

Editorial

Exploring the Relationship between Urban Form, Mobility and Social Well-Being: Towards an Interdisciplinary Field of Sustainable Urban Planning and Transport Development

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1. Introduction

This Special Issue focuses on exploring the relationship between urban form, mobility, and social well-being across neighbourhoods, cities, and regions. Understanding more about these relationships is helpful in shaping integrated sustainable urban planning and transport development strategies.

There is a growing body of research examining changes in well-being in response to social and spatial interventions (e.g., inequality, social exclusion, the built environment, land use, and transport development) and behavioural changes (e.g., travel preferences). However, there is a lack of understanding of the different types of well-being (e.g., social, hedonic, eudaimonic, short-term/long-term, or individual/collective well-being, as well as the spatial nature of well-being) and the variations in their impact. Furthermore, limited attention has been paid to the standardised measurement of well-being in both quantitative and qualitative terms in the field of social sciences, particularly regarding social and eudaimonic well-being, since they are abstract concepts and thus difficult to assess accurately. Therefore, there is an urgent need to further explore the relationship between urban form, mobility, and social well-being, as well as to examine the ways in which different types of well-being can be measured by applying various advanced models and research approaches within the broad field of urban planning and transport.

2. Discussion of the Papers

The first paper, entitled ‘The impacts of transportation sustainability on higher education in China’, written by Daqing Zu, Kang Cao, and Jian Xu [Contribution 1], uses a panel analysis to examine how the impacts of transport sustainability can contribute to the existing literature on the development of higher education in China. Four dimensions, namely the political, environmental, social, and economic, are explored to assess the complex effects of transport sustainability. The authors argue that there is a significant spatial dependence and spatial clustering effect on county-level higher education attainment across different provinces, and demonstrate how sustainable transportation can be used to improve this.

The second paper, ‘Deciphering property development around high-speed railway stations through land value capture: Case studies of Shenzhen and Hong Kong’, by Weihang Gong, Victor Li, and Mee Kam Ng [Contribution 2], applies a holistic power approach (the rail-plus-property model) to analyse the railway financing strategies used in Shenzhen and Hong Kong, focusing on the relationship between railway transport investment and the value capture of proximate land. They show that there is a significant difference between



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the pivotal stakeholder role played by the Shenzhen transit company and that of the Hong Kong government regarding how railways are financed and how land values are captured in these two cities. The findings of this study primarily contribute to the existing literature on sustainable railway financing.

The third paper, by Xuesong Gao, Hui Wang, and Lun Liu [Contribution 3], entitled 'Profiling residents' mobility with grid-aggregated mobile phone data using Chengdu as a case study', takes Chengdu, the capital of China's southwest Sichuan Province, as a case study, and uses mobile phone data to investigate the transformation of individual data-based mobility metrics to fit with grid-aggregate data in order to contribute to the existing knowledge on human mobility, as well as developing algorithms to measure mobility metrics more accurately. They also argue that even without relying on privacy-sensitive individual-level data, grid-aggregate mobility data could be used to help profile people's mobility patterns.

The fourth paper, 'Engaging smallholders in the flower agribusiness for inclusive rural development: The case of Yunnan, China', written by Jieming Zhu, Chen Chen, and Lie You [Contribution 4], discusses the issues of equitable and inclusive rural development in relation to flower growing among smallholders, social well-being, and the scarcity of farmland. They find that smallholders play a significant role in proactively contributing to flower agriculture, which in turn facilitates rural economic development. It is argued that endogenous non-agricultural job opportunities can support rural development, increase farm size, and improve social well-being.

The fifth paper, written by Cong Liao and Teqi Dai [Contribution 5], is entitled 'Is attending a nearby school actually near? An analysis of travel-to-school distances of primary students in Beijing using smart card data' and examines the crucial issue of children's mobility and educational equity. They use smart card data collected from students to explore the relationship between the spatial characteristics of school children's commuting distances by public transport and the residence–school spatial patterns. It is found that the policy of assigning children of primary school age to schools near their place of residence does not in fact ensure that they have a shorter commuting distance to school. The findings could contribute to the existing literature on children commuting by public transport and on housing studies/house prices and their implications for the distance children must travel from home to school (geography of education and geo big data analytics). They also point out that travel distance and housing and school locations should be taken into account in educational policymaking from a social equity perspective.

The sixth paper, by He Zhu, Qianyun Ji, Ying Lin, Ting Wang, and Jingqing Lu [Contribution 6], is entitled 'Street usage characteristics, subjective perceptions and urban form in relation to the aging population group: A case study of Shanghai, China'. The authors highlight the trajectory of an aging society in China and examine the key determinants of older adults' needs, as well as exploring the relationship between urban street form and spatial perceptions, using Shanghai as a case study. They find that improving urban form can facilitate the renovation of street spaces in a way that meets the needs of the older population, contributing to the existing literature on the significance of a need hierarchy for aging people and the understanding of different street forms and spatial perceptions among older people.

The seventh paper, entitled 'An empirical analysis of the benefits of opening a highway in terms of changes in housing prices', written by Wonchul Kim and Sung Hyo Hong [Contribution 7], investigates the social benefits of opening a new highway (the Pyeongtaek-Jecheon highway route in Korea) on changes in housing prices in the surrounding areas, using a treatment group living in close proximity to the new highway and a control group with no new highway development nearby. A difference-in-difference framework is applied to examine the effects of the newly built highway. The average price is found to be between USD 586 and 3075 per flat (i.e., between USD 10 and 53 per square metre). The main contributions of this study involve complementing the existing literature on cost benefit analysis (CBA).

The eighth paper, 'Does high spatial density imply high population density? Spatial mechanism of population density distribution based on population-space imbalance', written by Dian Shao and Weiting Xiong [Contribution 8], analyses how population density is influenced by different urban spatial characteristics and the distribution characteristics of city blocks, using Changzhou as a case study. The authors formulate a population–space correlation algorithm and compare the association between vector spatial data and mobile phone data. The study shows that an unbalanced density distribution depends on the spatial characteristics of an area and the critical value of spatial density. This research contributes to the development of the existing algorithm employed to quantitatively measure population density using big data, and its findings could also be used to suggest policy interventions designed to balance population density and urban public resources.

The ninth paper, by Dongho Han and Ji Hyun Kim [Contribution 9], entitled 'Multiple smart cities: The case of the Eco Delta City in South Korea', investigates the notion of smart cities and sustainable urban planning with specific reference to a new waterfront development in South Korea, using diverse archival sources and interviews. They find that, rather than the traditional government top-down policy, smart city mobilisation has in fact emerged from complex bottom-up local relationships between actors. In addition, the study finds that policy mobilisation can be managed and evaluated via the assemblage approach. It contributes to the existing research on smart cities and sustainable urban regeneration.

The tenth paper, 'The effect of hukou accessibility on migrants' long term settlement intentions in regard to destination', written by Peilin Li, Yufeng Wu, and Hui Ouyang [Contribution 10], uses a nation-wide large-scale survey carried out in 46 Chinese cities to analyse social equity issues relating to 'hukou' and migrants' long-term settlement patterns. This study contributes to Lee's 1966 theory of migration. It shows that hukou is still a barrier to people's mobility and movement across different cities in China, although there is also a non-linear trajectory regarding its adverse impacts on migrant workers' intentions to live in particular areas. In addition, it suggests that urban planners and policymakers should pay more attention to migrant cohorts when it comes to future strategic urban development, particularly in terms of welfare, medical, and educational distribution.

The eleventh paper, by Jiankun Yang, Min He, and Mingwei He [Contribution 11], entitled 'Exploring group differences in the nonlinear relationship between commuting satisfaction and commuting time', takes Kunming as a case study and analyses the non-linear association between commuting time and commuting satisfaction by applying a random forest approach. Using a k-means clustering algorithm, the authors identify three different commuting group: short-, medium-, and long-duration-tolerant groups. In addition, factors such as educational attainment, income, job–housing distance, and commuting modes are all shown to have significant impacts on the aforementioned cluster groups. Consequently, they argue in favour of using different planning strategies to address different commuting groups' needs to improve their commuting satisfaction and subjective well-being.

The twelfth paper, by Gang Li, Ruining Zhang, Shujuan Guo, and Junyi Zhang [Contribution 12], entitled 'Analysis of ride-hailing passenger satisfaction and life satisfaction based on a MIMIC model', uses a multiple-indicators multiple-causes (MIMIC) model to explore the impact of various factors on passenger satisfaction with ride hailing in Dalian, China. Some positive impacts are identified, notably relating to service operation and perceptions of safety and service quality. The findings also show that passenger satisfaction has different effects on people's overall level of well-being due to the heterogeneity in individual socio-economic characteristics. The study also contributes to research on the interactive relationship between passenger and life satisfaction in relation to ride hailing for a daily trip.

The thirteenth paper, by Maciej Kruszyna [Contribution 13], entitled ‘NOAH as an innovative tool for modelling the use of suburban railways’, uses a novel approach, the Nest of Apes Heuristic (NOAH), to model a suburban railway system by combining the technical aspects of transport systems with human decision making using Wroclaw, Poland, as a case study. It is argued that the proposed NOAH method can be used to observe different sets of data and the interactions between them without requiring precise knowledge on the influence of a specific factor on the outcomes. This method is also able to take dynamic changes of leadership into account and can thus be used to measure the effects of human decision making in a transport context.

The final paper, ‘Users’ preferences in selecting transportation modes for leisure trips in the digital era: Evidence from Bandung, Indonesia’, written by Tri Basuki Joewono, Mohamed Yusuf Faridian Wirayat, Prawira Fajarindra Belgiawan, I Gusti Ayu Andani, and Clint Gunawijaya [Contribution 14], focuses on the key determinants of leisure trips among people who live in cities in the Bandung area. Applying a multinomial logit model, the authors find that residents are more likely to choose buses and trains for leisure travel rather than private vehicles. Furthermore, the findings show that travel cost and time are the most significant factors influencing people’s choice of travel mode. They also demonstrate how online mobile apps could be used as a payment method for leisure travel in the current digital era.

3. Conclusions

Overall, this Special Issue contributes to the existing literature on the interdisciplinary field of the impact of urban planning and transport on social well-being, and facilitates novel ways of measuring the abstract concept of well-being, particularly in Asian and European countries. Further research could explore these themes in greater depth by means of both theoretical frameworks and methodological developments in this integrated field.

List of Contributions

1. Zu, D.; Cao, K.; Xu, J. The Impacts of Transportation Sustainability on Higher Education in China.
2. Gong, W.; Li, J.; Ng, M.K. Deciphering Property Development around High-Speed Railway Stations through Land Value Capture: Case Studies in Shenzhen and Hong Kong.
3. Gao, X.; Wang, H.; Liu, L. Profiling Residents’ Mobility with Grid-Aggregated Mobile Phone Trace Data Using Chengdu as the Case.
4. Zhu, J.; Chen, C.; You, L. Engaging Smallholders in Flower Agribusiness for Inclusive Rural Development: The Case of Yunnan, China.
5. Liao, C.; Dai, T. Is “Attending Nearby School” Near? An Analysis of Travel-to-School Distances of Primary Students in Beijing Using Smart Card Data.
6. Zhu, H.; Ji, Q.; Lin, Y.; Wang, T.; Lu, J. Street Usage Characteristics, Subjective Perception and Urban Form of Aging Group: A Case Study of Shanghai, China.
7. Kim, W.; Hong, S.H. An Empirical Analysis of the Benefits of Opening a Highway in Terms of Changes in Housing Prices.
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9. Han, D.; Kim, J.H. Multiple Smart Cities: The Case of the Eco Delta City in South Korea.
10. Li, P.; Wu, Y.; Ouyang, H. Effect of *hukou* Accessibility on Migrants’ Long Term Settlement Intention in Destination.
11. Yang, J.; He, M.; He, M. Exploring the Group Difference in the Nonlinear Relationship between Commuting Satisfaction and Commuting Time.
12. Li, G.; Zhang, R.; Guo, S.; Zhang, J. Analysis of Ride-Hailing Passenger Satisfaction and Life Satisfaction Based on a MIMIC Model.

13. Kruszyna, M. NOAH as an Innovative Tool for Modeling the Use of Suburban Railways.
14. Joewono, T.B.; Wirayat, M.Y.F.; Belgiawan, P.F.; Andani, I.G.A.; Gunawijaya, C. Users' Preferences in Selecting Transportation Modes for Leisure Trips in the Digital Era: Evidence from Bandung, Indonesia.

Conflicts of Interest: The authors declare no conflict of interest.

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