

BOOK REVIEWS

Editor: Clifford A. Lipscomb, Valdosta State University

Baranzini, Andrea, José Ramirez, Caroline Schaerer, and Philippe Thalmann, eds. 2008. *Hedonic Methods in Housing Markets: Pricing Environmental Amenities and Segregation*. Springer Science + Business Media, LLC: New York. ISBN: 978-0-387-76814-4. 278 pp. \$129 (paperback).

Reviewed by *Clifford A. Lipscomb*, Valdosta State University

This book provides a very useful presentation of the theory and empirics of hedonic pricing. While it has some editorial shortcomings within the individual chapters that might slow one's grasp of the hedonic pricing method, especially for a novice to hedonic pricing, the overall structure of the book addresses clearly the theoretical development of the hedonic price model and its empirical applications in multiple subfields.

The first part of the book examines the theoretical bases, problems, and some recent developments in hedonic pricing. The chapter by Laura Taylor details the theoretical base of hedonic pricing and provides an overview of recent developments. She covers such issues as recovering unbiased parameter estimates from first-stage hedonic price estimation, the endogeneity of regressors due to omitted variables and the simultaneous determination of prices and observable characteristics, as well as imperfections in housing markets. Then, Taylor concludes by detailing for the reader how to conduct second-stage hedonic estimation, where one attempts to recover preference parameters from the first-stage estimated implicit prices.

Then, the chapter by John Knight focuses on the conditions of the housing market transactions. The basic idea is that housing market transactions involve bargaining power. To include bargaining power in hedonic price models, one may include buyer and owner characteristics in the first-stage hedonic price models. Also, Knight discusses in detail the opportunities to incorporate time on the market (TOM) into hedonic price models and how marketing houses may be accounted for in hedonic estimation.

The second part of the book examines the application of hedonic estimation to value natural land use preservation and noise abatement measures. The use of hedonic pricing to assess urban environmental issues has a long tradition in applied economics, possibly because the results of hedonic pricing studies can be used to inform public policy issues in three main policy areas: cost-benefit analyses; evaluation of economic activities; and litigation. The chapter by Jon Nelson provides an extensive review of hedonic pricing noise studies. While he points out the importance of accounting for the spatial nature of the housing market, his discussion of market segmentation omits some recent developments in these areas since 2005.

Next, the chapter by Jean Cavailhès, Thierry Brossard, Mohamed Hilal, Daniel Joly, François-Pierre Tourneux, Céline Tritz, and Pierre Wavresky shows how the hedonic price model can be used to understand periurbanization, or the movement of urban dwellers to near-city locations. The authors examine consumer preferences for greenery and views of different landscapes. After a review of the existing literature, they show how measures of landscape composition and diversity have changed in recent years thanks to GIS data availability. Then, the authors describe an original model that seeks to explain sales prices using view-shed information

(views on plots of different types at different distances). They find that landscape contributes little to the explanation of house prices. But, more importantly, they find that landscape features have price impacts only when they are very close to houses and are visible.

Then, the chapter by Ghislain Geniaux and Claude Napoleone highlights the need for hedonic price equations to allow for spatial variability of the estimated coefficients. They describe recent advances in spatial econometrics and smoothing methods. But, of most use to the applied urban researcher, the authors show how these methods can take into account the location of properties near several central business districts. Instead of testing the hypothesis of monocentricity, these models allow researchers to test for the impacts of proximity to multiple agglomerations. The authors use figures and maps to show the importance of being able to visualize one's econometric results, especially in an area so rooted in spatial relationships as housing markets.

Finally, the chapter by Patrick Bajari and Matthew Kahn examines the incentives for suburbanization by showing how homebuyers value differently the attributes of urban and suburban houses. To determine homebuyers' willingness to pay for attributes of the house, the authors follow Rosen's (1974) two-stage approach and even go beyond. The authors conclude (p. 152) that "Suburban home ownership embodies a tradeoff...Whether a household is willing to suburbanize hinges on its preferences over land consumption and avoiding commuting."

The third part of the book examines the confluence of two ideas—environmental quality and racial segregation. The four chapters in this part clearly outline the relationships between segregation and housing location preferences. The chapter by David Wong provides an introduction to segregation and legitimizes its consideration within a hedonic price framework as a measure of neighborhood quality. He also presents and comments on both spatial and aspatial measures of segregation. The chapter by Jeffrey Zabel shows how the hedonic pricing method can be used to test for housing market discrimination. Using four models of prejudice and racial discrimination, Zabel concludes (p. 199) that "racial discrimination and segregation are best analyzed at the city-level rather than at the national level."

Next, the chapter by Diane Hite shows how environmental justice issues can be analyzed using the hedonic pricing method. After defining environmental justice, she develops two approaches to test environmental discrimination. The first compares implicit prices for environmental quality in hedonic price equations for different groups of the population; the second tests whether the disadvantaged group would be more likely to choose the environmentally favorable location if it had access to the consumption bundle of the advantaged group. This Oaxaca-style test bears promise as a method to test for some nuanced environmental injustice considerations in housing markets.

Then, the chapter by Patrick Bayer and Robert McMillan uses a model of racial sorting to motivate their inquiry into how segregation preferences are accounted for in the hedonic price framework. Their results suggest that researchers using hedonic pricing models to study segregation issues may need to consider issues of unobserved neighborhood quality and heterogeneous preferences to avoid underestimation of the segregation taste parameter.

Finally, Bengt Kristrom provides a step-by-step approach to estimating a simple hedonic price model using the R software (with exact computer code) in the Appendix. Using the famous Boston MSA dataset from Harrison and Rubinfeld (1978), the author provides detailed results

and analysis on standard econometric problems associated with hedonic price models, such as functional form choice, multicollinearity, and heteroskedasticity.

Harrison, David and Daniel L. Rubinfeld. (1978) "Hedonic Housing Prices and Demand for Clean Air," *Journal of Environmental Economics and Management*, 5, 81-102.

Rosen, Sherwin. (1974) "Hedonic Prices and Implicit Markets: Product Differentiation in Pure Competition," *Journal of Political Economy*, 82, 34-55.

Edwards, Mary. 2007. *Regional and Urban Economics and Economic Development—Theory and Methods*. Auerbach Publications: New York. ISBN: 978-0-8493-8317-5. 752 pp. \$94.

Reviewed by *Hart Hodges*, Western Washington University

Mary Edwards's text, *Regional and Urban Economics and Economic Development*, makes several notable contributions to both economics and applied public policy. The most obvious contribution—evidenced by the title—is the blending of different academic fields (regional science, urban economics, and economic development) into a coherent framework for policy analysis and evaluation. Where most texts focus on a single field, such as regional or urban economics—and often focus on the mechanics and academic theory in those fields—this book shows the linkages across fields and the applications for those interested in economic development and policy.

One thing to note about the book is the opening chapter does not do the book the justice it deserves. The wording is easy on purpose, but that keeps the definitions of regional and urban economics from being all they could be. For example, the opening chapters in other texts on Urban Economics by O'Sullivan (2007, 6th edition) or Mills and Hamilton (1994, 5th edition) are more interesting. But the richness of the topics comes through in Edwards' text as you read more of the book. Her "think about it" sections in each chapter and policy applications add dimensions not found in many of the other texts. The chapters that address the effectiveness of public policy in controlling and/or directing growth seem particularly relevant today (e.g., Chapters 11 and 15). Governments across the country are promoting strategic clusters, smart growth, and sustainability. This text addresses these topics directly, even if only lightly in places.

The opening chapter also includes some oversimplifications that are problematic. For example, the text offers that "Traditional economic models assume a perfectly competitive market structure, with constant returns to scale. Externalities are of concern, but only as examples of market failure" (p. 11). This comment is simply not accurate and sends poor signals about economics. Traditional economic models are not limited to just perfect competition and constant returns to scale... and externalities/market failure are part of what make the discipline interesting.

We see how Edwards bridges multiple topics in Chapter 2, where the text begins with a very simple discussion about a spatial monopolist. She explains how the full price of a product reflects both the price a store charges for the product and the transportation costs borne by the shopper. The chapter includes a discussion of Hotelling's linear market and the role of elasticity of demand. The same material is covered in most texts on urban and regional economics, but Edwards adds a variety of applied questions and explanations to reach readers who have different

backgrounds and experiences. In this chapter she asks specific questions about why certain stores cluster the way they do within a city and others do not. She also asks why the number of firms of certain types has declined over time. She goes on to answer the questions using the academic models alongside intuitive illustrations. She also cites examples from published articles to illustrate key points, letting her book serve as a good reference for the literature in general.

In the end, the book's strengths outweigh any weaknesses or errors. The presentation of regional and urban economics covers most of the same topics as you find in other texts, but in a new order and for a different audience. As mentioned, Edwards covers similar material on urban and regional economics as you find in books such as *Urban Economics* by Mills and Hamilton (1994). While other authors offer what felt to me at first glance to be a tighter presentation, Edwards' work is accessible to a broader audience and she does a nice job tying concepts together. She effectively motivates ideas in multiple ways. And her Chapter 6 discussion on why prices differ across space conjures images of the old 'shipping the good apples out' hypothesis. She explains nicely the role of space and other factors when discussing price variations for similar products.

This text makes the key topics in urban and regional economics available to readers with no more than an introductory course in microeconomics and macroeconomics. In short, the book makes accessible a wide range of topics to advanced undergraduates and master's level students studying economics, business/public administration, and other subjects. As such, it is very useful to professionals who need a refresher or could benefit from a single reference text that covers so much ground. It also shows students of economics the relevance of this material in the world of economic development.

Karlsson, Charlie (ed). 2008. *Handbook of Research on Cluster Theory*. Edward Elgar: Northampton, MA. ISBN: 978-1-8454-2516-6. \$210.

Reviewed by *Edward Feser*, University of Illinois at Urbana-Champaign

In his introduction to this edited volume, Charlie Karlsson promises (p. 1) the book provides a "thorough overview of economic cluster research in terms of agglomeration and cluster theory, methods for analyzing clusters, clustering in different spatial contexts, and clustering in service industries." A "thorough overview" is an appropriate and laudable objective for a handbook, though in this instance it is perhaps an impossible task given the enormous and diverse literature on industry clusters. Achieving it would require an editor to exercise an especially strong hand in shaping the contributions to ensure coverage of all pertinent topics and systematic referencing to the extant literature. Karlsson opted for a lighter hand and the result is a book that is something of a blend between a true handbook and a more conventional collection of related papers. Its coverage of selected areas of cluster research is incomplete and the chapters vary in the care they take to provide perspective on developments in the literature. At the same time, emerging themes in several important areas of scholarship on clusters receive excellent treatment and the majority of the contributions provide useful guides to the state of the art in their given sub-topic. If not the perfect handbook, it is certainly a handy book.

Following the editor's introduction, the chapters are organized into four sections: agglomeration and cluster theory (seven papers), cluster research methods (two papers), clusters

in different spatial contexts (four papers), and sectoral clusters (four papers). The organizational framework accurately reflects broad areas of inquiry in the research on industry clusters, although it also implies stronger distinctions among the assembled papers than truly exist. Karlsson's introductory chapter and papers by Philip McCann and by Borje Johansson and Ulla Forslund in the first section provide general overviews of theories of agglomeration economies and industrial location and their relation to various cluster theories. Subsequent chapters in the volume cover more specialized topics. For example, Harald Bathelt describes the role of local and extra-local networks in clusters; Andrew Atherton and Andrew Johnston link a micro-level perspective on cluster formation to cluster policy; Bergman provides a synthesis of perspectives on cluster life-cycles; Karen R. Polenske discusses the concept of dispersion economies; and Michaela Trippel and Franz Tödtling explore the role clusters play in regional industrial renewal. The section on sectoral applications is refreshing because the four contributions cover understudied industries: financial services, cultural industries, broadcasting, and tourism.

One weaknesses of the volume is that the coverage of some topics is idiosyncratic. In the methods section, Michael Sonis, Geoffrey J.D. Hewings, and Dong Guo propose a useful innovation in cluster identification with input-output data, yet input-output represents only one approach among a great many for studying clustering and clusters. The only other methods paper is a piece on clustering observations using wavelets which bears only very indirectly on industry cluster research. Thus any reader turning to the handbook for an "overview" of cluster methods will be disappointed. Another weakness is that some chapters fail to situate the ideas they present among the various developments and evolutions in the cluster literature. Readers will find that some of the papers, while excellent on their own terms, offer little explicit discussion of clusters. For example, Giulio Cainelli's contribution is an outstanding critical assessment of the industrial districts literature, but it provides no discussion of the distinctions between industrial districts and industrial clusters. Likewise, David B. Audretsch and T. Taylor Aldridge offer much insight into an important and neglected issue—the links between entrepreneurship, knowledge spillovers, and the formation of well-known innovation clusters such as Silicon Valley—but they do so without explicitly relating their own ideas to other scholarship on clusters. A bit more uniformity among the chapters with respect to their coverage of the cluster literature would have appreciably strengthened the volume's value as a handbook.

These issues aside, by the time I finished the book, I was glad to have read it. On balance, Karlsson has assembled a strong mix of papers that collectively provide a good sense of some of the latest research in the field. Most importantly for a volume intended to serve as a useful reference to a range of work, I am pleased to have it on my shelf.

Blien, Uwe and Gunther Maier, eds. 2008. *The Economics of Regional Clusters: Networks, Technology and Policy*. Edward Elgar Publishing: Northampton, MA. ISBN: 978-1-8472-0515-5. 311 pp. \$125.

Reviewed by *Henry Renski*, University of Massachusetts-Amherst

For nearly two decades, regional scientists have struggled to define regional clusters and distinguish its unique conceptual domain. Yet cluster-based strategies retain considerable favor among policy makers and the term "clusters" continues to appear in the titles of numerous books

and scholarly articles. In some cases, the term is mere window dressing—adding a contemporary flavor to studies of well-established concepts such as localization economies. Others treat clustering as a predominantly geographic phenomenon and focus on developing new instruments for detecting such concentrations. Many others see clusters as an umbrella concept that unifies traditional externalities and proximity with more recent concepts such as network externalities, social capital, and non-market institutions.

The Economics of Regional Clusters presents all three views nicely bound into a single volume. The editors do not try to resolve ongoing conceptual debates by imposing a unitary definition of clusters, but rather strive for some degree of accord by illustrating the full scope of contemporary research on the topic. Unlike previous collections, this is a book about clusters written primarily for regional scientists. In line with the interests of its target audience, the book's main emphasis is on methods for identifying clusters and empirical studies of clusters within specific regions. However, it also includes several papers that address contemporary policy applications. Despite its diverse content, the book hangs together well as a single volume with many common and complementary themes. Most impressive is the number of studies using survey and establishment-level data—something rarely found in empirical studies of clusters. I see this as a promising direction for a body of scholarship that is rapidly approaching the limits of what aggregate secondary data can reveal about the internal dynamics of clusters.

Following the editors' introduction, the book opens with two papers that explore the conceptual foundation of clusters. The paper by Simona Iammarino and Philip McCann offers a nice introduction to the remainder of the volume by presenting a unifying framework for classifying the different types of clusters. Building upon a recent paper by Gordon and McCann (2000) the authors characterize three clusters types—pure agglomeration, industrial complex, and social networks—and distinguish each by its dominant sources of knowledge and innovation. In doing so, they break from the common treatment of homogeneous innovation as a by-product of clustering, arguing that knowledge plays different roles in different types of clusters. Although a step in the right direction toward a more evolutionary model of clustering, the revised typology is still more valuable for understanding knowledge in existing clusters than it is for understanding how clusters form, mature, and transform from one type to another.

The next paper, by André Torre, focuses on the network cluster-type and questions its value to development policy. He laments the conceptual ambiguity of the cluster concept and points to flaws in the presumed association between proximity, networks, and innovation. He argues that social relationships are more important than spatial proximity in the exchange of tacit knowledge and concludes that policy attempts to strengthening local networks may be harmful if they lead to regional insularity. Torre's main arguments find support from two of the "policy" papers presented later in the volume.

Martin Wrobel uses survey data to conduct a social network analysis of the struggling logistics cluster in Bremen, Germany. He finds that the region's logistics firms have strong internal linkages but limited linkages to other regions – an outcome antithetical to success in an industry with an international scope.

Matthais Kiese sees the vagaries of the cluster concept as the source of inappropriate one-size-fits-all policy solutions in the sub-regions of Lower Saxony. He calls upon researchers to pay more attention how cluster processes differ by region-type (high-tech, industrialized, etc.) so that they may offer more relevant and specific policy advice.

The next set of papers showcase methods for identifying clusters within specific regions. Juan C. Duque and Sergio J. Rey illustrate a new approach to cluster-identification that merges input-output (I-O) analysis with network theory. Identifying clusters often involves a mix of art and science whereby the analyst exercises considerable judgment to offset the limitations of data reduction methods. Duque and Rey's framework adds some welcome formality to this process. It also offers a set of useful visualizing techniques and provides guidance for resolving common practical dilemmas such as dealing with single-industry clusters and breaking apart large "meta" clusters. Nevertheless, it does not address two bigger methodological challenges: allowing for multi-cluster industries (fuzzy clustering), and simultaneously capturing both vertical (buyer-supplier) and horizontal (complementary technologies and skills) linkages. While their technique has promise, the authors still need to demonstrate the practical value of their method, possibly by comparing their outcomes to other prevailing I-O-based approaches.

The papers by Martin T.W. Rosenfeld, Peter Franz, and Gerhard Heimpold as well as by Joachim Möller and Nicole Litzel take less formal, but more holistic, approaches to identify regional clusters. Rosenfeld, Franz, and Heimpold identify "economic development spots" in East Germany as areas exhibiting a confluence of industrial concentration, formal business networks, and innovative capacity. Möller and Litzel combine survey data with in-depth interviews to define clusters in Eastern Bavaria based on multiple types of relationships—supply-chains, partnerships, product markets, and organizational function.

The next two papers equate industry clusters with localization and present methods for measuring industrial concentration across multiple regions. Both face a common methodological dilemma—distinguishing industries that are concentrated beyond the degree expected by the uneven distribution of human settlement. Thomas Brenner uses theoretical industry-size distributions as a benchmark for identifying significant concentrations in German regions. Like Duque and Rey, this approach is intriguing, but somewhat unclear in its relative advantages over other measures. Björn Alecke, Christoph Alsleben, Frank Scharr and Gerhard Untiedt also analyze industrial concentration in Germany but apply Ellison and Glaeser's (1997) more commonly used statistic to plant-level data.

Other contributors examine the influence of inter-firm associations on other outcomes: wages, regional integration, and entrepreneurship. Leonardo M. Monasterio applies exploratory spatial data analysis (ESDA) to detect regional agglomerations of manufacturers in the Rio Grande do Sol region of Brazil. He uses these local statistics as inputs into a multi-level regression to explain individual wage variation. He finds that markets, localization, and urbanization all significantly explain wage variation—in broad support for the propositions of the New Economic Geography literature.

Frank G. Van Oort, Martijn J. Berger and Otto Raspe use survey data on inter-firm relationships (input suppliers, service providers, and sub-contractors) to investigate integration among the municipalities of the Randstad region in The Netherlands. Controlling for population, they find that intra-municipal and central cities-hinterland relationships are larger than expected, while inter-municipal associations between cities and towns of similar size (city to city or hinterland to hinterland) are weaker than expected.

Next, the paper by Anne Otto and Stefan Köhler stands out for introducing a dynamic dimension to the typically static analysis of industrial clusters. They use establishment-level data to study the growth and survival of start-up firms of three different regional clusters, each at a

different developmental stage: a growing medical technologies cluster in Munich; a mature surgical instruments cluster in Tuttlingen; and a declining textiles cluster in the Neckar-Alb. They find that the role of new firms clearly varies by the life cycle of the cluster. New firms play a considerable role in the growth of the Munich medical technologies cluster, but are far less important in mature and declining clusters.

The volume concludes with three papers on cluster policy. Of these, the contribution by Edward Feser offers the most concrete advice for policy-makers. Like Kiese, Feser is critical of “cluster-building” policies that strictly focus investment on a small number of desired sectors. While this strategy may work in areas blessed with existing scale advantages, it is ill equipped to address the needs of most rural and underdeveloped areas. Nevertheless, Feser still finds practical value in utilizing clusters as a framework for guiding policy decisions. The key difference lies in viewing clusters as a broad framework for addressing liabilities and leveraging existing strengths. This perspective asks policy makers to think beyond simply targeting their resources, especially in circumstances where addressing structural deficiencies in infrastructure and institutions may have economy-wide benefits.

To conclude, I believe this book will be of greatest interest to empirical researchers who wish to stay up-to-date with the recent work from both sides of the Atlantic. The blend of methods, empirics, and policy will also be of value to researchers that are interested in understanding the policy context of their research. The editing and scholarship are generally high, and there appears to be a slight emphasis on work that is new and in-progress. As such, I expect to see some of this work to continue to evolve and expand in the coming months. The book will be of lesser interest to policy makers who may not appreciate the technical nuances of applied empirical investigation. Nor is it sufficient background for novices wishing to deepen their understanding of the policy science of industry clusters. For these audiences, I recommend a more selective reading of specific chapters.

References

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- Gordon, Ian R. and Philip McCann. (2000) “Industrial Clusters: Complexes, Agglomeration and/or Social Networks,” *Urban Studies*, 37, 513–532.