

# Preface

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Despite the fact that the importance of the hedonic approach in public policy evaluation and environmental value estimation is widely accepted among practitioners as well as researchers in economics, it is difficult to find either a good introductory text or a precise and comprehensive professional book in the field of study. This book is written to explain the hedonic approach not only from a fundamental conceptual viewpoint but also from rigorous theoretical perspectives. The book is especially designed to show the basic assumptions of the approach and the strengths and weaknesses of the method by careful treatment of the fundamental theorem on which the method is developed, that is, the cross-sectional capitalization hypothesis. As to practical perspectives, the book examines the process of public policy or environmental valuation using understandable examples. In theoretical terms, the applicability of the method based upon the recent research findings is fully discussed. The book can be read without advanced knowledge of economics if the readers disregard the mathematical explanations (marked with an asterisk [\*]). It can also be used by economics students, environmental science and technology specialists, and professionals in the public sector.

The structure of the book is as follows. In the 'Introduction', we have an overview of the meaning of the hedonic approach and its characteristics. Chapter 2, 'The hedonic approach', starts with a brief research history of the approach, explaining the development of the hedonic conception, Rosen's pioneering method and Ohta's work in the early 1970s, the criticisms from Brown and Rosen in the 1980s and other econometric analyses, and finally discusses Scotchmer's crucial comments on the hedonic approach. Readers should pay attention to the basic principle of the approach, namely the capitalization hypothesis in Chapter 3. The differences between 'time-series and comparative static capitalization' and 'cross-sectional capitalization' are fully discussed. It should be noted that the hedonic approach must be based upon cross-sectional

capitalization. This latter theorem is explained in the most comprehensive two-region general equilibrium framework of the study. After giving an explanation of the model using the simple Cobb–Douglas production and utilities case, we introduce the fascinating ‘overestimation theorem’ and equality condition proved by Kanemoto in 1988. Appendix 2, 3, 4 and 5 show the complete proof. In Chapter 4, we use numerical analysis to argue the applicability of the theorem in a Cobb–Douglas type of production and utility function case and in the case of more general CES functions. Chapter 5 discusses the applicability of the theorem by empirical examination in Japan. Chapters 2 to 5 are related to the theoretical side of the approach. In Chapter 6, the accuracy of the approach will be compared with the results of another valuation method, namely the contingent valuation method in the case of air and water pollution. In Chapter 7, the data, variables and functional form of the hedonic approach are fully discussed. Chapter 8 shows the results of the value estimation in environmental goods and public services in many types of public goods, especially in Japan. Chapter 9 explains some basic conceptions of cost–benefit analysis and shows the practical evaluation process for the environmental cost–benefit analysis of small and large projects. The crucial variables in the analysis, such as scenario, are discussed, and a case study gives as an example. Chapter 10 consists of concluding remarks.

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*To a blue sky*

