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A review of China's Urban Agglomerations

LIU Haimeng

Institute of Geographic Sciences and Natural Resources Research, CAS, Beijing 100101, China

Since the 1980s, China has been developing rapidly and has gradually become a global manufacturer. During this period, industry and population began to concentrate in Beijing, Yangtze River Delta, Pearl River Delta, and other regions of China. In these regions, more urban agglomerations have started forming and growing, which have been constantly attracting resources, capital, and talents (the "straw effect"). Thus, these urban agglomerations were recognized as the main regions to promote China's National New Urbanization and economic development by the Chinese government. In this context, the monograph of China's Urban Agglomerations was published by Science Press and Springer. This book, written by geographers Chuanglin Fang and Danlin Yu, closes the gap in the information and knowledge on urban agglomeration in China. Importantly, this is the first systematic analysis and evaluation of China's urban agglomerations. Thus, it would be of great significance for global scholars to understand the development status and construction achievements in China's urban agglomerations. Furthermore, this study could be used as a valuable reference for the development of urban agglomerations in other countries.

The book is organized into five thematic chapters with a clear structure, rigorous data analysis, and detailed literature review. From concept and theory to practice and policy suggestions, it has vividly created a clear representative portrait of China's urban agglomeration status. The first chapter reviews the fundamental connotation and strategic position of China's urban agglomerations. Chapter 2 describes the macro-spatial pattern of China's urban agglomeration development and its fundamental principles. Chapter 3 provides updated summarized information concerning the fundamental development characteristics and outstanding issues of China's urban agglomerations during the past 35 years. Further, Chapter 4 analyzes the spatial and temporal differentiation of economic, social and environmental development of urban agglomerations in China in the period 1980-2014 by evaluation and representation of vast amounts of data. Finally, Chapter 5 expounds the safeguard measures and suggestions for the future development of China's urban agglomerations. The features and contributions of this book highlight the following aspects:

(1) The concept of urban agglomeration is defined scientifically, and the international status of China's urban agglomeration is put forward. Based on literature analysis, an urban agglomeration is formally defined as a group of cities that have a high level of integration and conurbanization. The book reveals that the formation of urban agglomerations is a process during which the relationships among cities shift from predominant competition to both competition and cooperation. The evolution of an urban agglomeration theoretically follows a spatiotemporal path from a cluster of cities to metropolitan areas, urban agglomerations, and large metropolitan belts. More significantly, 10 definition criteria have been proposed to identify the formation of an urban agglomeration. The book suggests that urban agglomerations are the most important regional units participating in the global competition and the and the international division of labor. As important vehicles shifting the gravity center of the global economy, they will determine the pattern of world political and economic development in the future. The global urban agglomeration development has steadily entered a "China Era" during the 21st century.

- (2) The "5 + 9 + 6" space organization pattern of China's urban agglomerations is proposed. In the background of large regional differences and rapid urbanization in China, planning the national urban agglomeration pattern is a topic of major scientific concern. Based on the findings of their ten-year extensive research, the authors have proposed the development of a new urban agglomeration system that contains five national-level, nine regional-level, and six local-level urban agglomerations. Moreover, the future development direction of these agglomerations has been put forward. This "5 + 9 + 6" scheme was adopted by the 13th Five-Year Plan for Economic and Social Development of China, which plays a key role in promoting the formation and development of China's urban agglomeration and the formation of a new-type urbanization pattern.
- (3) Combining the human and natural elements of urban agglomeration, in this book a comprehensive analysis of the complex system of economy, society and environment has been performed. Previous publications have generally analyzed only one aspect of the urban agglomeration development, such as the society, economy, politics, environment and ecology. However, this book represents an attempt to integrate natural science and social science. The authors regard an urban agglomeration as a complex system, where humans and nature are coupled. Therefore, they have not only analyzed the economic structure, investment, finance, urbanization, resident income, innovation, and informatization, but have also focused their scientific interest on the water environment, air quality, and waste emissions of urban agglomerations. The spatial and temporal thinking as well as the system thinking applied in the present publication can be used as a valuable reference for other and further research work.
- (4) The key problems and future development paths of China's urban agglomeration development have been precisely put forward. Intense human activities have led to high eco-environment fragility of urban agglomerations, and environmental pollution has exceeded the natural carrying capacity in some regions. In the process of urban agglomeration planning and construction, certain local governments have violated the general law of urban agglomeration evolution and have blindly pursued planning scope expansion. The outcomes of these activities are low compactness and input-output, as well as reduced carrying capacity of resources and environment in many urban agglomerations. Furthermore, the internal development of urban agglomerations is unbalanced, causing negative effects and a lack of cooperation and linkage between cities. Towards the end of the book, the authors propose that the future development of urban agglomerations should be based on innovation, green technologies, wisdom, openness, market dominance, and benefit sharing. To realize the sustainable development of urban agglomerations, the government should improve its potential in critically important areas including organization and coordination, public finance, laws and regulations, and resources and environmental protection.

The 21st century is an era of urbanization in developing countries, and more urban agglomerations are expected to emerge. The summary of the concepts and laws of urban agglomeration and the systematic analysis of the Chinese case in the book will be of outstanding implication to other states and regions. I consider that this book will attract the interest of academics and students in urban studies, as well as of practitioners, including urban planners and administrators.