

Reviews/Comptes rendus

Methods of Interregional and Regional Analysis. Walter Isard. Brookfield, Vt: Ashgate, 1998, 400 pages (ISBN 1-85972-410-8).

In 1960, Walter Isard and others produced *Methods of Regional Analysis: An Introduction to Regional Science*. For many taking classes in regional science, regional economics or regional geography during the following couple of decades, *Methods* became "the bible." Eventually, *Methods* became dated as theories, data sets, techniques and computers all evolved and improved. The present book was written in order to provide an up-to-date methods text to fill the gap left by the demise of the original *Methods*.

The 1998 book was edited by Walter Isard and written by a number of regional scientist authors: Walter Isard, Ivan Azis, Matthew Drennan, Ronald Miller, Sidney Saltzman and Erik Thorbecke. The book is dedicated to Barkley G. Jones and Benjamin H. Stevens, two regional scientists who contributed in major ways to the development of academic programs in regional science.

While the 1998 book is an update, it differs in both emphasis and coverage from its 1960 predecessor. The original *Methods* focussed on the single region while the 1998 version places more emphasis on interregional analysis and the functioning of a system of regions.

In 1960, it was possible to write a book which covered most of the advanced material current in regional science. In the meantime, of course, regional science has advanced in theory and techniques to the point where such coverage is no longer possible. In the present book, some topics are left out altogether and most are developed to an intermediate level. Advanced topics and many recent developments are omitted even for those topics that are addressed at length in the book's ten chapters. This will undoubtedly be a disappointment to some readers. The editor acknowledges these omissions and apologises for them in the preface.

What the book does is present a number of techniques that are indispensable tools for the student of regional science. Illustrations are selectively provided of the use of these techniques.

The first chapter is an Introduction and provides a brief summary of the contents of the book. Chapter 2 is devoted to the topic of location and covers such subjects as comparative cost analysis, location quotients and localisation curves. The locational requirements of services industries is briefly treated (whereas it was not in the 1960 version) and the basic elements of GIS are

cursorily discussed. Chapter 3, Regional and Interregional Input-Output Analysis, is one of the longest, and best, chapters. Written by Ronald Miller, this chapter is written in the style of Miller and Blair's excellent 1985 *Input Output Analysis* and covers the basics of single, interregional, and multiregional I-O models. Survey, non-survey and hybrid models are discussed. An appendix is devoted to the elements of matrix algebra. The fourth chapter, Regional and Spatial Econometric Analysis, is really an introduction to econometrics with applications illustrated by use of regional science examples. Spatial econometrics is only briefly touched on. Chapter 5, Programming and Industrial and Urban Complex Analysis, provides a brief introduction to linear and non-linear programming and illustrates the application of the latter with a summary of an industrial complex study. Urban complexes are briefly mentioned at the end of this chapter. Chapter 6, the shortest in the book, is devoted to a brief introduction and illustration of the use of gravity models.

Social Accounting Matrices and Social Accounting Analysis is nicely surveyed in Chapter 7. Within the framework of an expanded input-output model that emphasises intersectoral linkages and income distribution, SAM is a useful tool for policy analysis. Its use is illustrated with a 1980s model developed for Indonesia.

Chapter 8 provides readers with a good overview of general equilibrium models. CGE models have, to this time, been developed for policy analysis but in a spaceless context. The usefulness of this approach, which employs non-linear functions and relative price variability, is discussed along with the limitations experienced by dependence on less reliable data used to approximate the parameters of non-linear functions. The incorporation of distance and transport costs is explored with emphasis on the implications for production, consumption and trade.

Micro-simulation models are the subjects of the ninth chapter. Micro-analytic models refer generally to simulation models in which decision units (families, households, firms, governments), interact with each other directly or indirectly through a market. Families stack into households, firms into industries, and so forth. Products, money, stocks and deeds, among other objects, flow between decision units. In each simulation, outcomes for endogenous variables are produced through probabilities specified for behavioural relationships. Probabilities of events are the outputs. Both cross section and dynamic applications are possible. Computational power and costs have limited the development and use of micro-analytic models including the addition of a spatial dimension. Further progress appears to await even greater computing power. In the final chapter, 10, possible channels of synthesis of regional science techniques are discussed. Some syntheses discussed are currently operational, such as the combination of location analysis with input-output. Others, such as the fusion of social accounting analysis with applied general interregional equilibrium analysis, are, at present, only conceptual.

A strength of the book is the way most chapters tie in with others by ex-

plaining how the technique under discussion relates to techniques which are the topics of other chapters. One criticism is that several of the examples used for illustration, including graphs and tables, are taken from works published in the 1950s and 1960s, such as the original *Methods* and the excellent, but ancient, *Industrial Complex Analysis* written by Walter Isard, Eugene Schooler and Thomas Vietorisz in 1969.

The book is a welcome addition which could be used in a senior undergraduate course for students who have taken intermediate economic theory and statistics or as an introductory graduate level text.

Jack C. Stabler
Department of Agricultural Economics
University of Saskatchewan
Saskatchewan