

## BOOK REVIEWS

**Book Review Editor: Clifford A. Lipscomb, Greenfield Advisors LLC, Atlanta, GA**

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**Stephan J. Goetz, Steven C. Deller, and Thomas Harris, eds. 2009. *Targeting Regional Economic Development*. Routledge: New York. ISBN10: 0-415-77591-4, ISBN14: 978-0-415-77591-5. 410 pp. \$135.**

Reviewed by *Russ Kashian*, University of Wisconsin-Whitewater

This book builds on a series of workshops and papers organized by the Northeast Regional Center for Rural Development (NERCRD) at the Pennsylvania State University and the Rural Policy Research Center (RUPRI) at the University of Missouri. Integrating issues of applied empirical analysis with limited forays into theoretic foundations, it progresses in a solid fashion from the history of economic development to tools of economic development to case studies in the field. The result is a tangible book that has applications for the applied community developer and participants in the academic world.

The book's introduction offers some historic perspectives as well as a review of some of the more prominent issues in economic development, such as Porter's Cluster Analysis and Targeted Regional Economic Development. It provides the tenor of the book, as the three editors review the ongoing debate regarding the rationale for and the success of industry targeting and government-directed development programs. In a non-linear fashion that moves forward and backward through the history of economic development, these topics are covered through a wide variety of lenses. The first six chapters of the book concentrate on policy and historic issues of development. Chapters 7 through 14 are concerned with empirical modeling. In the final section, chapters 15 through 19 review a number of applications and case studies.

The first section regarding policy and history sets the tone for the book as the themes repeat themselves in various fashions by various authors. While rarely in conflict, this method is successful in offering the reader the opportunity to view similar theories from numerous angles. The heart of the book begins with Chapter 2, which describes the "Historic Description of Economic Development Policy." In it, *Steven Deller* and *Stephan Goetz* provide a valuable primer on government intervention. While it begins with the Great Depression and the Roosevelt Administration, a strong portion of this chapter reflects on policies developed post-1980. As with almost all subsequent chapters, Chapter 2 initiates a discussion regarding the various aspects of Porter's Cluster Analysis. Chapter 3 by *Martin Shields*, *David Barkley*, and *Mary Emery* adds to the discussion with their explanation of the limitations of location quotients in describing the linkages to and between industries; while cluster analysis is concerned with these linkages between industries, location quotients are concerned with the relative dominance of industries.

In Chapter 4, *Steven Deller* adds a general neoclassical profit-maximization problem to the analysis. Given the multidisciplinary nature of economic development, this is a valuable addition that challenges the non-economist and provides a model for economists to use in their teaching and research endeavors. In recognition of the mathematical and social limitations of the neoclassical model, however, Deller expands the discussion to include the behavioral institutional approaches. *Douglas Woodward* and *Paulo Guimarães* follow (in Chapter 5) by offering a sophisticated examination of the ideals of Porter's Cluster Analysis. They integrate the

concept of cluster analysis with strategic government intervention and continual innovation brought about by vigorous competition. Chapter 5 is an excellent primer that reviews many of the critical components of Porter's theories. The first section of this book concludes with Chapter 6 by *Todd Gabe*, who notes potential limitations to location-specific advantages often promoted in cluster analysis. In one example, he argues that cluster impact is influenced by the age of the cluster and size of the business in the cluster. He contends that the benefits of clusters are industry- and business-dependent.

Provided the terminology and history in Part I of the book, Part II offers several techniques and tools for analyzing regional economic development. *John Leatherman* and *Terry Kastens* begin the discussion of empirical modeling in Chapter 7 by calculating the probability of new industry establishments at the county level. Their logistic regression creates a predictive equation that estimates the marginal impacts associated with a variety of community and regional characteristics. Expanding economic development modeling, *Hanas Cader*, *John Leatherman*, and *John Crespi* (Chapter 8) fashion an industry's location choice decision through a conditional logit approach. In this model, the authors find that enhanced highway infrastructure is important in attracting firms to nonmetropolitan locations. In Chapter 9, *Alison Davis* and *Thomas Harris* find that local economic conditions alone (such as tax revenues or average earnings) do not attract firms to an area. They argue that a community's infrastructure and input potential are more important variables in the firm's location decision.

Rather than reviewing the conditions by which firms locate, *David Barkley* and *Mark Henry* create criteria for selecting firms. In Chapter 10, they employ the industry targeting method used by the Regional Economic Development Research Laboratory (REDRL) to construct a decision process that values input suppliers, product markets, and the associated industry clusters. Also, Chapter 11 by *Mark Henry* reviews critical ideas such as central place theory, agglomeration economies, and backwash and spread effects when retracing the history of economic development theory. The review of these hierarchical issues provides an opportunity to bring together regional development issues that link together rural and urban areas. Henry then places these linkages together to review a series of interconnected decisions on the part of urban and rural policy makers.

*Edward Feser*, *Henry Renski*, and *Jun Koo* revisit the idea of value chains in Chapter 12. They use six-digit NAICS industries to create a value chain classification. These value chains are aggregated into the value chain groups to identify trends. This is used to identify the growing NAICS industries and their related growing value chain clusters. In Chapter 13, *Thomas Johnson* surveys business and governmental leaders that evolve into a three-step process to identify community preferences regarding firm location choice. Issues such as a clean environment, capital considerations, and wages were leading variables in this survey instrument. In Chapter 14, *Linda Cox*, *Jonathan E. Alevy*, *Thomas R. Harris*, *Barbara Andreozzi*, *Joan Wright*, and *George "Buddy" Borden* draw on a Community Business Matching Model (CBM) that reviews equilibrium issues; potential conflicts are created between economic development goals and social and environmental goals. This chapter also provides the authors' survey results on the needs and aspirations of both the citizens and the businesses. It thereby identifies deficiencies and disequilibria that may exist in the event of business recruitment.

Part III of the book is concerned with "Applications and Case Studies." *Stephan Goetz*, *Martin Shields*, and *Qiuyan Wang* confront the issue directly with a comparison of analytic tools. Chapter 15 considers location quotients, shift-share analysis, Moran statistics, and input-output

analysis. As with much of the book, this is a primer on economic development and an excellent tool for both research and teaching. *James R. Nelson, Michael D. Woods, La Dee Homm, and Gerald A. Doeksen* include extensive diagrams and figures in Chapter 16 on targeted industry analysis to describe the flows included in economic development. Their use of flow charts and illustrations clearly identifies where monies travel, ultimately leading to inflows and leakages in the economy.

*Steven Deller, John Leatherman, and Martin Shields* encourage public participation through community strategic planning to bring together the goals of targeted regional economic development with the community's vision in Chapter 17. They identify critical component parts to the planning process that would promote success in the development of these plans. While a challenge in terms of having the necessary skills and social infrastructure in place, an important step toward a satisfactory result includes the development of social capital.

In Chapter 18, policy recommendations evolve out of *David Hughes'* application of regional purchase coefficients that are available from the Minnesota IMPLAN Group. In addition, Hughes develops the ideas of import substitution and economic linkages. These ideas flow easily into Chapter 19, in which *Steven Deller* uses input-output linkages strategically in an attempt to maximize economic growth. He identifies areas where gaps and disconnects between interindustry linkages occur. For example, in the region under analysis, cheese is a large regional export. At the same time, milk is heavily imported. This enables the argument that local milk production is a potential economic growth instrument if the region can transition milk from an imported good to a regionally produced input (import substitution). It is notable that this idea was initially dismissed by local policymakers due to the low wages provided by dairy farms.

To conclude, this book is a well-edited trip through Porter's Cluster Analysis, regional input-output data, and Location Quotients (just to name a few topics). Concluding Chapter 20 gracefully pulls together many of the critical topics imbedded in the discussion of economic development. This challenging feat is successfully accomplished in a way that maintains the book's relevance to a number of constituents, from students to teachers to practitioners.

**Stimson, Robert, Roger R. Stough, with Maria Salazar. 2009. *Leadership and Institutions in Regional Endogenous Development*. Edward Elgar: Northampton, MA. ISBN: 978-184844-059-3. 168 pp. \$95.**

Reviewed by *Robert Dunn*, Washington and Jefferson College

The focus of this text authored by *Robert Stimson, Roger R. Stough, and Maria Salazar* is the role of leadership, institutional factors, and entrepreneurship in regional economic development. The authors note that these endogenous processes have been identified as important factors in the "new growth theory" but have yet to receive substantial attention in the literature, particularly any systematic analysis of their role in development and growth. The authors acknowledge in the preface that the book should be viewed as a work in progress; and the purpose of the work is to display the potential for analysis of these endogenous growth factors.

The first chapter of the book provides an overview of the evolution of regional economic development theory from the neoclassical focus on capital and labor through the introduction of technology as an exogenous growth factor and finally to the current literature on endogenous

growth factors such as research and development and innovation. After this the book is broken into two parts. The first part contains Chapters 2 through 6 and deals with the development of a model of endogenous regional economic development. Chapter 2 presents the “regional competitiveness performance cube” as a framework for regional development analysis. The framework incorporates resource endowments and market fit, leadership, and institutions as relevant factors for growth.

Chapter 3 discusses the importance of resource endowments and market conditions and fit. Variations in resource endowments across regions can be an important determinant of economic development, but the authors note that favorable endowments themselves are not sufficient for growth. Current and potential regional markets are also important and the ability of regions to expand into new markets is critical. Increasing returns and industrial agglomeration have become increasingly crucial elements when considering a region’s potential market reach. Leadership and institutions are integral to the ability of a region to exploit resource endowments and markets. Chapter 4 provides several perspectives on leadership. In an attempt to identify leadership elements essential for regional development the authors identify collaboration, trust, shared power, flexibility, and entrepreneurialism. When compared with traditional leadership structures, regional leadership is more dependent on the collective participation of community members. Chapter 5 is a thorough examination of the role of institutions in regional development. This role includes defining consistent rules that facilitate economic growth, enacting and interpreting policies, and creating or enhancing a learning infrastructure that can reduce transactions costs. Sustainable development requires institutions that are inclusive, flexible, and focused on the creation of value for individuals and firms.

Chapter 6 deals specifically with entrepreneurship and its unique meaning with respect to regional development. Entrepreneurs in regional development generally differ from traditional entrepreneurs in that their goals will encompass more than profits. Entrepreneurs concerned with regional development generally have deep ties to the region and are motivated to preserve their family and business positions against possible economic decline. The authors connect regional leadership and entrepreneurship through contingency theory. Contingency theory hypothesizes that leadership derives from an event that challenges or changes the status quo. Entrepreneurship is closely related because it is centered on the ability to exploit new opportunities created by such changes.

The second part of the book contains Chapters 7 through 10. In these chapters Stimson, Stough, and Salazar summarize numerous metropolitan and regional development case studies from North America, Europe, and the Pacific Rim. They discuss actual attempts to model endogenous growth and some related issues in the final chapter. The major difficulties of building an operational model are the definition of the proposed variables (resource endowments, market fit, leadership, institutions, and entrepreneurship) and accurate measurement once definitions are agreed upon. The authors provide a short overview of results from similar models estimated for regions in Australia and some U.S. metropolitan areas.

Chapter 4 presents many perspectives on the definition of good leadership; however it is difficult to ascertain how parts of the discussion contribute to the understanding of regional endogenous development. One aspect that needs to be further developed is the role of collective action in metropolitan or regional development. The authors briefly mention that collective action is necessary when thinking about regions, but they do not deal with the issue in any detail. This may be an area for future expansion. Chapter 5 covers a wide range of material on

institutions and it would benefit from a clearer focus and organization. Section 5.4 on the relationship between institutional arrangements and policy outcomes contains considerations from many researchers but lacks a unifying contribution to understanding the role of institutions in regional development.

A clear reasoning for the selection of case studies presented in the book should be given. The authors note that the studies were selected to display the crucial role that leadership and institutions can play in development; but this may present the reader with an incomplete picture. A more systematic selection process would reduce these fears. In addition, there is considerable variation in the depth of coverage of the case studies. The case studies would also benefit greatly from a discussion of the costs and benefits of many of the projects and programs undertaken. While there is discussion of the development benefits in several of the studies, it is important from an efficiency perspective to consider if the costs of such programs outweigh the benefits produced. This would also complement the idea of sustainable development nicely. In addition, from an equity standpoint there may be reason to believe that the benefits described in several of the case studies may have accrued disproportionately to certain groups within regions. Given the active role of government in several of the examples this could be cause for concern.

Finally, further discussion of the results from Australia and the U.S. in the final chapter would considerably strengthen the conclusion of the book. Although this is likely due to the “work in progress” nature of the book, careful consideration of some surprising results would be a notable addition.

Given these concerns, the book effectively accomplishes the goal set by Stimson, Stough, and Salazar. It provides a thorough overview of the role of endogenous factors, specifically leadership and institutions, in regional economic development and growth and sheds light on the potential of this area for future research. The case studies provide several interesting examples of the success and difficulty of different development strategies. I recommend this book to anyone interested in understanding the evolving role of leadership and institutions in the “new growth theory.”

**Audretsch, David B., Flack, Oliver, and Heblich, Stephan (eds.). (2009) *Innovation and Entrepreneurship*. Edward Elgar Publishing Limited: Cheltenham, UK. ISBN: 978-1-84844-099-9. 724 pp. \$344.**

Reviewed by *Justin M. Ross*, Indiana University

The editors of this book attempt to compile the lion's share of the original classic works of two related but often separated strands of the economics literature, those of innovation and entrepreneurship. While the book provides little new insight, it does organize more than a century of literature in a logical way that adequately contextualizes the individual works. Since the intention of the book is to provide selected pieces that were major landmarks in these literatures, it would be highly recommended as a starting point for a researcher interested in these topics. The book would have less value added for someone interested in modern methods or recent point estimates. The remainder of this review will focus on the aspects most relevant to regional scientists.

The book is in six parts: history of thought, innovation and growth, the innovation process, role models of the entrepreneur, knowledge flows, and institutions. Those with a

penchant for history will be pleased to find that those chapters are the most cohesive as a group; but in general each chapter seems to belong within the group to which it has been partitioned.

This work is of particular interest to regional scientists, who have long recognized the importance of competitive and intellectual spillovers as potential factors that encourage agglomeration of economic activity in certain regions. Indeed, this is evident in the selection of *Alfred Marshall's* "The Concentration of Specialized Industries in Particular Localities" from his *Principles of Economics* ([1890] 1925) as the opening chapter. It is in this chapter that Marshall emphasizes the importance of entrepreneurs in cultivating specialized regional industries and economies. For instance, Marshall states (p. 267)

Some of [the luxury goods] were produced only in a few places, or even only in one place; and they were diffused all over Europe partly by the agency of fairs and professional peddlers, and partly by the producers themselves, who would vary their work by travelling on foot for many thousand miles to sell their goods and see the world. These sturdy travelers took on themselves the risks of their little businesses; they enabled the production of certain classes of goods to be kept on the right track for satisfying the needs of purchasers far away; and they created new wants among consumers, by showing them the fairs or at their own houses new goods from distant lands. An industry concentrated in certain localities is commonly, though perhaps not quite accurately, described as a localized industry.

Part II of the edition focuses attention on the subject of innovation and growth, starting with *Paul Romer's* (1986) endogenous growth model. His model is, if not the most, at least one of the most influential recent theoretical models in the enormous literature on regional growth and divergence.

Part III of the book provides *Gilles Duranton* and *Diego Puga's* (2001) theoretical model of "nursery cities," where entrepreneurs are initially trying to discover the nature of their production process; only at later stages does mass production become feasible. The uncertainty of resource demands (e.g., the types of workers needed) creates a trade-off between advantages from urban diversity at the start-up stage and specialization in the maturity stage, allowing the conditions for a specialized or diverse city to be derived from the theoretical model.

The entrepreneur becomes a more complex creature in Part IV of the volume, which provides four chapters under the loose heading of "Role Models of the Entrepreneur." For example, rather than formulaically translating technological innovation into product profitability, *Israel Kirzner* (1973) introduces them as arbitragers that help establish equilibrium properties in existing markets. It is in this series the regional scientist is most likely to be left wanting. One of the long-recognized barriers to perfect competition is the set of complications that arise in the presence of transportation costs. Entrepreneurs are therefore able to play an important role in the spatial arbitrage between market regions. While this aspect of entrepreneurship is overlooked in this particular part of the book, it is arguably ascertained in many other chapters, particularly those covering the history of thought.

Part V, on knowledge flows, is both the longest part of the book and arguably the most relevant to regional science. Its chapters focus on the mechanism through which knowledge spillovers occur; as a result they place a great deal of emphasis on geographic proximity and dispersion. Chapters 21 and 22, both authored by *Zvi Griliches*, provide an extensive overview of the difficulties in gathering meaningful inference from research and development data (see p. 369–372 in particular). Chapter 24 (*Jaffe, Trajtenberg, and Henderson, 1993*) attempts to measure the extent of regional localization of knowledge spillovers using patent citations across

standard metropolitan statistical areas. *David Audretsch* and *Maryann Feldman's* (1996) *American Economic Review* piece in Chapter 25 on the geography of innovation and production provides an empirical framework to distinguish the relative roles of knowledge spillovers and geographic concentration of production from the propensity of innovative activity to cluster.

The final part of the volume emphasizes the role of institutions, namely in the form of a few regional case studies before concluding with a chapter from Nobel Laureate *Douglas North* on the history of European institutions. This is undoubtedly a very intense subject of modern research: Why do institutions differ? In what ways are institutions conducive to economic growth? How and why do institutions change over time? Though the articles are focused on the relationship with entrepreneurship, addressing these questions nevertheless are the underlying themes of the section.

To conclude, the editors of this volume have provided a handy compilation of important papers in economic theory, empirical research, and case-study work. Anyone preparing a course in entrepreneurship, or is looking to add an entrepreneurship/innovation aspect to a doctoral course in regional studies, would benefit from reading this book.

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**Varga, Attila, ed. 2009. *Universities, Knowledge Transfer and Regional Development: Geography, Entrepreneurship and Policy*. Edward Elgar Publishing: Cheltenham, U.K. 978-1-84542-931-7. 400 pp. \$160**

Reviewed by *Elvira Uyarra*, University of Manchester

The role of universities in promoting regional economic development is the focus of increasing scholarly debate. An institution with ancient origins, the university sector has in recent decades expanded both in terms of numbers of institutions and in terms of the scale and scope of activities conducted and roles played. The growing perception of universities' economic relevance has led to heightened interest by policy makers in promoting university- supported regional development.

This volume is a valuable contribution to the academic debate as it offers a rich mix of conceptual perspectives and critical insights that will be of interest for researchers within economics, geography, and innovation studies. The book adopts a comprehensive approach to the subject, dealing with the geography of knowledge transfers (Part Two), the mechanisms or pathways through which they take place (Part Three), and concrete experiences of university-based economic development strategies (Part Four).

The chapter by *Harvey Goldstein* sets the scene by reviewing the literature about the relationships between universities and regional economic development and the way these have been assessed. The author provides an overview of the empirical evidence regarding seven main types of impacts: development of human capital; creation of knowledge; transfer of existing know-how; technological innovation; capital investment; regional leadership and governance; and co-production of knowledge infrastructure and creative milieu. The chapter is a salutary reminder of the difficulties of measuring certain university economic impacts and the factors that may condition such impacts, both at the regional level (for instance regional ‘culture’) and in relation to internal university organization. The chapter by *Zoltán Ács* provides a valuable overview of the key scholarly contributions to the study of knowledge spillovers. It discusses the early models developed by Adam Jaffe, Maryann Feldman and Attila Varga (the “JFV model,” see e.g. Jaffe, 1989; Ács, Audresch, and Feldman 1992; and Anselin, Varga, and Ács, 1997) and recent developments of these models. The chapter further examines the “spatialized” explanations of economic growth of three distinct literatures, namely the new economic geography, new growth theory, and the new economics of innovation, which are used as building blocks of a proposed framework for technology-led economic growth. The chapter also discusses an extension of the ‘JFV model’ to develop a knowledge spillover theory of entrepreneurship.

Next, the chapter by *Edward Feser* shifts the analysis of university-industry relations in terms of knowledge spillovers to regional clusters. Two applied cluster studies in the U.S. (namely the Appalachian Regional Commission technology based cluster study and the cluster identification study of the Research Triangle region of North Carolina) provide the basis for a discussion of the conceptual and practical challenges of using applied industry cluster analysis as a basis for policy. Some of the problems identified include data availability, the use of diverse methodologies for cluster identification, and multiple objectives of cluster policy. The chapter concludes that cluster analysis should constitute a flexible methodology rather than a set of fixed definitions and measures and highlights the importance of a clearly articulated set of project goals in order to tailor information needs to specific policy objectives.

The geography of research networks is analyzed using novel methodological approaches in Part Two. For instance, the chapter by *Roderik Ponds, Frank van Oort, and Koen Frenken* investigates the geography of different forms of research collaboration. The authors consider that geographical proximity facilitates collaboration between organizations with different socio-economic structures, as it can help overcome problems arising from conflicts of interest or from cognitive differences. They test, using co-publication data for the Netherlands in the biotech and semiconductor sectors during 1988-2004, whether research collaborations involving heterogeneous networks (firms, universities, government research institutions) are more localized than collaborations between similar types of organizations. Results suggest that heterogeneous collaborations are significantly more regionalized than collaboration within homogeneous networks for the case of biotechnology, but are inconclusive in the case of semiconductors (even after controlling for the spatial distribution of universities and the



significance of the Dutch electronics multinational Philips). *Attila Varga* and *Andrea Parag* consider the structural features of research networks of universities rather than the actors' mix and argue that the quality of network connections is a key factor in academic knowledge transfers. The structural features of networks considered in the paper are size, network position, and the intensity of interactions among network members. Using co-publication data for selected research units at the University of Pecs, they find a positive impact of research network connection quality on knowledge transfers, measured by university patenting activity. A key policy implication that the authors derive from these findings is that knowledge-based economic development should incorporate academic research networking in addition to R&D promotion.

One has to welcome the fact that this edited volume does not dedicate much space to the issue of commercialization strategies of universities, and that these are the object of critical scrutiny as in the case of *Chiara Franzoni* and *Francesco Lissoni's* chapter on 'academic entrepreneurs' which opens Part Three of the book. After reviewing the relevant literature, they question the 'straightforward definition' of academic entrepreneurs as potentially inadequate. Academic entrepreneurship, they argue, stems from a complex set of strategies and incentives. They note that entrepreneurial efforts are contingent upon the institutional characteristics of national academic systems. The advent of the 'entrepreneurial university' in the US can be traced to the particular evolution and characteristics of US universities, particularly their strong autonomy, the mobility of personnel, the principal investigator principle, and the large public funding of research activity. This is, they argue, a far cry from the way academic research is organized in parts of Europe. The lack of autonomy of universities in countries such as France stands in stark contrast to the eagerness of national policy makers to replicate US policies on intellectual property. *Knut Koschatzky* and *Joachim Hoemar* analyze another form of knowledge transfer mechanism, namely the start-up and early-development process of academic spin-offs. Using case-study data on academic spinoffs in Germany, they analyze their degree of success, the regional and non-regional factors contributing to this success, as well as the promotional measures that influence such impact. They link the strategies followed by the parent organizations with different degrees of company performance. Their findings indicate the importance of having a financing mix from diverse sources and sufficient strategic management and commercial skills to secure the success of spin-offs. The infrastructure endowment of the region appears to be of little relevance for spin-off performance vis-à-vis "soft" locational factors.

Two chapters demonstrate the importance of graduate mobility as a mechanism of R&D location and academic knowledge transfer. *Martin Andersson*, *Urban Gråsjö*, and *Charlie Karlsson* assess the relationship between location of industry R&D and accessibility to students and graduates and university R&D. Using secondary data for Sweden, they find that the main attractor is not university R&D as such, but rather the human capital embodied in students and graduates. Their model only considers aggregate R&D data across industries, so these findings could vary across industries. Their results are consistent with the findings of *Alessandra Faggian*, *Philip McCann*, and *Stephen Sheppard*, who in their chapter examine the relationship between migration of university graduates and regional performance. Using data from the 2000 student leavers' questionnaire by the UK Higher Education Statistics Agency (HESA), the authors construct a model to capture the dynamic relationship between a region's inflows of graduate human capital, the regions' stock of knowledge assets, and innovation performance. They find that the innovation dynamism of the region is positively related to the inflows of graduate human capital into the region. Migration of human capital appears to be a major, albeit

generally overlooked, *interregional* knowledge transfer mechanism (in contrast with the *intraregional* transfer role played by small firms and universities). Further, while the human capital effect appears to be relevant for *all* industries, other spillover effects tend to be restricted to high technology industries.

The chapter by *Gunther Maier* tackles the issue of university competition for students using the case of Austria. Austrian university system is, according to the author, undergoing a transition from a command and control system (with little competition among universities) to one of greater autonomy of universities (where greater competition can be anticipated). Against this backdrop, and using data on students starting their degree program in business education between 1990 and 2003, Maier tests the hypothesis of whether universities act as spatial monopolies or as product differentiating suppliers. Results of the empirical analysis provide evidence for spatial monopolies; however, reputation differences between universities suggest a degree of product differentiation.

Also in the context of competition and competitiveness of universities, the chapter by *Ádám Török* provides an assessment of university ranking lists, focusing particularly on two popular rankings, namely the Jiao Tong and the Times Higher Education Supplement (THES) lists. The analysis of the two lists illustrates the diversity of the methods employed for measuring performance and the different ranking criteria used. These rankings tend to be un-scientific value and un-systematic, comparing very diverse and heterogeneous sets of institutions (not least in terms of size), which clearly distorts results. Despite their methodological shortcomings, these lists act as a signaling device for students and firms. As such, they send a message of clear relevance according to the author, namely the leading position of American vis-à-vis European Universities, particularly those in Eastern and Southern EU countries.

The last three chapters of the book (Part Four) are more descriptive in nature and seek to provide an account of the experience of a number of regions in developing countries, transition economies, and rural settings. The chapter by *Daniel Schiller, Björn Mildahn, and Javier Revilla Diez* seeks to understand the factors explaining the low degree of cooperation between firms and universities in Thailand. The chapter by *Imre Lengyel* deals with the role of universities to improve the competitiveness of lagging regions. The author constructs a model of regional competitiveness, which he uses to analyze the local economic development strategy of the University of Szeged in Hungary and its cluster-based initiatives around biotechnology and health. The final chapter by *Hugh Sherman, William Lamb, and Kevin Aspegren* deals with the role of universities in high-growth businesses (HGBs) in four rural areas of the US, and in particular the HGB support initiatives of Ohio University's George Voinovich School for Leadership and Public affairs. HGBs, they argue, offer significant potential for economic growth, but they also require more sophisticated hands-on business, technical, and financial assistance than other types of start-ups. This part of the book works less well than the rest, for the contributions lack coherence and a clear framework of analysis, which prevents a better grasp of the institutional context and the relevance of the cases examined.

This book is overall an original contribution, offering new case studies as well as some novel methodological approaches, as well as reviews of theoretical advancements in the field. As such it should be of interest for both researchers and practitioners in the area of science policy and regional development. It is also timely, particularly in relation to the so-called Lisbon Agenda and the Bologna Process of higher education reform in Europe. The acknowledgement of multiple economic impacts of universities implies that knowledge spillovers through academic

entrepreneurship and university-industry R&D collaboration should not be pursued to the detriment of other local impacts of universities, such as the provision of skilled labor. The difficulty of measuring such impacts should not obscure the importance of universities' key function of human capital development. Furthermore, the differences in institutional settings of university systems in different countries cannot be overlooked when promoting academic entrepreneurship. In a context of growing internationalization of higher education, and the persistently poor showing of most European universities in "league tables" such as the Jiao Tong and the THES lists, pressures exist to make universities more dynamic as research actors. There is a risk that a more "Anglo-Saxon" model is pursued with little consideration of the institutional differences in 'national systems' of research and higher education. The U.S. university system is for instance quite unique among its OECD counterparts due to its combination of large scale, decentralized structure and dominant position in publicly funded basic research (Mowery, 2001). Finally, the book is original in that it covers many aspects of a multi-faceted research area, including aspects that generally receive little attention in the literature, such as university ranking lists and student mobility. However, the book would have been stronger and more coherent had it included a concluding chapter bringing together the key lessons and research challenges of these diverse contributions.

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