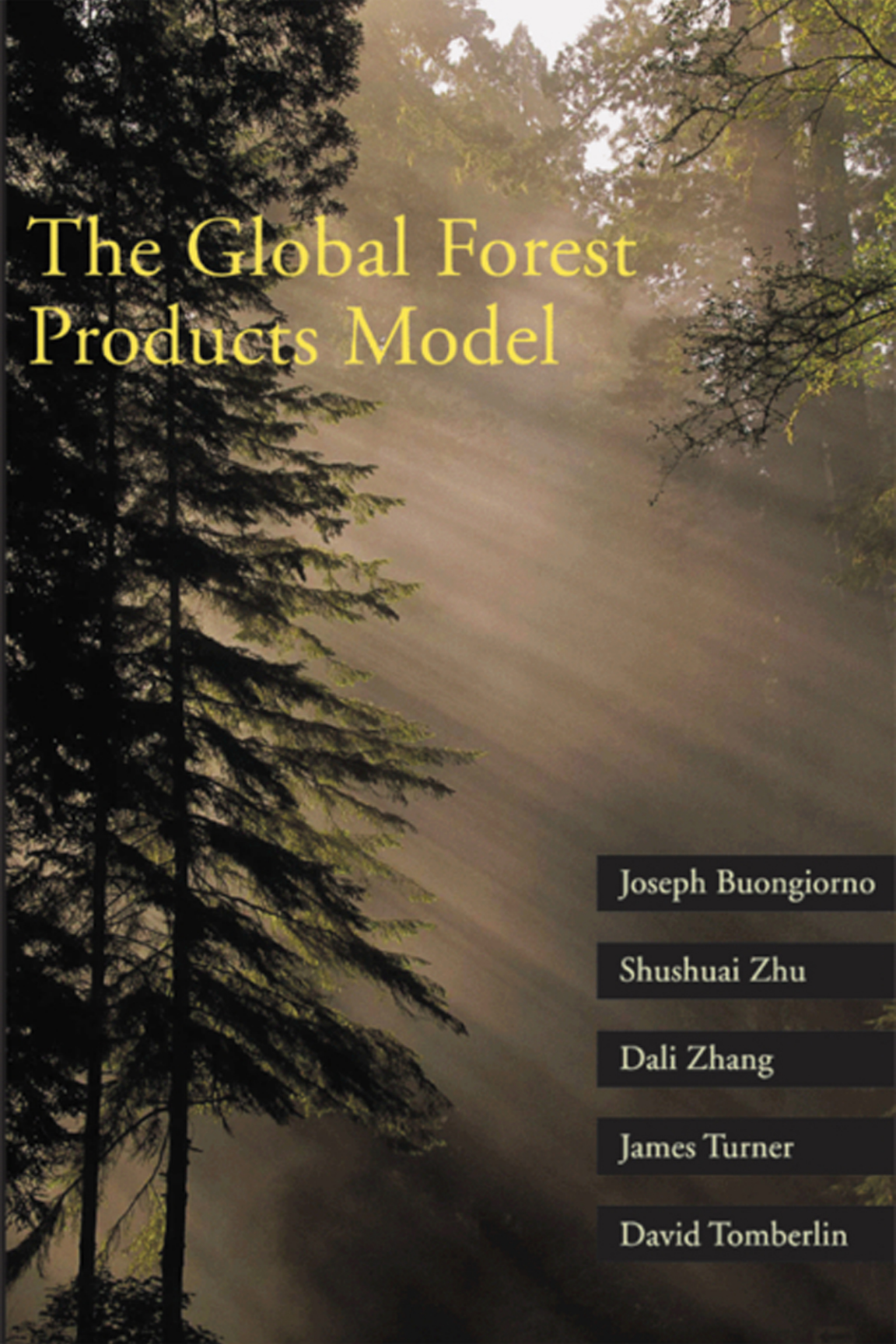
The Global Forest Products Model
Joseph Buongiorno
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Structure, Estimation, and Applications

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PREFACE AND ACKNOWLEDGMENTS

Many years ago, I dreamed of working for the Forestry Department of the Food and Agriculture Organization (FAO) of the United Nations. This was a natural inclination for the son of a farmer growing up in southwestern France and the grandson of a forest guard from the Italian Veneto. In 1971 my dream came true when Jack Westoby, then director of FAO's Forest Operations Division, hired me as a Junior Forestry Officer in Rome. Mr. Westoby made it clear to me that what he wanted more than a forester was someone who could work with computers. I had then just gotten my Ph.D. at Berkeley, and was fully trained in biking across campus, from Mulford Hall to the computer center, with large boxes of computer cards. During my stay at FAO, from 1971 to 1975, I perfected my training by climbing and descending the stairs from the fourth floor to the basement computer room of the Terme di Caracalla building, with boxes of cards or stacks of computer output. Remote, let alone personal, computing was still far in the future.

At FAO, I helped publish the Yearbook of Forest Products and establish the first computerized database of international forestry statistics. It was not always easy. I recall being in the computer room even on the eve of my marriage, to Angela, who never protested. I am very grateful to her for the freedom she has always given me since, to work as I please and to do what has to be done or what I simply enjoy. In those days I also began working intensively on methods to predict the world demand and supply of forest products. This interest, which led ultimately to this book, was stimulated by my wonderful FAO supervisors and colleagues: Dr. Stan Pringle, a pioneer in the application of econometrics to forestry; Alf Leslie, a true Renaissance man, who ordered me to think on my own; and Phil Wardle, who challenged my strongest tenets.

I owe my first experience in forest sector modeling to Nils Svanqvist, who took me away from FAO headquarters in 1975 to work on the FAO-UNDP Malaysia Project. A key feature of the project was a computer model to plan the conversion of natural forests to oil palm and rubber plantations. Dr. Svanqvist was also instrumental in bringing me to Indonesia in 1978 and 1979, after I had already joined the University of Wisconsin, to develop a model of the Indonesian forest sector. This was my first programming model integrating the many activities ranging from logging, manufacturing, and transportation to consumption. To some extent it was the precursor of the spatial equilibrium model structure that led to the Global Forest Products Model described in this book. This was also one of the last times I worked largely on my own.

Since then, many students and researchers have contributed directly or indirectly to the model that is the subject of this book. They include, in chronological order: J. Keith Gilless, who worked on the initial Price Endogenous Linear Programming System (PELPS) in 1985 and tested it with a model of the North American paper industry; Patrice Calmels, who wrote the PELPS II software in 1990, also applying it to the paper industry; Peter Ince, who collaborated on PELPS III and applied it extensively to the North American pulp and paper sector. More recently, Yibing Zhang and Bintang Simangunsong improved the estimation of the international demand equations used in the GFPM, and Chia-Sheng Liu helped develop the method to calibrate the input-output coefficients, described in Chapter 4.

Among our staunchest external supporters and collaborators I wish to thank Mafa Chipeta, Michael Martin, and Adrian Whiteman at FAO. Mafa Chipeta was especially instrumental in taking the responsibility that the 1999 FAO Forest Outlook Study would be based on projections developed by my research team at Madison in collaboration with Antti Rytkönen. The first version of the GFPM, the FAO Provisional Outlook of 1997, resulted from this decision. David Brooks at the USDA Forest Service, Pacific Northwest Station, took early notice of the potential of the GFPM for policy analysis within the United States, secured further research support, and collaborated in the study that led to Chapter 7. G. P. Horgan, of APR Consultants, and F.M. Maplesden, of the New Zealand Forest Research Institute, collaborated in the application in Chapter 9, first published in the *New Zealand Journal of Forestry Science*. The material in Chapter 8 originally appeared in the *International Forestry Review*. At Academic Press, I thank Charles Crumly and Angela Dooley for managing this project with care and cordial efficiency.

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I thank especially the Department of Forest Ecology and Management and the School of Natural Resources at the University of Wisconsin, Madison, for the exceptional environment they have given me for more than 25 years of research and teaching.

Most of all, I am grateful to my coauthors, Shushuai Zhu, Dali Zhang, James Turner, and David Tomberlin, for their hard work and dedication firstly in the development of the GFPM itself and secondly in the writing of this book. Without them it would not have been possible.

SUPPLEMENTARY MATERIALS: The GFPM software and the data used in various chapters of this book are available at: www.forest.wisc.edu/facstaff/buongiorno/book/index.htm.

We welcome comments and suggestions. Please, send them to: jbuongio@facstaff.wisc.edu. Thank you.

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