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### [Review of the book *The Distribution and Redistribution of Income: A Mathematical Analysis*]

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# [Review of the book *The Distribution and Redistribution of Income: A Mathematical Analysis*]

#### Abstract

[Excerpt] This book seeks "to bring together, in a single body, the many strands of formal analysis of income distribution and redistribution which have developed since the beginning of the 1970s" (p. ix). It does this beautifully. Peter Lambert has produced an eminently readable and instructive volume, suitable for researchers, practitioners, and students alike.

#### Keywords

development, economic growth, income distribution, poverty, redistribution

**Disciplines** Economics

#### Comments Suggested Citation

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The distribution and redistribution of income: A mathematical analysis. By PETER J. LAMBERT. Oxford and Cambridge, Mass.: Blackwell, 1989. Pp. xiv, 302. \$49.95. ISBN 0-631-16174-0. JEL 91-0043

This book seeks "to bring together, in a single body, the many strands of formal analysis of income distribution and redistribution which have developed since the beginning of the 1970s" (p. ix). It does this beautifully. Peter Lambert has produced an eminently readable and instructive volume, suitable for researchers, practitioners, and students alike.

Many books provide information; others develop theses. This book educates. Lambert guides the reader's thinking about distributional issues. When is one income distribution more equal than another? Better than another? How much redistribution is possible? Desirable? When is a change in a tax benefit system an improvement? For readers with the intellectual curiosity to think about income distribution and redistribution, a taste for logical analysis, and proficiency with basic calculus, this book will hold great appeal.

At first glance, this seems to be two books in one: the first on comparisons of income distributions, the second on analysis of income redistributions through tax and expenditure systems. Yet, though the two halves of the book cover quite different literatures (I, for instance, felt very much at home in the first half of the book but was unfamiliar with much of the material in the second half), Lambert ties them together. How many tax reforms are analyzed in terms of generalized Lorenz curves? Or how often are labor-leisure choices brought into welfare economic comparisons of income distributions? Lambert's explicit objective is to "provide a coherent and unified treatment" of work in the fields of social policy analysis and welfare economics, "separate endeavors . . . dominated by different groups of researchers, whose paths do not cross as often as they should" (p. 2). Here, the paths do cross, and both subjects are richer for it.

The book proceeds as follows. After an introduction and summary, we find four chapters on income distribution. Chapter 2 shows how to present income distributions by means of frequency distributions, Lorenz curves, and various parametric families. Chapter 3 links Lorenz curves with welfare judgments, first for the case of constant mean (Atkinson's theorem on the welfare economic foundations of Lorenz curve comparisons) and then for the case of different means (Shorrocks' theorem on the welfare economic foundations of generalized Lorenz curve comparisons). Chapter 4 analyzes social welfare functions in terms of inequality aversion (building on the well-known parallels between inequality aversion in welfare economics and risk aversion in consumer theory). Chapter 5 examines "abbreviated social welfare functions," those which take the form W = f(mean)income, inequality) rather than  $W = g(\mathbf{x}), \mathbf{x}$ being a vector of incomes.

The book then turns to income redistribution through taxes and transfers. Chapter 6, on progressive income taxation, features the Jakobsson-Kakwani theorem on the relation between progressive taxes and Lorenz dominance. Chapter 7 gives alternative indices of tax progressivity and of the redistributive effect of taxes for a given pretax income distribution. Chapter 8 explores how different patterns of income growth affect the growth of tax revenue. Chapter 9 assesses the social welfare effects of income tax reforms, going well beyond the more familiar "who gains, who loses" type of analysis. In Chapter 10, the benefits of public expenditures are brought in alongside taxes. Finally, in Chapter 11, the income distribution is made endogenous by allowing for the tax system to affect work effort.

A few other features of this book bear mention. One is its clarity, both of expression and of thought. Another is the sense of education it conveys: Lambert genuinely wants to teach us, even presenting exercises at the end of each section that challenge the reader and bring out new ideas and insights. Then there is the exceptionally comprehensive, up-to-date bibliography that Lambert has compiled and draws on throughout the volume. All of which makes this a great book for teaching, both for class use and for the use of advanced students in search of thesis topics.

One word of caution: this book is not for everyone. Readers seeking detailed empirical data on income distribution or polemics on income redistribution should look elsewhere. But if what you are seeking is to learn how to *think* about income distribution and redistribution, this is the book for you.

#### GARY S. FIELDS

#### The econometric analysis of transition data. By TONY LANCASTER. Econometric Society Monographs, no. 17. Cambridge; New York and Melbourne: Cambridge University Press, 1990. Pp. xii, 352. \$49.50. ISBN 0-521-26596-7. IEL 91-0856

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The past decade has witnessed incredible growth in the econometric and statistical literature devoted to the analysis of transition data. Data of this form arise frequently in economics as researchers observe and analyze the movement of economic agents between various states. Commonly cited examples include individuals moving between being employed, unemployed, and out of the labor force; firms and unions moving between strikes and settlements; and families experiencing transitions between different household sizes.

This very useful book addresses two important shortcomings in the existing literature on transition data. Professor Lancaster's first goal is to provide a book-length, technical summary of basic results for transition data. The rapid pace of development in the field, while stimulating considerable interest among econometricians and applied economists alike, has rendered many of the standard reference works dated. This book is an attempt to provide a practical and up-to-date reference for researchers confronting transition data. The second goal is to provide a discussion of transition data from the perspective of an econometrician. Since many