other people's money, and who do not track the use of that money to the delivery of appropriate services become the sinister "public bureaucrats" that conservative commentators revile: "spend, spend, spend is all they know." To be a useful contributor to the public, the graduate of a public affairs program needs familiarity with the practice of all components of public finance.

Second, a public affairs student hasn't learned enough if he or she hasn't crunched some numbers (probably a lot of numbers) during a public budgeting and finance class. Most chapters in this text are followed by questions and exercises that require some calculations to come up with an answer. That is how you learn what is going on and that is how you become useful to a prospective employer. You will discover that many exercises are much easier with a spreadsheet program, and if you don't know how to use these, this would be an outstanding time to learn. But learning how to plug numbers into a spreadsheet template provided you will not do; you need to know why you are doing what you are doing and what it means. The preparation of spreadsheets is something you can learn on your own, outside of class, so this textbook concentrates on developing the "what and why" behind the problems and asking the questions that can be answered with that logic. If you understand the principles involved, plugging the numbers into your own spreadsheet will be easy. The ideas always precede the numbers. If you start by plugging numbers into a spreadsheet template prepared by someone else, you will not be able to do independent analysis. Of course, every exercise can be done with paper and pencil. It just takes longer.

This edition updates all statistics of government finance reported in the text and in the tables to the most recent year available. It includes fiscal actions through the official end date of the Great Recession and beyond, and it includes new legal actions that form government fiscal processes. It includes the Budget Control Act of 2011, the act that established new spending constraints and debt ceiling for the federal government and that Congress quickly worked to violate; the continued inability of the federal government to meet its fiscal deadlines or to put finances on a long-term path of sustainability; the state and local government struggles to close fiscal gaps even as they rush to reduce the productivity of their tax systems; the municipal defaults, bankruptcy filings, and state receiverships that have characterized recent years even though they continue to be rare; the financial problems with state and local government pension programs and our social insurance systems; the arguments about the tax that should be paid by the top 1 percent of earners (the people who are not the 99 percent); and the possibly hopeless struggle to repair the federal income tax. There are new and revised cases, sidebars, and exercises. All text materials have been updated where needed to reflect new literature, new laws, and new data.

Instructor's Manual/Test Bank

The Instructor's Manual/Test Bank is available online at the password-protected Instructor's Companion Site (via cengage.com). It provides answers to many review exercises or study questions mentioned in the text, as well a detailed bank of exam questions for each chapter. Interested instructors can find it by looking up this edition of the book on Cengage.com.

Acknowledgments

I want to thank my colleagues at Indiana University and friends at other institutions for their comments and suggestions of ways in which the text could be improved. Many generations of students also have been generous with their thoughts about the text, serving as the best force for quality control that I know. I am particularly grateful to my former students who have gone on to great careers with governments, financial institutions, and research organizations around the world and have given comments from their experience that helped to improve each edition of this text. I would like to thank the reviewers, who made comments and suggestions to help the revision of this book: Dr. Nancy S. Lind, Illinois State University; Dr. Natalia Ermasova, Governors State University; and Dr. Rosa Leung, California State University, Dominguez Hills. Diana Worman provided outstanding secretarial assistance when I couldn't figure out how to make tables, graphs, or figures that were clear and presentable. Finally, I thank my wife Karen for complaining only moderately about the time that I was devoting to this revision.

John L. Mikesell
Indiana University

Contents

About the Author v

Preface vii

CHAPTER 1 *Fundamental Principles of Public Finance* 1
Why Public Finance and Budgeting? 2
Public Finance versus Business Finance 2
Functions of Government: Market Failures 5
Public Goods 6
Externalities 10
Incomplete Markets and Imperfect Information 14
Functions of Government: Economic Stabilization 16
Functions of Government: Redistribution 19
Privatization 22
Why Privatize? 23
Versions of Privatization: Production/Provision 27
Building Public Choices from Individual Preferences 30
Politics, Representation, and Government Finance 34
The Layers of Government 37
Conclusion 40
Questions and Exercises 40
Case for Discussion 42

PART ONE **Budgeting, Budget Structures, and Budget Reform 44**

CHAPTER 2 *The Logic of the Budget Process 44*
Size and Growth of Government Expenditure 46
What Is a Budget? 54
Budget Process and Logic 55
The Parts of the Public Expenditure/Public Revenue Process 56
Budget Classification, Structure, and Presentation Years 58
The Budget of a City Police Department: Organization, Items, and Years 59
Administrative and Functional Classification 62
What the Budget Process Should Contribute 65
Delivering Those Budget Process Functions 67
The Budget Cycle 71
Executive Preparation 72
Legislative Consideration 74
Execution 75
Audit and Evaluation 77
Government Accounting and Financial Reporting 80
Standards 80
Funds 82
Accounting Basis: Cash or Accrual 83
Comprehensive Annual Financial Report (CAFR) and Monitoring Financial Performance 84
Budgets and Political Strategies 87
The Incrementalist Insight 88
Roles, Visions, and Incentives 89
Strategies 91
Conclusion 98
Questions and Exercises 98
Case for Discussion 103

CHAPTER 3 ***Budget Methods and Practices 106***
Growth Rates and Simple Forecasts 106
Preparation of Agency Budget Requests 110
Budget Justification 112
Elements of Cost Estimation 115
Personnel Costs: Paying the Staff 116
Non-Personnel Costs 118
Screening for Errors 119
Review of Budgets 122
Reviewing a Budget Request 122
The Budget Presentation 126
The Executive Budget: The Plan and the Balancing 127
Making Budget Reductions for Fiscal Sustainability 129
Managing Budget Execution 131
Internal Controls 135
An Intra-Year Cash Budget 137
Audit and Evaluation 138
What Audits Need to Prevent: Some Methods of Stealing from Government 138
Conclusion 142
Questions and Exercises 142
Cases for Discussion 150

CHAPTER 4 ***Federal Budget Structures and Institutions 154***
Federal Spending 155
The Fiscal Control Record 158
Legal Framework for Federal Budgeting 161
Phases in the Federal Budget Cycle 170
Executive Preparation and Submission Phase 170
Legislative Review and Appropriation Phase 176
Execution/Service Delivery 186
Audit 189
Sorts of Budget Authority 189
Mandatory and Discretionary Spending 194
Federal/Trust, On-Budget/Off-Budget 203
Conclusion 207
Questions and Exercises 208
Appendix 4–1 210

CHAPTER 5 ***State and Local Budgets 214***
State and Local Spending and Services Delivered 216
Fiscal Control and Conditions 219
State and Local Budget Processes 221
Executive-Legislative Powers and Functions 223
Budget Features 228
Legal Constraints 236
Budget Balance Tricks 237
The Elephant in the Room: State and Local Pensions and Other Post-Employment Benefits 245
Conclusion 251
Questions and Exercises 252
Appendix 5–1 253

CHAPTER 6 ***Budget System Reforms: Trying to Make Better Choices 257***
Considering the Flow of Provision of Government Services: The Logic of the Service System and Budget Classifications 260

Traditional Budgets: A Flawed Tool for Decision Making (but Pretty Good for Control and Accountability) 264
Traditional Performance Budgets 268
Program Budgets 271
An Illustration of an Expenditure in Alternative Classifications 281
The Zero-Based Budget System 282
Results-Based, Outcome-Driven, New Performance Budgeting 286
Performance, Outcome-Budgeting Experience 294
Some Challenges for New Performance Budgeting 296
Participatory Budgeting 302
Conclusion 305
Questions and Exercises 306
Appendix 6–1 307
Appendix 6–2 308

CHAPTER 7 *Capital Budgeting, Time Value of Money, and Cost-Benefit Analysis: Process, Structure, and Basic Tools 311*
Why Have a Separate Capital Budget Process? 313
A Process for Managing Capital Expenditure 317
Planning 318
Budgeting 321
Implementation/Execution 324
Audit 324
Problems in Capital Budgeting 324
Accounting for Time: Discounting and Compounding 325
Compounding 326
Discounting 328
The Annuity Formula—A Special Case 330
Organizing Information for Choices: Cost-Benefit Analysis 331
Elements in Cost-Benefit Analysis 332
Some Special Problems of Cost-Benefit Analysis 345
Conclusion 349
Questions and Exercises 350
Case for Discussion 352

PART TWO Revenue Sources, Structure, and Administration 354

CHAPTER 8 *Taxation: Criteria for Evaluating Revenue Options 354*
Taxation in the United States: A Brief Overview of the Systems 356
Standards for Tax Policy 363
Adequacy of Revenue Production 365
Equity: Horizontal and Vertical 372
Economic Effects 382
Collectability 387
Transparency 393
State and Local Taxes and Economic Development 395
Taxes and Externalities 398
Conclusion 400
Questions and Exercises 400
Case for Discussion 402

CHAPTER 9 *Major Tax Structures: Income Taxes 405*
Some Background 407
The Argument about Taxing Income 411
For the System of Taxing Income 411
Against the System of Taxing Income 414

Individual Income Taxation 418
Defining Income 418
Adjusted Gross Income 420
Personal Deductions 424
Personal Exemptions 427
Taxable Income 427
Tax Rates 428
Tax Credits 432
Effective Tax Rates 433
Indexation 435
Tax Computation 436
The Individual Income Tax Gap 440
Corporate Income Taxation 442
Dividing the Profit Base among Governments 445
Integration of Corporate and Individual Income Taxes and Distortion Problems 450
Payroll Taxation 452
Conclusion 454
Questions and Exercises 454
Case for Discussion 457

CHAPTER 10 *Major Tax Structures: Taxes on Goods and Services 462*
The Equity Question 469
Selective Excise Taxation 471
Luxury Excises 472
Sumptuary Excises 473
Benefit-Base Excises 475
Regulatory and Environmental Excises 478
Other Excises 479
General Taxes on Goods and Services: Retail Sales and Value-Added Taxes 480
Retail Sales Taxes 483
Exclusion of Producers' Goods 486
Taxation of Services 490
Commodity Exemptions 492
Variation in the State Sales Taxes 494
Sales Taxes and Internet Commerce: Remote Vendors and Use Taxes 494
Collecting the Retail Sales Tax 499
Value-Added Taxes 500
Value-Added Tax Features 506
Value-Added Tax versus Retail Sales Tax 508
Conclusion 510
Questions and Exercises 510
Cases for Discussion 511

CHAPTER 11 *Major Tax Structures: Property Taxes 518*
Good Tax, Bad Tax? 523
Arithmetic and Application of Rates, Levies, and Assessed Value 527
Doing Assessments: Standards 530
Doing Assessments: Cycles 534
Doing Assessments: Approaches 539
Fractional Assessment and Assessment Disparity 541
Collecting the Tax 547
Property Tax Relief Mechanisms 547
Exemptions, Credits, and Abatements 548

Circuit Breakers 552
Deferrals 554
Classification 554
Limits and Controls 556
Tax Increment Financing 560
Conclusion 562
Questions and Exercises 563
Cases for Discussion 566

CHAPTER 12 ***Revenue from User Fees, User Charges, and Sales by Public Monopolies 570***
User Fees and Licenses 575
User Charges 578
Advantages of User Charges 580
Limitations of User Charges 582
Charge Guidelines 585
Public Monopoly Revenue: Utilities, Liquor Stores, and Gambling Enterprises 588
Government Utilities 588
Liquor Stores 589
Government Gambling Enterprises: Lotteries and Offtrack Betting 590
Conclusion 595
Questions and Exercises 595
Cases for Discussion 597

CHAPTER 13 ***Revenue Forecasts, Revenue Estimates, and Tax Expenditure Budgets 603***
Revenue Forecast (or Baseline) 604
General Guides for Revenue Forecasts 606
Alternative Methods for Forecasting 608
Choosing the Method for the Budget Forecast 614
Forecasts for the Long Term 616
Monitoring and Evaluating 618
Wrong Forecasts 620
Revenue Estimating (or Scoring) 622
The Macrodynamic Argument 625
Accuracy in Scoring/Estimating 626
Tax Expenditure Budgets 627
Conclusion 633
Questions and Exercises 634
Case for Discussion 636
Appendix 13–1 638

CHAPTER 14 ***Intergovernmental Fiscal Relations: Diversity and Coordination 643***
Correspondence and Subsidiarity 644
Is Bigger Better? 646
Fiscal Disparity 648
Coordination and Assistance: Tax Systems 650
Coordination and Assistance: Grants 654
Categorical Grants 658
Block Grants 662
Revenue Sharing (General-Purpose Fiscal Assistance) 664
States and School Aid 665
Coordination and Assistance: Mandates 668
Conclusion 671
Questions and Exercises 672
Case for Discussion 672

PART THREE **Administering Debt, Working Capital, and Pension Funds 673**

CHAPTER 15 *Debt Administration 673*
Federal Debt 674
State and Local Government (Municipal) Debt 682
Municipal Bonds, Tax-Exempt Interest, and the Tax Reform Act of 1986 686
A New Taxable Municipal Bond Option (Short-Lived) 688
Appropriate Debt Policy 688
The Mechanics of Bond Values 690
Debt Structure and Design 691
Ratings 695
Credit Enhancements 700
Underwriting, Interest Rates, and Ownership 702
Lease-Purchase Finance and Certificates of Participation 708
When Government Finances Go Horribly Wrong: Debt and Other Claims 710
Default 710
Receivership/Emergency Managers 712
Bankruptcy 713
Repudiation 716
Conclusion 717
Questions and Exercises 718
Appendix 15–1 719

Index 721

CHAPTER 1

Fundamental Principles of Public Finance

Chapter Contents

Why Public Finance and Budgeting

Public Finance versus Business Finance

Functions of Government: Market Failures

Public Goods

Externalities

Incomplete Markets and Imperfect Information

Functions of Government: Economic Stabilization

Functions of Government: Redistribution

Privatization

Why Privatize?

Versions of Privatization: Production/Provision

Building Public Choices from Individual Preferences

Politics, Representation, and Government Finance

The Layers of Government

Conclusion

Before the following chapters help you with the skills necessary to become a productive participant in the work of government finance, it is important for you to understand why a functioning public sector is critical for a comfortable, civilized existence. Despite the centuries of human, economic, and social success accommodated by government operations, loud voices declare the importance of markets and free enterprise and declaim a desire for governments to shrink away. In the face of such noise, it is important for anyone contemplating work in the public sector to understand the unique and critical role that this sector must play in even the most vibrant of market economies. Both markets and governments must succeed if people are to be comfortable. Therefore, this first chapter delves into the vital role that government must play and explains why mindless downsizing of government would be a horrible idea. Sound public finances are a prerequisite for making government function.

Why Public Finance and Budgeting?

Why do public managers, whether they work for the government or for a not-for-profit organization, need to study public budgeting and finance? Here is your top ten list:

1. They must make choices about how resources are utilized, and working through the finances gives a good start in organizing the options.
2. They operate in the public trust and need to be able to control the use of public resources—they are using *other people's money*, and those people get mad when the money disappears.
3. They need to make sure they don't run out of money before they run out of need for the service being provided with the money.
4. They need to make a case for the resources appropriate to provide services to their constituents and clients to legislative and executive bodies.
5. They need to understand the case being made by other managers.
6. They don't want to go to jail for misuse of resources that belong to the public or to their organization.
7. The people in any organization who actually understand what the organization is doing are the people who understand the finances of the organization.
8. Not-for-profit organizations frequently have abysmal financial management practices in place.
9. Government crises, regardless of whether the government is national, state, or local, often have financial underpinnings that could have been avoided with better budget systems and mechanisms for finance.
10. It is simply fun to understand what is going on in public organizations, and understanding finance is the most important single step in gaining that understanding.

Unless you have no interest in providing services to people through the public sector, at least one item on this list of reasons will resonate with you. If none does, then you probably need to reconsider your professional goals and objectives. When you have worked through the chapters, cases, and exercises that follow, you will have at least a start at dealing with everything in that list, and you will have made a substantial start to becoming more useful to whoever your employer is.

Public Finance versus Business Finance

Public finance is not the same as business finance, although the two are related and use many of the same tools. One difference is in ultimate objectives. Financial management in business seeks to increase the value of the firm to its owners by judicious allocation and control of its resources.[1] Public financial management uses similar analytic, technical, and managerial tools to allocate and control finances, but governments differ from private businesses in terms of resource constraints, ownership, and objectives. Four important differences exist: governments may tax to enlarge their resources; "ownership" of the government is not clear because many stakeholders—including at least taxpayers, those benefiting from particular government services, and those providing government services—share a legitimate interest in government decisions; the value of government services is neither easy to quantify nor reflected in a single measure (like the sales or profits of a business enterprise); and governments are dealing with the public trust and reputations of all the citizenry. Default on obligations and financial bankruptcy may be seen as interesting and possibly useful financial tools for a private business and stair steps to eventual private wealth, but they are indelible stains on governments and their citizens because they represent violations of contracts with employees, suppliers, lenders, or those receiving services—and breaking contractual promises is not acceptable behavior.

Businesses operate by generating an income stream from the sale of goods and services on the market. Production requires inputs that must be paid for from that income stream; efficient producers can end up with money left over (profit) after the inputs have been paid for, and that is mostly what interests business owners. Business executives may point with pride to the number of people they employ, but if the business isn't profitable, those people are gone. Governments similarly provide goods and services that are valued by the community, but the nature of these goods and services is such that the government cannot capture that value in a voluntary sales transaction. The value of the government service is collective, for the community as a whole, as opposed to the individual value received by purchasers of business services. The fundamental idea that the provider of a valued product can capture a portion of that value—a link between creating value and receiving revenue from that value—is broken for government operations. Government finance, for this reason, is fundamentally different from business finance.

The absence of that link does not mean that governments are financially powerless because governments have the unique power to tax, prohibit, and punish, which makes all the difference when the government is providing a service whose benefits are collective. These coercive powers make governments different from proprietary businesses and voluntary organizations (in this respect, not-for-profits

[1]The collapse of financial institutions in 2008 and 2009, such as Merrill Lynch, Northern Trust, and AIG, exposed several instances in which managers and officers of these institutions enriched themselves while the value of the businesses to the stockholders was declining dramatically toward bankruptcy or government takeover. This divergence of interest between owners (the shareholders) and managers (executive officers) has plagued American capitalism since the emergence of the modern corporation in the early twentieth century. Nevertheless, business finance presumes maximization of corporate value, not plunder by high executives, as the objective. That is a simpler objective than the maximization of the interests of those governed because not everyone has the same interests. For example, I like soccer (what the world calls football) and you like American football, but the public park has room for only one size playing field and set of goals. Whose "best interests" will win? Business managers do not face such balancing dilemmas. They just go for profit.

are more like proprietary businesses than like government); the reflection of those differences makes public financial administration distinct from business finance. Those powers are not, however, without limit, and those limits may be political (the people may get fed up and throw the public officials out, both figuratively and literally) and economic (the economy and the population cannot support a limitless draw to support government operations). Both private and public entities are interested in *fiscal sustainability*: that is, the ability to operate over the long term without reducing the standards of life below those currently enjoyed and even to improve that standard. If fiscal actions now reduce the capacity of future generations to live at least as well as we do now, then those actions violate the standard of sustainability. Much more about violations of fiscal sustainability appears in later sections because American lawmakers seem to have an ingrained desire to violate those standards.

Many different organizations—private businesses, nonprofit organizations, and government agencies—provide the goods and services that we use every day, including both those necessary for life itself and those that make life more enjoyable. Private businesses sell us food and clothing, cars and television sets, and so on: a vast range of commodities that we purchase for survival and enjoyment. The same applies to services: we go to movies run by private companies, travel across the country on privately operated airlines, and hire the neighbor to feed our cats when we go on vacation. All these and many more goods and services are provided under market principles of voluntary exchange: privately owned businesses provide those services to us in exchange for the payment we make to them. No payment, no service. Markets do a pretty good job of getting those goods and services to people willing and able to pay for them, and there isn't much reason for governments to get involved when markets are working. Much the same applies for many nonprofit organizations, such as hospitals and social service organizations, that operate on the basis of charges and government contracts. Other services come from voluntary associations or clubs: the services of the county historical museum, the local neighborhood association, or a local youth soccer organization. Their operations are financed by a variety of contributions and fees. Although voluntary organizations may not require payment before service is rendered, they still need to be paid by someone, voluntarily, in order to survive. After all, those who provide the resources that are used in providing services (utilities, rents, supplies, etc.) need to be paid for those resources.

Finally, we receive the services of police departments, school systems, the judicial and regulatory systems, the social safety net, and so on from governments. But these services are financed differently. Rather than operating from finance by voluntary exchange (market sales) or by voluntary contribution, governments provide goods and services paid for by taxes or other revenues raised by law. This revenue comes not from voluntary purchase or contribution, but, even in a democracy, from the operation of a revenue system based on the legal requirement for payment—ultimately backed by threat of force. Why have a public sector? The reason is not that government services are uniquely essential to life: most countries leave the provision of life's necessities—food, clothing, and usually shelter—to the private sector. But when government fails, the private sector cannot function, and citizens are "bereft of even the most basic conditions of a stable existence: law and security, trust in contracts, and a sound medium of exchange."[2] In short, the public sector exists to provide valued services when the market fails to provide them appropriately, including services needed for proper functioning of markets. Public budgeting and finance sees to the operations of the public sector.

Functions of Government: Market Failures

Why can't private businesses selling their products in free markets be relied upon to provide all goods and services that ought to be available? The argument for the efficiency of markets is powerful. The President's Council of Economic Advisers explains:

> If markets are competitive and function smoothly, they will lead to prices at which the amount sellers want to supply equals the amount buyers demand. Moreover, the price in any market will simultaneously equal the benefit that buyers get from the last unit consumed (the marginal benefit) and the cost of producing the last unit supplied (the marginal cost). These two conditions ensure efficiency: when they hold in all markets, the Nation's labor and other resources are allocated to producing a particular good or service if and only if consumers would not be willing to pay more to have those resources employed elsewhere.[3]

Markets cause the productive capacity of the economy to be used to produce what people want most and cause the least possible amount of resources to be used in that production. In a world of limited resources, it is a valuable result. Markets make people better off and economize on the use of scarce resources.

But there remains an important role for government, even if private markets can deliver most goods and services reliably and at low cost. Indeed, there is an important cooperative relationship between healthy government and healthy markets. Markets need government to function efficiently: "Deals must be enforced and fraud discouraged. Without a government legal system to guarantee property rights and enforce contracts, corporate organizations and market exchange would be virtually impossible. Anarchy and the free market are not synonymous."[4] Markets are useful for government. Governments can obtain important information from market data, use markets as efficient mechanisms for implementing public policy, and acquire goods and services in market transactions to provide government services.

---

[2]International Bank for Reconstruction and Development/World Bank, *World Development Report 1997* (New York: Oxford University Press, 1997): 19.
[3]*Economic Report of the President Transmitted to the Congress February 1997* (Washington, D.C.: U.S. Government Printing Office, 1997): 191.
[4]Ibid., 192.

The market economy needs government to function properly, and governments need the market economy if they are to serve the public interest.[5]

The role of government, however, extends beyond simply allowing markets to operate because a system of markets is not always able "to sustain 'desirable' activities or to stop 'undesirable' activities."[6] What makes some services a government responsibility? Why can't private action be relied upon to provide public safety, primary education, environmental protection, public health, national defense, and so on? Individuals demand these services, and we expect businesses to respond to customer demand in their quest for profit. Why do markets fail, and thereby create an economic need for government? The role for government begins with what are called "public goods."

Public Goods[7]

Some goods will not be supplied in the market or, if supplied, will be supplied in insufficient amounts because of their very nature. The problem comes from two properties: (1) *nonexhaustion,* or nonrivalry, occurs when benefits of the service can only be shared, meaning that a given quantity of the service can be enjoyed by additional people with no reduction in benefit to the existing population; and (2) *inability to exclude nonpayers* occurs when benefits cannot be easily limited to those who have paid for the services. The properties reflected in Figure 1–1 distinguish private goods, public goods, and two intermediate kinds of goods—toll goods and common-pool goods.

What do these public-good properties mean? When services are nonrival, use of the service by one person does not preclude concurrent full use by others at no additional cost of providing that service. To give an extreme example, should some extraordinarily rich individual decide to build a bridge across the Mississippi River for his personal use and because he thought it would look pretty, the extra cost of allowing someone else to use the bridge is nothing. Once the service has been provided for one, the cost of providing the service to additional users equals zero (its marginal cost is zero, in microeconomic terms). Economic efficiency requires that the price paid by the buyer (the value of resources given up by the buyer to make the

[5]Some doubt that governments do anything useful. For instance, they point to high crime rates in areas with heavy police presence: why aren't the cops doing their job? But maybe the police are there because of the crime and maybe the crime rate would be even higher if the police weren't there. No sense sending lots of police where there isn't much crime. In terms of gauging impact, there sometimes are natural experiments. After the 9/11 attacks, there was much increased policing in the District of Columbia for reasons unrelated to amounts of criminal activity there. Did crime levels go down when alert levels (and intense policing) were high? Yes, evidence indicates that a 50 percent increase in police presence led to a decrease in crime of around 15 percent, a pretty good return from policing (Jonathan Klick and Alexander Tabarrok, "Using Terror Alert Levels to Estimate the Effect of Police on Crime," *Journal of Law and Economics* 48 (April 2005): 266–79.

[6]Francis M. Bator, "The Anatomy of Market Failure," *Quarterly Journal of Economics* 72 (August 1958): 351.

[7]Some argue that individuals make "wrong" decisions. The idea is that the market underprovides museums, ballets, and symphonies because people do not understand their true value and government needs to step in to support such "merit goods." On the other hand, junk food and reality television starring yokels could be viewed as "merit bads." The line between good and bad is not scientific and ends up in special-interest political battles. My idea of what things are "good," in all likelihood, would not match your idea and that is why the "merit good" idea ends up being somewhat squishy as a standard for determining what governments should pay for.

Figure 1–1
The Elements of Nonappropriability

	Rival	Nonrival
Excludable	Pure private goods Examples: food, clothing, television sets	Toll goods Examples: satellite broadcasts, toll bridges, turnpikes, concerts
Nonexcludable	Common property resources Examples: fisheries, aquifers, petroleum reserves	Pure public goods Examples: national defense, system of laws, vector control

purchase) not exceed the additional cost of producing the purchased good or service. A private business will charge a price higher than zero, the efficient price, because it cannot afford to do otherwise. Therefore, too little of the good or service will be purchased and consumed, and its price will be too high, compared with quantities and prices in a fully functioning market.

Now suppose a private business has no way of excluding people who have not paid from using the service. That's a big problem: if the business can't keep nonpayers away, it will be hard to get anyone to pay (only the suckers), and the business will have no incentive for providing the service. It has little chance of covering its costs, let alone make a profit. Again, this is a market failure because the seller can't successfully charge a price, and without being able to charge a price, the service won't be available. Within the range of exclusion failure, if someone provides the service, all receive that service. When one structure in an urban area receives fire protection, given the propensity of fires to spread, nearby structures receive protection as well. (The public good is fire protection, not firefighting; when the equipment is putting out the fire at Smith's house, it is not available to put out the fire anywhere else. Extinguishing Smith's fire, however, provides fire protection equally to many neighbors.) Obviously, there are geographic limits to that range of impact: fire protection provided in Bloomington, Indiana, will not extend to the people in Jackson, Mississippi. Sidebar 1–1 provides further discussion about the provision of fire protection. Within a specific geographical area, however, all receive the service regardless of payment, whether they want it or not. Such is the special monopoly position of governments: not only are alternative providers unavailable, but also residents do not have the option of not paying for the service because public revenue systems operate independently from service delivery. A governor of Kentucky recognized the difference between operating the state and operating his successful business: "Hell, governing Kentucky is easier than running Kentucky Fried Chicken. There's no competition."[8] Payment regardless of preference or consumption is, of course, a unique feature of government provision.

[8]The Honorable John Y. Brown Jr., quoted in *Newsweek* (March 30, 1981). Mr. Brown qualified to be governor by once heading Kentucky Fried Chicken, so he had some evidence behind his claim. However, he did not face a legislature with dramatically different policy philosophies than his. Perhaps President Obama might find heading Kentucky Fried Chicken to be a relief after being president of the United States.

Sidebar 1–1
Fire Protection as a Private Good

Households expect fire protection as a part of civilized life, an expectation that includes extinguishing any fires on the household's property and preventing any fire from spreading from the neighbor's property. Although property owners may install sprinkler systems for protection, there remains a presumption that some firefighting service will be available to combat any fire that erupts. There are alternative ways in which this service could be provided, sometimes by governmental entities, sometimes by volunteer community groups, and sometimes by private firms.

In colonial America, it was common for fire insurance companies to provide fire protection and firefighting services. Property owners paid a fee in advance, and an insurance mark was placed on the property. Fire companies would fight fires only in buildings for which that payment had been made. The companies fought the fire to reduce the loss that the insurance company would need to pay for the loss experienced by insured clients. That gave the fire insurance company a considerable incentive to extinguish the blaze as expeditiously as possible. Property owners had an incentive to pay for the insurance mark because otherwise the fire company would not extinguish the fire. But in built-up areas, fire companies ultimately had to extinguish all fires, even those on uninsured properties, because of the danger that the fire would spread to adjacent insured parcels. It was advantageous to be a free rider, certain in the knowledge that the company would fight the fire, even if the fee hadn't been paid, and private provision fell apart. Municipal fire companies supported by tax revenue became the rule throughout the world.

Insurance companies still are involved in firefighting in the western United States, however. American International Group (the AIG involved in the financial collapse of 2008) and some other insurers of high value properties operate fire protection operations for their private clients in California, Colorado, and Idaho. For example, in the Castle Rock, Idaho, wildfires of 2007, AIG sent in its own fire truck with retardant chemicals to protect seven extremely expensive properties that it covered (the homes were valued at around $35 million, so the insurance company had a lot at risk, and this was not an exercise in charity).[1] The public-good problem is that fires tend to spread, and if your neighbor does not have fire protection, the fire on his property will threaten your property. That protection of property owned by others is the public-good feature. You can be reasonably certain that AIG wasn't there fighting the fire because of these public benefits.

In a number of other parts of the country, fire protection companies are privately run and privately financed by fire protection fees paid by property owners. These are true fees for services and not disguised taxes, such as the Fire Prevention Fee collected in California. For that fee, there is a collection process associated with nonpayment, not withholding of service and paying the fee is not optional. Governments usually impose such fees because some legal or political constraints make it difficult to finance the service through straightforward taxes. Truly privatized provision is financed by voluntary payments, and failure to pay means service will not be rendered. Consequences can be tough, as the following example illustrates.

[1]William Yardley, "The Wealthy Get an Extra Shield for Wildfires," *New York Times,* August 28, 2007.

Residents of Obion County, Tennessee, have the option of paying a $75 fee for fire protection from the city of South Fulton. In October 2010, the house of a family that had chosen not to pay caught fire, the firefighters did not respond, and the house burned down. They did respond when the neighbor's field caught fire and endangered his house—the neighbor had paid the fee. Amazingly enough, the same thing happened in December 2011. Another house whose owner had not paid caught fire, and the South Fulton firefighters watched as it burned to the ground. Apparently, there are slow learners in the county.[2] The South Fulton mayor notes that the costs of the fire department have to be covered, and if the department responded to nonpayers, there would be no reason for anyone to pay. People in the city, of course, get the service automatically because it is financed by city taxes.

Other private firefighting companies have somewhat different operating procedures when confronted with a fire in a parcel that has not paid the fee. The Rural Metro Fire Department in the Maricopa County, Arizona, area battles the fire and then bills the property owner for the cost of the service. One couple in Surprise, Arizona, were surprised to receive a bill for $19,825 with charges of $1,500 per fire truck and $150 per hour for firefighters for their mobile home fire.[3] A similar approach is used by the Southside Fire Department in Georgia.

The ability to handle firefighting through private provision depends on the operating environment. When properties are densely situated, fires are likely to spread from one property to another, which makes it generally infeasible to ignore a fire on a nonpaying parcel because of the likelihood that it will spread to adjacent properties. In that environment, fire protection has public-good characteristics, and providing service through the market is of doubtful feasibility (but a private company might be contracted to produce the service that is being provided by the government). In less dense areas, fire protection is less definitely a public good and alternate approaches may be feasible. But if private financing is the choice, then the system will work only if there is a clear policy about what will happen if the property of a nonpayer catches fire.

[2]Jason Higgs, "Home Burns While Firefighters Watch." http://www.wpsdlocal6.com/news/local/Home-burns-while-firefighters-watch-again-135069773.html
[3]David Lohr, "Arizona Firefighters Charge Family Nearly $20,000 After Home Burns Down," *Huffington Post,* November 8, 2013.

Public goods include national defense, mosquito abatement, pollution control, and disease control, for example. The common characteristics of these services are the previously described nonexclusion and nonexhaustion or nonrivalry. Consider mosquito abatement. When a given level of control is provided, all people in the area receive the same service. Other people could enter the control district and simultaneously receive that same service without any additional abatement cost (marginal cost equals zero). Furthermore, there is no way to deny service to those not paying for it. Individuals in the service area may value the abatement service differently (reaction to mosquito bites varies among individuals; some people swell up in alarming fashion, and others don't—and the consequences of some mosquito-borne diseases, like Zika, are considerably more devastating to some people), but all receive the same service in terms of mosquito reduction. Public goods are the domain of public provision and public finance.