

LOUIS KAPLOW

The Theory of Taxation
and Public Economics



1378792

LOUIS KAPLOW

The Theory of Taxation
and Public Economics



PRINCETON UNIVERSITY PRESS
PRINCETON AND OXFORD

Copyright © 2008 by Princeton University Press
Published by Princeton University Press, 41 William Street, Princeton,
New Jersey 08540
In the United Kingdom: Princeton University Press, 6 Oxford Street,
Woodstock, Oxfordshire OX20 1TW
All Rights Reserved

Library of Congress Cataloging-in-Publication Data
Kaplow, Louis.

The theory of taxation and public economics / Louis Kaplow.

p. cm.

Includes bibliographical references and index.

ISBN 978-0-691-13077-4 (cloth : alk. paper)

1. Finance, Public. 2. Taxation. 3. Income tax. 4. Welfare economics.
5. Distributive justice. I. Title.

HJ141.K36 2008

336.2001—dc22 2007044141

British Library Cataloging-in-Publication Data is available.

This book has been composed in Minion.

Printed on acid-free paper. ∞

press.princeton.edu

Printed in the United States of America

1 3 5 7 9 10 8 6 4 2

Preface



The purpose of this book is to offer a unifying conceptual framework for the normative study of taxation and related subjects in public economics. Such a framework necessarily begins with a statement of the social objective, taken here to be the maximization of a conventional social welfare function, and then asks how various government instruments are best orchestrated to achieve it. The structure is built on the foundation provided by the fundamental theorems of welfare economics. The key deviation is due to the infeasibility of redistribution by individualized lump-sum taxation. Because of this limitation, the fiscal system relies significantly on income taxation, which gives rise to the basic tradeoff between distribution and distortion.

My motivating premise is that the analysis of various forms of taxation and of many other topics must be grounded explicitly in this framework. As a matter of a priori theory, this assertion seems self-evident. Its importance is reinforced by two considerations. First, the optimal use of any one instrument depends on which others are available and how they are employed. In the present context, the pivotal role of the income tax is particularly significant, and analysis that focuses on other instruments in isolation may be problematic. Second, in complex, second-best settings, failure to examine all the effects of a policy in terms of social welfare can be dangerous. For example, a reform that is found to reduce labor supply distortion may seem desirable on that account, but the reform may concomitantly reduce redistribution, perhaps to such an extent that overall welfare is lower. Examining only one set of effects can be misleading, especially when the omitted effects may systematically run in the opposite direction.

The most direct way to meet the challenge would be to optimize all instruments simultaneously. This task, however, is quite daunting even with only a few instruments and minimal complicating assumptions—all the more so when one piece of the problem includes optimal deployment of a nonlinear income tax. An alternative strategy, developed and

frequently applied in this book, is to use a construction that makes it possible to (legitimately) set aside much complexity and examine a few elements at a time. Specifically, in order to analyze a given policy—such as a modification to commodity taxes, transfer (estate and gift) taxation, public goods provision, or some means of regulating externalities—the policy is combined with a distributively offsetting adjustment to the income tax. The net result is a reform package that is distribution neutral, which, as will be seen, holds much constant and leaves in play the distinctive effects of the policy instrument under consideration, ones that can then more readily be evaluated.

In most areas of economics, it is standard practice to relate analysis to a paradigmatic setting, often one closely related to the simplified world of the two welfare theorems. This methodology enhances rigor, economizes on effort, generates benefits from cross-fertilization, and facilitates understanding and communication. For taxation and many other public economics questions, the same advantages can be realized by adopting such an approach, although, as noted, the benchmark scenario should be the second-best one in which an income tax is present and redistribution is accomplished imperfectly and at a cost. My goal is to pursue this line of inquiry systematically in order to enhance our understanding of the theory of taxation and of public economics more broadly.

The ambition of this project is similar in spirit to that of Musgrave in *The Theory of Public Finance* and of some of his predecessors, including Pigou and Vickrey. The closest modern incarnation is Atkinson and Stiglitz's *Lectures on Public Economics*, which builds importantly on Mirrlees's seminal paper on optimal nonlinear income taxation. There has been a tremendous growth in research since these works, which is reflected in texts and surveys such as those in the four volumes of the *Handbook of Public Economics*.

This book is meant to be complementary to these more recent efforts. Most of them are rather specialized, presenting often-subtle developments on particular topics but attending less to interactions among the various pieces. It is inevitable and appropriate that most research and even most syntheses of research are of this nature. Nevertheless, it is useful from time to time to step back and reflect carefully and precisely on the whole enterprise and to trace directly the relationships among each of its constituent parts. Such an exercise ought to produce payoffs

along a number of dimensions. Existing results may be solidified, better understood, and extended; solutions may emerge for previously intractable problems; and, in some instances, seemingly sound conclusions may be overturned. In addition, research agendas, both analytical and empirical, may be initiated, refined, or redirected in light of what is learned. Having undertaken this mission, it is my belief that the experience yields all of these rewards. Readers, of course, will judge this for themselves.

. . .

I began work on this book in earnest during the mid-1990s, producing hundreds of pages of manuscript that I aired to some extent. Upon resuming work five years later, after completing other projects, I decided to scrap my existing draft and begin afresh. Further reflection and interim research had produced new ideas, refined my thinking, and ultimately shifted my focus. Moreover, I wished to create a text more uniform in depth and rigor, with a scope more finely tailored to my central theme. In the intervening years, my work frequently alternated between this book and spin-off articles (including a *Handbook* survey, Kaplow 2007g). While working on particular chapters, I often discovered important gaps or deficiencies that required independent, sustained attention. In the end, it is hard to say which articles came from the book and which chapters or sections of the book came from articles. In every case, however, book chapters have been written from scratch in order to optimize their fit with the current project.

Although the first keystrokes for this venture were made in 1995, its intellectual origins are much earlier. During my economics training, Hugo Sonnenschein and Michael Spence were most responsible for inculcating in me the virtue of rigor, the value of tracing problems to their foundations, an appreciation of elegance, the importance of extracting and communicating core intuitions, and an understanding of welfare economics and the economics of information that underlies this endeavor. My interest in public economics, and taxation in particular, was sparked at an early stage by Martin Feldstein, Richard Musgrave, Stanley Surrey, Alan Auerbach, and Lawrence Summers. Subsequently, my thinking has been notably advanced and revised in reaction to lively

discussions at regular meetings of the public economics group at the National Bureau of Economic Research and tax workshops at Harvard.

I received comments on the book manuscript and on related articles from participants at many additional workshops and conferences and in other, more individualized settings. Joel Slemrod, Steven Shavell, and David Weisbach have supplied the most extensive input. In addition, over the course of two decades I have benefited from countless conversations with David Bradford; even since his untimely death, I find myself contemplating how he might have reacted to new directions I have pursued. At various points, additional reactions were provided by Alan Auerbach, Peter Diamond, James Hines, Daniel Shaviro, Alvin Warren, referees and journal editors, university press reviewers, and additional individuals too numerous to mention.

I am also grateful to a large and unusually skilled supporting cast. Matt Secombe and various individuals at Princeton University Press provided excellent editorial and related assistance; Molly Overholt and the late Regina Roberts offered secretarial and administrative support; staff at the Harvard Law School library assembled materials; and many research assistants over the years helped review literature and checked the text, notes, derivations, and references. This latter group includes (with apologies to any accidentally omitted) Susan Amble, Mary Bear, Elizabeth Bell, Clifford Chen, Ivan Chen, Eun Young Choi, Vicki Chou, Derek Colla, Ryan Copus, Shelley de Alth, Nicholas Degani, Sameer Doshi, Stephanie Gabor, Ryan Gavin, Yehonatan Givati, Thomas Gremillion, Zachary Gubler, Gregory Hannibal, Jeffrey Harris, James Hileman, Alexander Hooper, Anna Joo, Jasi Kamody, Lisa Keyfetz, Summer Sung Eun Kim, James Kvaal, Stacy Lau, Jonathan Lin, Richard Lin, Edward Locke, Daniel Lyons, Kenneth Moon, Kevin Mosher, Jesse Panuccio, John Rackson, Manoj Ramachandran, Daniel Richenthal, Kathleen Saunders, Brian Sawers, Amy Sheridan, Moshe Spinowitz, Andrew Steinman, Eric Sublett, Kevin Terrazas, George Wang, Tzung-bor Wei, Gregory Weston, and Jeremiah Williams. Finally, I appreciate receiving substantial financial support from the John M. Olin Center for Law, Economics, and Business and from Harvard Law School, as well as the encouragement of Deans Robert Clark and Elena Kagan.

Summary of Contents



<i>Preface</i>	xvii
1. Introduction	1
PART I: FRAMEWORK	
2. An Integrated View	13
3. The Social Objective	35
PART II: OPTIMAL TAXATION	
4. Optimal Income Taxation	53
5. Elaboration and Extensions	80
6. Income and Commodity Taxation	122
PART III: GOVERNMENT EXPENDITURES	
7. Transfer Payments	151
8. Goods and Services	179
PART IV: ADDITIONAL ASPECTS OF TAXATION	
9. Taxation of Capital	221
10. Taxation of Transfers	249
11. Taxation and Social Security	275
12. Taxation of Families	315

PART V: DISTRIBUTIVE JUSTICE AND
SOCIAL WELFARE

13. Welfare	347
14. Social Welfare Function	370
15. Other Normative Criteria	391
16. Conclusion	407
<i>References</i>	417
<i>Index</i>	455

Contents



<i>Preface</i>	xvii
1. Introduction	1
PART I: FRAMEWORK	
2. An Integrated View	13
A. Completeness of Policy Specification	15
B. Comprehensiveness of Instruments Considered	19
C. Comparability of Proposals under Assessment	22
1. The Problem	22
2. Distribution-Neutral Income Tax Adjustments as a Solution	25
3. Applicability	29
3. The Social Objective	35
A. Motivation	35
1. Examples	36
2. Implications	37
B. Exposition	41
1. Social Welfare Functions	41
2. Comments on a Range of Social Welfare Functions	44
3. Relevance of the Choice of a Particular Social Welfare Function	48
PART II: OPTIMAL TAXATION	
4. Optimal Income Taxation	53
A. Statement of the Problem	53
B. Results	57
1. Linear Income Tax	58

2. Two-Bracket Income Tax	63
3. Nonlinear Income Tax	65
a. Analysis	65
b. Qualifications	70
c. Simulations	74
4. Discussion	77
5. Elaboration and Extensions	80
A. Behavioral Response to Labor Income Taxation	80
1. Labor Supply Elasticity	80
2. Taxable Income Elasticity	82
3. Long-Run Elasticity	87
B. Problems of Implementation	90
1. Administration and Enforcement	90
2. Lack of Comprehensive Tax Base	94
C. Income and Ability	96
1. Taxation of Earning Ability	96
2. Income as an Indicator of Ability versus Preferences	103
D. Interdependent Preferences	110
E. Additional Considerations	116
1. Liquidity Constraints	116
2. Uncertain Labor Income	117
3. General Equilibrium Effects	119
4. Nontax Distortions	120
6. Income and Commodity Taxation	122
A. Statement of the Problem	125
B. Optimal Commodity Taxation	127
1. Distribution-Neutral Income Tax Adjustment and Labor Effort	128
2. Elimination of Differential Commodity Taxation	132
3. Other Reforms of Commodity Taxation	133
C. Qualifications	135
1. Externalities	137
2. Preferences Nonseparable in Labor	137
3. Preferences Dependent on Earning Ability	139
4. Preference Heterogeneity	140
5. Administration and Enforcement	142

6. Taxpayer Illusion	143
7. Political Economy	144
D. Ramsey Taxation	145

PART III: GOVERNMENT EXPENDITURES

7. Transfer Payments	151
A. Integrated View	152
1. Characterization	152
2. Analysis	154
B. Existing System	156
1. Aggregate Marginal Tax Rates	156
2. Application: Earned Income Tax Credit	158
3. Administration, Eligibility, and Measurement of Need	160
C. Categorical Assistance	164
1. Optimal Categorical Assistance	164
2. Application to Existing Programs	167
3. Endogenous Categorization	169
D. Work Inducements	170
1. Rewarding Earnings	170
2. Rewarding Hours	171
3. Other Reasons to Encourage or Discourage Work	173
E. Cash versus In-Kind Transfers	175
8. Goods and Services	179
A. Distribution-Neutral Income Tax Adjustments	182
B. Special Case: Government Provision Perfect Substitute for Consumption	185
C. General Case: Distributive Incidence and Optimal Provision	188
1. Analysis	188
2. Examples	190
3. Comments	192
D. General Case: Distributive Incidence and Optimal Redistribution	197
1. Introduction	197
2. Analysis	198
3. Optimal Income Taxation and Revenue Requirements	200

E. Measurement of Distributive Incidence	202
F. Benefit Taxation	209
G. Extension: Government Regulation	211

PART IV: ADDITIONAL ASPECTS OF TAXATION

9. Taxation of Capital	221
A. Analysis	222
1. Taxation of Capital as Differential Commodity Taxation	222
2. Qualifications	225
B. Applications	230
1. Income versus Consumption Taxation	230
2. Wealth Taxation	235
3. Corporate Income Taxation	236
C. Extensions	239
1. Uncertain Capital Income	239
2. Capital Levies and Transitions	242
3. Human Capital	245
10. Taxation of Transfers	249
A. Analysis	251
1. Taxation of Transfers as Differential Commodity Taxation	251
2. Externalities Due to Transfers	253
a. Externality on donees	253
b. Externality involving tax revenue	254
3. Transfers' Effects on the Marginal Social Value of Redistribution	256
B. Transfer Motives	258
1. Altruism	260
2. Utility from Giving Per Se	261
3. Exchange	263
4. Accidental Bequests	264
C. Additional Considerations	266
1. Other Aspects of Distribution	266

2. Human Capital	269
3. Charitable Giving	270
11. Taxation and Social Security	275
A. Redistribution	276
1. Labor Income Tax Comparison	276
2. Lifetime Income	278
3. Intergenerational Redistribution	285
4. Redistribution across Family Types	289
B. Forced Savings	290
1. Myopia	291
a. Myopic labor supply	295
b. Nonmyopic labor supply	298
2. Samaritan's Dilemma	301
3. Liquidity Constraints	306
4. Heterogeneity	309
5. Relationship to Redistribution	310
C. Insurance	312
12. Taxation of Families	315
A. Distribution	317
1. Unequal Sharing	320
2. Economies of Scale	323
3. Intrafamily Transfer Motives	325
a. Altruism	326
b. Utility from sharing per se	327
c. Exchange	329
4. Children	329
5. Distributive Shares as a Function of Income	332
B. Incentives	333
1. Labor Effort	333
a. One-worker families	333
b. Two-worker families	337
2. Endogenous Family Structure	341
a. Marriage	341
b. Procreation	343

PART V: DISTRIBUTIVE JUSTICE AND SOCIAL WELFARE

13. Welfare	347
A. Welfarism	348
1. Definition	348
2. Basis for Welfarism	349
3. Perspectives on Welfarism	351
a. Two-level moral theory	352
b. Moral intuitions	354
c. Relevance of nonwelfarist principles under welfarism	357
B. Well-Being	359
1. Definition	359
2. Limited Information and Other Decision-Making Infirmities	360
3. Other-Regarding Preferences	362
4. Capabilities, Primary Goods, and Well-Being	367
14. Social Welfare Function	370
A. Aggregation	370
1. Frameworks	370
a. Original position	370
b. Social rationality	373
2. Concerns	375
a. Interpersonal comparisons of utility	375
b. Weight on equality	377
B. Membership in Society	378
1. National Boundaries	379
2. Future Generations	382
3. Population Size	387
15. Other Normative Criteria	391
A. Inequality, Poverty, Progressivity, Redistribution	392
B. Horizontal Equity	396
C. Sacrifice Theories	401

D. Benefit Principle	403
E. Ability to Pay	404
F. Definitions as Norms	405
16. Conclusion	407
<i>References</i>	417
<i>Index</i>	455

Introduction



This book develops and applies a unifying framework for the analysis of taxation and related subjects in public economics. Its two central features are explicit attention to the social objective of welfare maximization and direct examination of how various government instruments should be orchestrated to achieve that objective. Consistent application of this approach solidifies and extends some familiar results and intuitions, overcomes seemingly intractable obstacles regarding other issues, and overturns several important settled understandings.

Mirrlees (1971), although most remembered for pathbreaking technical analysis of optimal nonlinear income taxation, also provides the seminal modern articulation of this research agenda. Concerns about distribution and distortion and the tradeoff between them, the key issues in his article, arise in connection with many topics in public economics, ranging from all forms of taxation to public goods and the regulation of externalities to social insurance. Nevertheless, literatures vary widely in the extent to which analysis is related to a social welfare function and connected to the backbone of modern fiscal systems: some form of labor income taxation (or consumption taxation equivalents). Even though optimal income tax writing has hewed closely to the course of inquiry suggested by Mirrlees and adopted here, work on the taxation of capital income, transfer programs, public goods, regulation, social insurance, and other subjects often has not done so, and research on other topics such as transfer (estate and gift) taxation and the tax treatment of different family units only rarely attempts the necessary linkages.

It is worth pausing to emphasize the pivotal role of the income tax in studying different types of taxation and many other problems in public economics. The truism that the optimal use of any policy instrument