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Policy readers will appreciate: a format that supports the reporting of the comprehensive set of model outputs of interest to policy makers; discussion of elements of the theory and data that exert a heavy influence on research findings; and nuanced and qualified discussion of the policy implications of AGE research.

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Glyn Wittwer
Editor

Economy-Wide Modeling of Water at Regional and Global Scales

Springer

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Preface

An edited volume on water modeling was the suggestion of one of the series editors of Advances in Applied General Equilibrium Modeling, James Giesecke. This arose during the 19th Annual Conference on Global Economic Analysis held in Washington DC in June 2016.

The objective of this volume is to bring material together from contributors whose perspectives differ widely. This is because the characteristics of water resources within the nations analyzed within the volume vary widely. Moreover, different stages of economic development present different problems concerning water resource management. More generally, various models that embed water into an applied general equilibrium (AGE) framework are examples of the versatility and policy relevance of AGE models.

It is appropriate that the founder of the Global Trade Analysis Project (GTAP), Tom Hertel, and his colleagues at Purdue University are among the contributors. Their perspectives using variants of the GTAP model are global, national, and sub-national. It is also appropriate that Mark Horridge is co-author of one chapter. He is the creator of The Enormous Regional Model (TERM) used in analysis in two chapters of the volume covering three nations at a sub-national level. Various models outlined in this volume cover specific nations from five continents.

The volume may provide a useful reference for other modelers who are grappling with national accounts data and recognizing the need for auxiliary water accounts to proceed with model development. From a policy perspective, climate change is a pervasive issue. Structural changes in economies are altering water needs. We may anticipate a growing economic literature on AGE water analysis as the relevance of the framework becomes more widely recognized.

Melbourne, Australia
November 2018

Glyn Wittwer

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About the Editor

Prof. Glyn Wittwer is a regional dynamic CGE modeling expert. He has played a major role with Mark Horridge in developing databases for TERM versions in several countries. He edited the Springer volumes *Economic Modeling of Water* (2012) and *Multi-regional Dynamic General Equilibrium Modeling of the U.S. Economy* (2017) and contributed the majority of chapters in both volumes. Glyn is a GTAP Research Fellow from 2017 to 2020. He has extensive consulting experience. His list of projects includes dynamic, multi-regional CGE modeling in Australia, China, and the USA. These include modeling of the impacts of major dam and transport projects, drought and water trading, flood, hypothetical plant disease scenarios, productivity scenarios, wine tax scenarios, major mine construction projects, industry closures, and the aftermath of civil disruption.

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