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The Spatial Economy: Cities, Regions and International Trade, Masahisa Fujita, Paul Krugman and Anthony J. Venables
The MIT Press, Cambridge, 2001. 367pp. illustrations, index. \$35.

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This book is an authoritative introduction to “New Economic Geography” by three leading economists in the field. The book will be interesting to scholars and students both in economics and geography who are interested in theoretical explanation of uneven development, concentration and deconcentration in the real world. The book is divided into four parts. The first part introduces and reviews urban economics and regional science as intellectual foundation for the “New Economic Geography”. The second part develops a set of basic spatial models of regional development that is fundamental to the issue of spatial inequality and concentration. The third part focuses on the dynamics of urban system especially the existence of urban hierarchy and the emergence of new cities. The fourth part examines issues in international trade that bears much similarity to unbalanced development within a country. The book is well organized with lots of numerical examples, graphs and appendixes.

In this book, the authors attempted to bring location and spatial consideration to economics using a strict mathematical approach prevailing in mainstream economics. Although such issues have been studied for a long time by geographers and regional scientists since the 1950s, the authors attempted to get inside the black-box of external economies. Traditional models in economic geography were criticized as being loose in reasoning. For example, the authors argued that the central place theory is not an economic model and at best a description of an economy’s spatial structure as the theory does not give an account of how individual actions produce a hierarchy of central places. The authors argued that the “New Economic Geography” moves beyond “loose-jointed

modeling” in economic geography and provides a sound theoretical basis of economic behaviour under imperfect competition at micro level. The key concept in the “New Economic Geography” introduced in the book is increasing returns which is the foundation to explain concentration of population and economic activities.

Knowledge spillover, pooling of skilled labour, and the backward and forward linkages in a large market are three causes of increasing returns. The authors relied on the role of linkages that is easier to model to develop the models of “New Economic Geography” in the book. To be able to track complex spatial problems, the authors used three modeling tricks in a consistent but artificial way. The first trick is the use of the Dixit-Stiglitz model of monopolistic competition assuming an unlikely form of individual utility function. The second trick is the assumption that transportation cost takes “iceberg” form. The third trick is the use of evolutionary dynamics to make sense of static models.

The book is focused on two related questions about the spatial system. When is spatial concentration of economic activity sustainable? When is a symmetric equilibrium, without spatial concentration, unstable? These two questions are solved by looking for the conditions of “sustain point” and “break point” respectively. Various models in the book are linked to a unified framework through the answering of above two questions.

Part three of the book focuses on urban systems that will be of interesting especially to the readers of this journal. The authors attempted to answer two fundamental questions in urban geography using various continuous spatial models. How do new cities form? Why do cities of different size coexist? The authors made one step further in deriving the co-existence of the central city and the pattern of land use in the von Thünen model. The model was then extended to the case of urban system with multiple cities. The formation of new cities was considered as a result of population growth and the location of the new city was identified using the market potential function. Assuming several different manufacturing sectors, the authors were able to show the emergence of a hierarchical urban system using numerical simulations. Nevertheless, the urban models developed in the book are all for a linear one-dimensional space. It remains a difficult task to model urban system in two-dimensional space to produce an urban hierarchy like central place theory.

The works of “New Economic Geography” should be assessed whether it has made real advance in developing consistent models of spatial concentration. The authors were successfully in three ways although their models are more simplified than existing spatial models in economic geography and regional sciences. First, the spatial models in the book have a firm microeconomic foundation of the behaviour of firms and consumers following the tradition in mainstream economics. Second, the models are fairly consistent. Third, much insight about the dynamics of spatial economy is obtained.

However, most models developed in the book are quite unrealistic and simplified. For example, although the Dixit-Stiglitz model of monopolistic competition is tractable and flexible, it is grossly unrealistic as admitted by the authors. The “racetrack economy” assuming a large number of locations around the circumference of a circle is also quite unrealistic. The backward and forward linkage considered in various models is limited to the linkage between population and goods produced by manufacturing sector. The inter-industry input-output linkages as well as the transport sector are not modeled in the book. Knowledge spillover and the advantage of a skilled labour pool remain difficult to model and are not considered in the book. Furthermore, the book is focused on a few classical spatial problems like uneven development and urban hierarchy assuming rational decision-making with perfect information. Yet it is also important to study the changing nature of the regional and world economy using institutional and cultural approaches. Overall, the book has made a significant contribution to the field, but much work remains to be done to model the spatial economic system more realistically to provide more insights to policy-makers of the real world.