

## Editorial introduction

### *Special Issue on “Urban and Regional Sustainability in China”*

Guest Editors:

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Since 2000, China has entered into a new phase, which takes economic transformation and sustainable development as an important strategy for national, regional and urban development. Many scholars have discussed the pathways of globalization, innovation and development in China ([Dicken, 1998](#); [Wei, Y. H. D., 2007](#)). Recently, with the rapid development and application of ICTs (Information and Communication Technologies), internet-dependent cities, resident mobility and social sustainability are also become hot topics in China ([Zhen, Wang, & Wei, 2015](#)). Therefore, this special issue addresses these four key issues: innovation, greening, mobility and sustainability.

The Chinese central government has vigorously promoted the development of low-carbon industry. The first paper, written by [Wang, Liu, and Tan \(2016\)](#), verifies the effectiveness of policies and measures to reduce carbon emissions, which partially offset the incremental carbon emissions produced by required industrial production. However, the authors also highlight that the effectiveness of local government efforts to reduce emissions is still insufficient, which induces the ongoing growth of the total amount of carbon emissions. The paper also reveals that there is a huge gap between the actual development of low-carbon industries and real industrial development. Most of the regions in China still face difficulties in reducing carbon emissions and improving urban livability.

Under the strategy of “internet plus” and mass innovation, traditional manufacturing cities in China are undergoing profound changes. Taking Shenzhen as a typical representative city, the second paper, by [Fernandez, Puel, and Renaud \(2016\)](#) analyzes the role of the local Shanzhai community (made up of entrepreneurs and companies historically based on the strategy of imitating high-end products) and the international manufacturing community in open innovation. Based on the built conceptual framework of open innovation, the authors conclude that the establishment of an innovation ecosystem for the Shenzhen electronics cluster was mainly promoted by open-source innovation. Although Shanzhai brings completely negative effects on open innovation and the upgrading of an electronics cluster, it is worth acknowledging that the open-source innovation driven by the manufacturing community can support and accelerate the modernization of declining

industrial sectors. This open innovation is associated with the specific economic and industrial environment in Shenzhen. However, the open innovation paradigm is still an emerging approach for changes in technology and manufacturing cultures that are rooted in special territories.

Considering the new mobility paradigm in an information era, the third paper, by [Xi, Zhen, and Chang \(2016\)](#) argued that analysis on elemental flows should turn into the space of flows, which could be treated as the coupling of technologies, activities, socio-economic factors and physical environments. Based on this argument, the authors proposed a systematic measurement of the urban space of flows by evaluating spatial mobility from technological accessibilities, the intensity of activity and the spatial activeness. These theoretical methods are then used for extracting the topological structure of Nanjing City into the nodes of place, the route of flows, the boundary of flows, the functional zones and the network of flows. This topological structure implies the interaction between elemental flows and physical space, which provides a new approach to understanding the mixed morphology of urban space instead of the traditional space of places. According to the topological structure of urban space of flows, more attention should be given to those places with lower spatial mobility (such as new built districts with few residential activities) and those places with over crowded activities.

The fourth paper, by [Wei, Z. et al. \(2016\)](#) explores the evolution of housing estates and their social sustainability in China, using a case study of Guangzhou. The study finds that the housing reform which dramatically changed the supply side of housing from government to market-based, could be used to solve the shortage of housing conundrum and also could give rise to the improvement of living environments. The findings of this research indicate that the living environment of gated communities is indeed better than work-unit neighborhoods, but the social relations within the work-unit compounds are more harmonious.

China has become the largest tourist-generating country in the world (UNWTO, 2015), however, there is limited research on Chinese tourism, especially of student tourism. In the fifth paper, [Xu, Brown, and Long \(2016\)](#) discuss socio-cultural and indirect political influences on the tourist experiences and aspirations of Chinese students of tourism, based on a survey of Chinese students studying tourism management, using a free-elicitation technique. The result suggests that Chinese students produce a big potential market for European tourism. For their motivation, this study reveals that for Chinese youth, past travel experiences did not seem to be linked with a tendency to revisit the same place, but rather encourages interest in wider exploration.

Sustainability is a very broad and complex topic. Especially in China, there are many fields worthy of further exploration. This special issue addressed only a few topics regarding urban and regional sustainability. I hope more research about Chinese sustainability can be explored in future studies, based on the body of research presented in this special issue.

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