JONATHAN GRUBER PUBLIC FINANCE AND PUBLIC POLICY

FIFTH EDITION

## **Public Finance and Public Policy:** A Tour Through the Book

#### **PART I** Introduction and Background

1 Why Study Public Finance?

The goal of studying public finance is to understand the proper role of the government in the economy. The changing role of government and exciting current policy debates motivate the study of this field.

2 Theoretical Tools of Public Finance

We review the microeconomic tools necessary to understand the effects of government intervention in the economy.

3 Empirical Tools of Public Finance

We review the main issues in empirical public finance, the use of data and statistical methods to measure the impact of government policy on individuals and markets.

4 Budget Analysis and Deficit Financing

We delve into the complexity of budgetary issues that arise as governments consider their revenue and expenditure policies.

#### **PART II Externalities and Public Goods**

A major role of government is to address market failures caused by goods that have external costs and benefits or public benefits. In this part we discuss when the private market can and cannot solve these problems and the prospects for government success in addressing the problems.

5 Externalities: Problems and Solutions

When do externalities cause private markets to fail, and what tools does government have to combat this failure?

6 Externalities in Action: Environmental and Health Externalities

We use theoretical tools to examine examples of environmental and health externalities (such as acid rain, global warming, cigarette smoking, and obesity).

- 7 Public Goods
- 8 Cost-Benefit Analysis
- **9** Political Economy

➤ Goods with public benefits may be underprovided by the private market, under conditions discussed in Chapter 7, but the public sector faces two key problems in providing those goods: measuring their costs and benefits (Chapter 8) and effectively translating voters' preferences for public projects into public policy (Chapter 9).

10 State and Local Government Expenditures

We discuss the local provision of public goods and the question of whether competition across localities can solve the problem of underprovision of public goods.

11 Education

We review the public finance issues involved in providing education, one of the most important public goods in the United States.

#### **PART III Social Insurance and Redistribution**

The increased nature and scope of government spending on social insurance programs is one of the most fundamental changes in U.S. public policy over the past fifty years.

- 12 Social Insurance: The New Function of Government
  - We examine the general theory of social insurance, highlighting the benefits (consumption smoothing) and costs (moral hazard) of insurance.
- 13 Social Security
- 14 Unemployment Insurance, Disability Insurance, and Workers' Compensation
  - We apply the principles of social insurance from Chapter 12 to the study of the nation's largest social insurance programs. We discuss the institutional features of these programs, their benefits and costs, and prospects for program reform.
- 15 Health Insurance I: Health Economics and Private Health Insurance

16 Health Insurance II: Medicare, Medicaid, and Health Care Reform

- ➤ The largest and most rapidly growing government expenditure is on health care. We discuss the nature of health economics and the functioning of private health insurance markets, the role of the nation's two largest public health insurance programs, and the structure and impacts of the Affordable Care Act.
- 17 Income Distribution and Welfare Programs

We review the facts on income distribution in the United States, the theoretical and empirical effects of welfare policy, and the impacts of fundamental welfare reform.

#### **PART IV** Taxation in Theory and Practice

In this part we move from the study of government expenditures to the study of how the government raises revenue through taxation.

18 Taxation: How It Works and What It Means

We provide the institutional and theoretical bases for understanding tax policy and its effects, focusing in particular on the appropriate base for individual income taxation.

- **19** The Equity Implications of Taxation: Tax Incidence
- 20 Tax Inefficiencies and Their Implications for Optimal Taxation
  - Markets do not take taxes lying down. In these chapters, we discuss how market reactions affect both the equity implications of tax (tax incidence) and the efficiency costs of taxation. We use this theory to model the optimal design of taxes on goods and on income, and discuss evidence on the distribution of tax burdens.
- 21 Taxes on Labor Supply
- **22** Taxes on Savings
- 23 Taxes on Risk Taking and Wealth
  - In these chapters we explore the effect of income taxation on individual behavior and the resulting implications for tax policy. How do taxes affect labor supply, and what has been the effect of the Earned Income Tax Credit? How do taxes affect savings, and what has been the effect of tax-subsidized retirement savings? How do taxes affect the distribution of asset holdings, and what has been the effect of the capital gains, estate, and property taxes?
- 24 Taxation of Business Income

We discuss the structure of the corporate income tax and its implications for a firm's investment and financing decisions.

25 Fundamental Tax Reform and Consumption Taxation

Fundamental tax reform in the United States focuses on moving to a low-rate, broad-based tax system. We discuss the benefits of this reform, the political and economic barriers it faces, and possible reforms such as a consumption or flat tax.

### PUBLIC FINANCE AND PUBLIC POLICY

this page left intentionally blank



# PUBLIC FINANCE AND PUBLIC POLICY

FIFTH EDITION

# Jonathan Gruber

Massachusetts Institute of Technology



A Macmillan Education Imprint New York

#### To Andrea, Sam, Jack, and Ava

Vice President, Content Management: Catherine Woods Vice President, Editorial, Sciences, & Social Sciences: Charles Linsmeier Publisher: Shani Fisher Executive Editor: Carlise Stembridge **Executive Development Editor:** Sharon Balbos Development Editor: Jane Tufts Associate Media Editor: Lindsay Neff Media Producer: Andrew Vaccaro Editorial Assistant: Carlos Marin Marketing Manager: Tom Digiano Marketing Assistant: Alex Kaufman Director of Content Management Enhancement: Tracey Kuehn Managing Editor: Lisa Kinne Project Editor: MPS North America LLC Project Editor Liaison: Julio Espin Photo Editor: Cecilia Varas Director of Design, Content Management: Diana Blume Cover and Text Designer: Vicki Tomaselli Art Manager: Matthew McAdams Production Manager: Susan Wein Supplements Project Editor: Edgar Doolan Composition: MPS Ltd. Printing and Binding: RR Donnelley Photo Cover Credit: Robert Dodge/E+/Getty Images Library of Congress Control Number: 2015951239 ISBN-13: 978-1-4641-4333-5 ISBN-10: 1-4641-4333-1 © 2016, 2013, 2011, 2007 by Worth Publishers All rights reserved. Printed in the United States of America First Printing Worth Publishers

One New York Plaza Suite 4500 New York, NY 10004–1562 www.worthpublishers.com

#### About the Author

r. Jonathan Gruber is a Professor of Economics at the Massachusetts Institute of Technology (MIT), where he has taught since 1992. He is also the Director of the Health Care Program at the National Bureau of Economic Research, where he is a Research Associate, and President Elect of the American Society of Health Economists. He is also a member of the Institute of Medicine, the American Academy of Arts and Sciences, and the National Academy of Social Insurance.

Dr. Gruber received his B.S. in Economics from MIT and his Ph.D. in Economics from Harvard University. Dr. Gruber's research focuses on the areas of public finance and health economics. He has published more than 150 research articles, has edited six research volumes, and is the author of *Health Care Reform*, a graphic novel. In 2006, he received the American Society of Health Economists Inaugural Medal for the best health economist in the nation aged 40 and under.

During the 1997–1998 academic year, Dr. Gruber was on leave as Deputy Assistant Secretary for Economic Policy at the Treasury Department. From 2003 to 2006, he was a key architect of the ambitious health reform effort in Massachusetts and in 2006 became an inaugural member of the Health Connector Board, the main implementing body for that effort. In 2009–2010, he served as a technical consultant to the Obama Administration and worked with both the Administration and Congress to help craft the Patient Protection and Affordable Care Act. In 2011, he was named "One of the Top 25 Most Innovative and Practical Thinkers of Our Time" by the online magazine *Slate*. In both 2006 and 2012, he was rated one of the top 100 most powerful people in health care in the United States by *Modern Healthcare* magazine.



# **BRIEF CONTENTS**

Contents vii Preface xvii

#### PART I Introduction and Background

- 1 Why Study Public Finance? 1
- 2 Theoretical Tools of Public Finance 27
- 3 Empirical Tools of Public Finance 65
- 4 Budget Analysis and Deficit Financing 93

#### PART II Externalities and Public Goods

- 5 Externalities: Problems and Solutions 123
- 6 Externalities in Action: Environmental and Health Externalities 153
- 7 Public Goods 191
- 8 Cost-Benefit Analysis 219
- 9 Political Economy 241
- 10 State and Local Government Expenditures 275
- 11 Education 305

#### PART III Social Insurance and Redistribution

- 12 Social Insurance: The New Function of Government 335
- 13 Social Security 367
- 14 Unemployment Insurance, Disability Insurance, and Workers' Compensation 403
- 15 Health Insurance I: Health Economics and Private Health Insurance 433
- 16 Health Insurance II: Medicare, Medicaid, and Health Care Reform 471
- 17 Income Distribution and Welfare Programs 511

#### **PART IV** Taxation in Theory and Practice

- 18 Taxation: How It Works and What It Means 549
- **19** The Equity Implications of Taxation: Tax Incidence 585
- 20 Tax Inefficiencies and Their Implications for Optimal Taxation 619
- 21 Taxes on Labor Supply 657
- 22 Taxes on Savings 683
- 23 Taxes on Risk Taking and Wealth 713
- 24 Taxation of Business Income 739
- 25 Fundamental Tax Reform and Consumption Taxation 777

Glossary G-1

#### References R-1

Index I-1

# CONTENTS

#### Preface xvii

#### PART I

#### **Introduction and Background**

<b>CHAPTER 1</b>	Why Study	Public	Finance?	1
------------------	-----------	--------	----------	---

#### **1.1 The Four Questions of Public Finance** 3 When Should the Government Intervene in the Economy? 4

APPLICATION Modern Measles Epidemics 5 How Might the Government Intervene? 8 What Are the Effects of Alternative Interventions? 9

APPLICATION The CBO: Government Scorekeepers 10 Why Do Governments Do What They Do? 11

#### 1.2 Why Study Public Finance? Facts on Government in the United States and Around the World 11

The Size and Growth of Government12Decentralization13Spending, Taxes, Deficits, and Debts14Distribution of Spending16Distribution of Revenue Sources19Regulatory Role of the Government19

#### **1.3 Why Study Public Finance Now? Policy Debates over Social Security, Health Care, and Education** 21

Social Security 21 Health Care 22 Education 23

1.4 Conclusion24Highlights24Questions and Problems25Advanced Questions25

#### CHAPTER 2 Theoretical Tools of Public Finance 27

#### 2.1 Constrained Utility Maximization 28 Preferences and Indifference Curves 29

Utility Mapping of Preferences 31 Budget Constraints 33 Putting It All Together: Constrained Choice 35 The Effects of Price Changes: Substitution and Income Effects 37

#### 2.2 Putting the Tools to Work: TANF and Labor Supply Among Single Mothers 39

Identifying the Budget Constraint 40

The Effect of TANF on the Budget Constraint 41

#### 2.3 Equilibrium and Social Welfare 45

Demand Curves 46 Supply Curves 48 Equilibrium 49 Social Efficiency 50 Competitive Equilibrium Maximizes Social Efficiency 53 From Social Efficiency to Social Welfare: The Role of Equity 54 Choosing an Equity Criterion 56 **2.4 Welfare Implications of Benefit Reductions: The TANF Example** 

Continued 56 2.5 Conclusion 58

Highlights 59 Questions and Problems 59 Advanced Questions 60

APPENDIX The Mathematics of Utility Maximization 62

Quasi-Experiments 81

#### CHAPTER 3 Empirical Tools of Public Finance 65

3.1 The Important Distinction Between Correlation and Causality 66 The Problem 67
3.2 Measuring Causation with Data We'd Like to Have: Randomized Trials 68 Randomized Trials as a Solution 69 The Problem of Bias 70 Randomized Trials of ERT 71 Randomized Trials in the TANF Context 71 Why We Need to Go Beyond Randomized Trials 72
3.3 Estimating Causation with Data We Actually Get: Observational Data 73 Time Series Analysis 73 Cross-Sectional Regression Analysis 77