

# URBAN INSIGHT

Vol.87, No.5, 2023

## ABSTRACTS

### GUANGDONG-HONG KONG-MACAO GREATER BAY AREA

On the Governance Mechanism of Cross-border Financial Data Flows in the Guangdong-Hong Kong-Macao Greater Bay Area 4

*LI Lisha, PENG Ziyang*

**Abstract:** In the process of promoting the digital Bay Area, the circulation of cross-border data elements has become a more and more frequent trend, among which the flow of financial data accounts for a considerable proportion and has a profound impact on economic development. Based on its advantages in finance, information, economy, and regional location, the Guangdong-Hong Kong-Macao Greater Bay Area can serve as a suitable test platform for cross-border data flow and provide reference for the reform of cross-border financial data management across China. Problems do exist, though, such as conflicts of rules for cross-border financial data flow, difficulties in coordinating and unifying financial data regulatory systems, and incomplete financial data sharing mechanisms. The paper constructs a three-dimensional cross-border financial data governance mechanism in the Greater Bay Area from the macro, medium and micro dimensions at multiple levels. It is suggested to optimize the top-level framework for managing cross-border financial data flows in the Greater Bay Area, and formulate an inclusive and orderly mechanism for rules abutment at the macro-level; to explore an innovative regulatory system for cross-border financial data flow and improve financial supervision and collaborations at the meso-level; and to establish a mechanism to link financial data sharing with a view to open channels for data sharing and the construction of the digital economy in the Greater Bay Area, so as to promote the integration of Hong Kong and Macao into the overall development of China.

**Keywords:** the Guangdong-Hong Kong-Macao Greater Bay Area; financial data; cross-border flows; data governance; data security

Research on the Development of Modern Finance in Macao in the Course of Moderate Economic Diversification 19

*ZHONG Yun, HU Huan*

**Abstract:** Modern finance is an important driving force to promote the moderately diversified development of Macao's economy and the construction of China-Portugal business cooperation service platform. Starting from the

analysis of policy texts, this study reviews the measures taken by the Macao SAR Government to promote modern finance and its achievements since Macao's return to China, focuses on the evolution characteristics of modern financial policies in Macao and the development trend of modern financial industry. It analyzes the relationship between modern financial industry and the trade between Macao and Portuguese-speaking countries, offering suggestions for the development of Macao's modern financial industry. It is found that the concerns of modern financial policies in Macao include renminbi business, wealth management and financial leasing. Relying on cross-border cooperation in the Guangdong-Hong Kong-Macao Greater Bay Area, Macao's modern financial industry has been developed in an orderly manner, and is currently focusing on the bond market. According to the quantitative results, there is a positive interaction between Macao's modern financial industry and the trade development between Macao and Portuguese-speaking countries, but its impact is still small and needs further strengthening.

**Keywords:** moderate economic diversification; modern finance; policy text analysis; trades between Macao and Portuguese-speaking countries; cross-border renminbi business

## CITY TALKS

Municipal Strategies on Intellectual Property Rights and Patent-Driven Innovation 31  
*WANG Zhitao*

Strong Market of Intellectual Property: From “Potential” to “Advantage” 33  
*CHENG Wenyin, PAN Xia, HU Angang*

**Abstract:** China's intellectual property has gone through an important leap from “mechanism” to “strategy” and is experiencing a great leap from “big” to “strong”. As an important starting point to become a power of intellectual property rights power (IPR), China further proposed its municipal IPR strategies. The rapid development of reform and opening up has formed a huge potential for IPR. However, this huge “potential” has not been well transformed into a strong “advantage”, and the gap between science and technology and industry are important factors hindering the transformation of potential. Starting from the concept path of “scientific knowledge - technical knowledge - technical product - industrialization - socialization”, this paper systematically analyzes the path and countermeasures of strengthening the market of intellectual property, including strengthening the construction of the whole innovation chain; transforming IPR into science and technology productivity, especially the policy coordination between science and technology departments and intellectual property offices; transforming scientific and technological productivity into social productivity, and truly realizing the mutual linkage between municipal IPR strategies and an IPR power.

**Keywords:** municipal strategies on intellectual property rights; full innovation chain; scientific and technological productivity; social productivity

## The Dilemma Between Innovation and Regional Industrial Development: Patent Pool as the Solution

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WANG Zhitao, YE Jian, XU Lu

**Abstract:** Innovation has long been faced with the dilemma of “high investment, low return”. As the main carrier of innovative technology, the economic values of intellectual property right have been seriously underestimated and were far from being fully utilized. The industrial economic development of various regions has fallen into a serious homogenization dilemma due to the consensus of “rebuild the city by industry”. In this context, this paper conducts an in-depth analysis of the reasons behind such dilemma, points out the crux of the problem from the perspective of industry management, and then proposes three countermeasures to solve the problem, that is, patent data transparency and standardization based on artificial intelligence and blockchain technology, reorganizing the industrial chain through patents, and establishing and operating industrial patent pool.

**Keywords:** innovation; patents; artificial intelligence; patent pool

## A Greater Bay Area Legal Service Solution for Patent Circulation Driven by Intelligent Valuation 51

YE Xiang

**Abstract:** Due to the characteristics of the Guangdong-Hong Kong-Macao Greater Bay Area, ranging over different legal jurisdictions and having different industrial features, the legal service scheme of cross-border patent circulation in the Greater Bay Area is complicated. In the era of artificial intelligence, under the background of the national intellectual property strategy being implemented, intelligent valuation as an innovation factor is the driving force to promote patents circulation in the Greater Bay Area. First of all, the scope of the Greater Bay Area legal service scheme for patent circulation combines the initial assessment based on intelligent valuation with the final assessment with deep manual intervention. Secondly, the quantification of patent value needs the macroscopic guidance of industry standards or guidelines. Furthermore, a set of multiple application scenarios is an alternative solution to patent portfolio valuation. Meanwhile, it is necessary to carry out three kinds of risk investigation, including core patent ownership risk, title risk in service invention and the integrity of patent property chain.

**Keywords:** patent valuation; legal services; attribute of right; cross-jurisdictional; cross-border circulation

## Transformation of Scientific and Technological Achievements: The Practice of Southern University of Science and Technology 55

ZHANG Yuan, WU Shouren

**Abstract:** High-quality development is inseparable from the support of high-level scientific and technological achievements. This paper starts with the digital interpretation of the achievements in the transformation of scientific and technological achievements in Southern University of Science and Technology, summarizes the main charac-

teristics of the transformation of scientific and technological achievements, and deeply analyzes the basis, guidance and practices of transformation of scientific and technological achievements, so as to provide references for colleges and universities to further smooth the transformation path of scientific and technological achievements and help promote high-quality economic and social development.

**Keywords:** Southern University of Science and Technology; transformation of scientific and technological achievements; high-quality development

## URBAN SPACE

Spatial Heterogeneity Analysis of Population Distribution Factors Based on Multi-source Big Data: A Case Study of the Central Urban Area of Nanjing 62

*YANG Shuo, SHI Fei*

**Abstract:** In this paper, mobile phone signaling, Internet big data, and other multi-source data are used to analyze the influencing factors of urban population spatial distribution and their mechanisms. Geographical detector and OLS are used to identify the leading influencing factors. It is found that employment position, distance, housing price and land use mixing degree have significant effects on the spatial distribution of population. Geographical weighted regression model is used to analyze the spatial heterogeneity of the effects of the four factors above on population distribution. Results show that the population distribution in the central urban area of Nanjing has obvious agglomeration, the spatial heterogeneity of the effect of different factors is strong, and the hierarchical clustering of the effect is spatially compatible with the functional groups of the city.

**Keywords:** population distribution; spatial heterogeneity; big data; Nanjing; neo-urbanization

The Division of Detailed Planning Units in Rural Areas and the Exploration of Planning Technology Paths in the Context of Territorial Spatial Planning: A Case Study of Wuxi 75

*SHEN Yang, SHEN Qi, SHAO Qifeng*

**Abstract:** As a typical representative of highly urbanized areas, the city of Wuxi has carried out a preliminary exploration of the detailed planning of rural areas (rural unit planning). From the technical aspects of planning management and control system construction as well as planning preparation, the connections between rural unit planning and territorial spatial planning, village planning and comprehensive land consolidation planning are expounded. By studying the status and role of rural unit planning, unit division, control focus and planning content framework, the paper establishes a hierarchical and systematic management and control system of “basic unit → management unit → countryside unit”, a territorial space planning and control system based on “function zoning and use index”, and detailed planning results for management implementation and classification, in order to promote the spatial management outside the boundaries of urban development, and to provide reference for the real-

ization of all-factor management and control.

**Keywords:** countryside area; detailed planning; rural unit planning; basic unit; administrative unit

## REGION & URBANIZATION

Suburbanization in China: The Power, Mode, and Problems of Urban Suburbanization Development

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*HU Xiaowu, FANG Jiarui*

**Abstract:** With the continuous acceleration of urbanization, the development of big cities in China has entered a new stage. In some of China's big cities, suburbanization has become an objective trend of spatial change. The process of suburbanization has reshaped the spatial pattern and economic geography of large cities, changed the production, lifestyle, and activity patterns of residents but also exposed cities to new problems. This paper explores the realization path of suburbanization of big cities from the perspective of theories related to suburbanization, and analyzes the current problems that arise in China's suburbanization process, then explores the possible trends of the future development of suburbanization of big cities.

**Keywords:** suburbanization of big cities; suburbs; urbanization

Research on the Measurement and Influencing Factors of Regional Coordinated Development From the Perspective of the Chinese Path to Modernization

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*CHA Tingjun*

**Abstract:** In the process of the Chinese path to modernization, regional coordinated development is not only an important part of high-quality development, but also an inevitable requirement for achieving common prosperity. This paper selects the Yangtze River Delta, Pearl River Delta and Beijing-Tianjin-Hebei city clusters to measure their degree of regional coordinated development since 2017. Results show that the level of regional coordinated development is relatively high in the Yangtze River Delta, Guangzhou and Shenzhen in the Pearl River Delta, and Beijing and Tianjin in the Beijing-Tianjin-Hebei region, but relatively low in other cities and regions. The degree of dispersion of regional coordinated development level has been increasing since 2017, and the difference between cities of the Beijing-Tianjin-Hebei regional coordinated development level was much higher than that of the Yangtze River Delta and Pearl River Delta. Further, through empirical analysis of the factors affecting regional coordinated development, it is found that the coordination degree of economic development is the most crucial factor, followed by the coordination degree of social development and of ecological environment.

**Keywords:** Chinese path to modernization; regional coordination; economic coordination; social coordination; ecological civilization

## URBAN CULTURE

Study on the Influence of Urban International Communication on International Students in China: An Empirical Analysis Based on 53 Cities 113

*FAN Ming*

**Abstract:** Improving the external communication effect of a city's image is one of the important factors attracting international students to China. This study examines the impact of urban international communication on the scale of international students from two aspects: urban spatial communication and urban media image. It is found that the scale of international students is highly unbalanced in Chinese cities, and the media image based on international public evaluation has the greatest impact on the scale of international students, while the government, enterprises and other communication subjects also have a positive impact on the scale of international students. Therefore, it is necessary to mobilize multiple subjects to enhance the effectiveness of international communication, help improve the scale and quality of international students, and provide clues for communication studies on promoting the education for international students in China.

**Keywords:** city; international communication; international students; city image; media

## URBAN GOVERNANCE

Emergency Response Capability of Urban Lifeline System: An Analytical Framework Based on Resilient City Theory 123

*HUANG Yong, SHE Lian*

**Abstract:** The urban lifeline system is a key infrastructure to maintain a city's operation and coordinate its development and safety, but it faces more and more challenges in response to the increasingly frequent urban emergencies. Existing studies mainly focus on the safety of the urban lifeline system and its role in maintaining city's daily functions, but rarely on its emergency function and resilience in urban public management. Based on the perspective of resilient city theory and starting from the attributes of urban lifeline system facilities, the spatial characteristics of the pipeline-and-network of the urban lifeline system and the development and urban security functions undertaken by the urban lifeline system are sorted out, and an emergency capability framework for the urban lifeline system that adapts to its functions is proposed, and further subdivided into five specific evaluation dimensions. Combined with practical observation and literature research, this paper analyzes the status-quo of the emergency capacity of the urban lifeline system, and on this basis, puts forward targeted optimization countermeasures for the emergency capacity of the urban lifeline system in order to provide reference for the improvement of urban infrastructure security and resilience.

**Keywords:** urban lifeline system; resilience; emergency response capacity; pipeline-and-network space; public safety