

UDC 332.01

Hongyue Wang

PhD Student of the Economics and Management Department

Sumy National Agrarian University,

Henan Institute of Science and Technology

ORCID: 0000-0002-4000-7819

Koblianska Inna

PhD, Associate Professor of the Economics and Entrepreneurship Department

named after prof. I. M. Briukhovetsky

Sumy National Agrarian University

ORCID: 0000-0002-7844-9786

**ELABORATING STRATEGIES FOR SUSTAINABLE DEVELOPMENT
IN CHINA REGIONS: KEY PRINCIPLES
РОЗРОБКА СТРАТЕГІЙ СТАЛОГО РОЗВИТКУ ДЛЯ РЕГІОНІВ
КИТАЮ: ОСНОВНІ ПРИНЦИПИ**

***Summary.** As a form of regional spatial organisation, regional territorial communities have become the basic regional unit for a country to participate in global competition and international division of labour. Their development has a profound impact on the competitiveness of a country and is of great significance to the sustainable and stable development of the national economy. Cities constitute a significant part of China's regional territorial communities. With the rapid growth of urbanisation in China, a series of problems, such as resource shortage, environmental pollution, and ecological destruction, have become highly concentrated and intensified, threatening regional sustainable development and national security. The fundamental reason that restricts the*

realisation of the ultimate goal of sustainable development of regional territorial communities is the lack of holistic, systematic and sustainable methods and policies. Therefore, this study aims to put forward key principles for regional territorial communities' strategic planning in China by analysing the main elements of the sustainable development concept. Strengthening scientific and technological publicity, creating a favourable environment conducive to scientific and technological progress and independent innovation, and facilitating the training and introduction of talents are suggested to improve sustainable development's science and technology element. Concerning the economic subsystem, the main efforts should be made to change the extensive economic growth mode, develop the tertiary industry, and adjust the industrial system in backward areas. When making strategic decisions concerning social issues, it is advisable to focus on factors affecting the community's social sustainability (infrastructure, access to public facilities, equality and fairness) and make proper planning and guidance. For the environmental dimension of regional sustainable development, the most critical issues to be solved are the efficient use of land resources and the strengthening of the environmental governance role and functions.

Key words: *region, territorial community, sustainable development, strategy, planning.*

Анотація. *Як форма регіональної просторової організації, регіональні територіальні громади в Китаї стали основною одиницею країни для участі в глобальній конкуренції та міжнародному поділі праці. Їх розвиток значно впливає на конкурентоспроможність країни та має велике значення для сталого та стабільного розвитку національної економіки. Міста становлять значну частину регіональних територіальних громад Китаю. Зі швидким зростанням урбанізації, в Китаї посилюється ряд проблем, таких як дефіцит ресурсів, забруднення*

навколишнього середовища та екологічне руйнування. Це загрожує стабільному регіональному розвитку та національній безпеці. Фундаментальною причиною, яка стримує реалізацію кінцевої мети сталого розвитку територіальних громад регіонів, є відсутність цілісних, системних і сталих методів і політики в регіонах. Дане дослідження має на меті сформулювати основні принципи стратегічного планування регіональних територіальних громад у Китаї через аналіз основних елементів концепції сталого розвитку. Для покращення науково-технологічної складової сталого розвитку пропонується акцентувати увагу на зміцненні наукової та технологічної публічності, створенні сприятливого середовища для науково-технічного прогресу та незалежних інновацій, а також сприятливі умови навчання та впровадженню талантів. Відносно економічної підсистеми, основні зусилля мають бути спрямовані на зміну режиму екстенсивного економічного зростання, розвиток третинної промисловості та налагодження промислової системи у відсталих районах. Приймаючи стратегічні рішення щодо соціальних питань, доцільно зосередитися на факторах, що впливають на соціальну стабільність громади (інфраструктура, доступ до громадських об'єктів, рівність і справедливість), а також здійснити належне планування та керівництво. З точки зору екологічних аспектів регіонального сталого розвитку, найважливішими питаннями, які необхідно вирішити, є ефективне використання земельних ресурсів та посилення ролі та функцій екологічного управління.

Ключові слова: *регіон, територіальна громада, сталий розвиток, стратегія, планування.*

Statement of the problem. The concept of regional territorial communities is generally defined as an "organic complex" of multiple cities, which is composed of a considerable number of different nature, types, and grade

scales in a specific geographical area, relying on certain natural environmental conditions, taking one or two mega-cities or large cities as the regional core, with the help of the accessibility of comprehensive transportation network, to promote the interconnection between urban individuals [1, p. 130]. Currently, there are 142 cities with a population of more than one million in China, while there were only 29 cities in 1978. In addition, there are 25 cities in the world with a population of more than 10 million, six of which are located in China. China also has ten densely populated cities, between 5 million and 10 million [2, p. 120]. According to the United Nations forecast, more than two-thirds of China's population will live in cities by 2025 [3, p. 60], and China's urbanisation process will be further promoted. Then, the city's sustainable development has gradually become a new challenge in regional sustainability promotion. The deep-seated contradictions of environment, economy, society, and science and technology in Chinese cities and regional territorial communities will further emerge.

Analysis of recent researches and publications. Scholars have conducted in-depth studies on the scale and characteristics of cities as part of the regional system. Gottman put forward the features of a metropolitan belt – a combination of natural, social, economic, political, and cultural factors organically linked through the division and cooperation of labour – formed by several mature and distinctive metropolitan areas [4, p. 189]. Chinese scholars focus on the pattern of regional territorial community development. For example, some researchers put forward four land use patterns to analyse the overall design of sustainable development of the Pearl River Delta urban agglomeration [5, p. 32]. Other scholars also divided regional territorial communities into four development types according to the coordinated development degree model [6, p. 105]. Other scholars divided urban agglomeration within the regional system according to different methods: Harris set the city scale according to the sales index [7, p. 315], Brülhart measured the city scale according to the regional GDP [8, p. 227], and Ottaviano directly segmented the urban space by Voronoi diagram [9, p. 636]. In

addition, Holden puts forward four modes of urban development: urban sprawl, green city, compact city, and decentralised type, and suggests that the decentralised type is more conducive to the sustainable development of cities and regions [10, p. 2145]. At present, the central gap and dilemma concerning the sustainable regional territorial communities development in China can be condensed into the following issues: unsustainable society and the environment caused by population problems, ecological environment pollution, and resource depletion; extensive economic growth and short incubation of technological innovation resulting in unsustainable economy and technology; unsustainable levels of the urban environment, economy, society and science and technology.

Formulation purposes of the article (problem). To sum up, the fundamental reason that restricts the realisation of the ultimate goal of sustainable development of regional territorial communities is the lack of holistic, systematic and sustainable methods and policies. Therefore, this study aims to put forward critical principles for regional territorial communities' strategic planning in China by analysing the main elements of sustainable development connotation.

The main material. This study takes the whole system as the observation point and starts from the multi-dimensional framework of the sustainable development concept. The specific manifestations of regional territorial communities' sustainable development arise within four dimensions: sustainable ecological environment, sustainable economic development, sustainable social well-being, and sustainable scientific and technological innovation (Fig. 1). These elements are interrelated and interact with each other; there is a cross-cutting structure and order among them. Society is the fundamental element of this system because of the primary motive force for sustainable development – human well-being [4, p. 60]. Human well-being is not only the essential motive force for realising regional territorial communities' sustainable development but also the most direct beneficiary of the results. The human being is also the action subject and beneficiary object of maintaining social stability, promoting economic

development, advancing scientific and technological innovation, and protecting the ecological environment. Economic development is the core element of regional territorial communities' sustainable development system. Economic development is not only the fundamental driving force to meet the material and spiritual needs of humans in society but also the basis for supporting the construction and protection of the ecological environment and the primary prerequisite for promoting scientific and technological innovation [5, p. 71]. In addition to social and economic factors, technological and environmental factors constitute the core elements of regional territorial communities' sustainable development system. These elements complement each other and are inseparable.

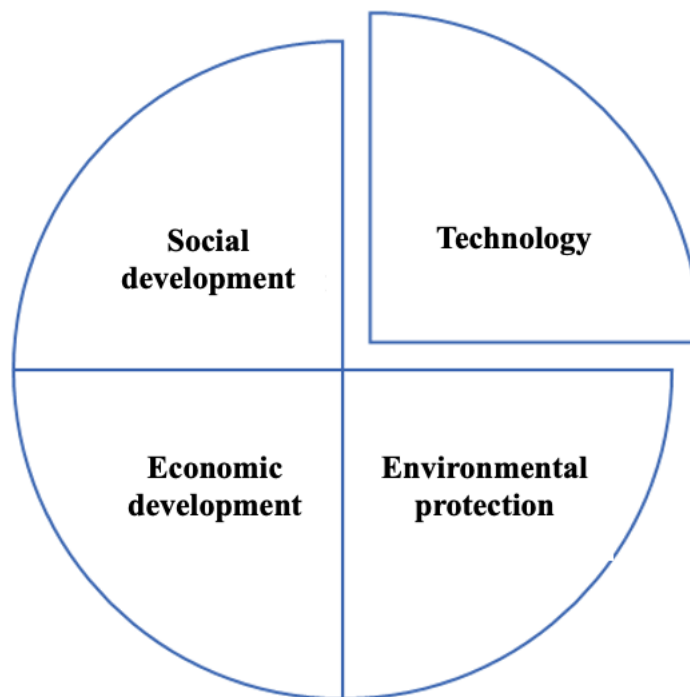


Fig. 1. The four-dimensional paradigm of regional territorial communities' sustainable development

Source: Wang Hongyue development

The scientific connotation of regional territorial communities' sustainable development refers to the collaborative and lasting development of urban economy, social environment, and science and technology. In other words, on a certain spatial and temporal scale, moderate population, high-quality labour force,

high-quality economic growth, advanced industrial structure, comprehensive economic benefits, environmental quality without pollution or even less pollution, sustainable utilisation of resources, and reasonable consumption to achieve the agglomeration benefits of urban development, promote the sustainable development of the regional territorial communities.

When making decisions on strategies promoting sustainable development of regional territorial communities, there is the need to consider different functions of each element, i.e. environment, economy, society, and science and technology. A brief review of these functions – guiding the main strategic objectives – is given below.

Scientific and technological innovation is an important yardstick to measure a region's strength and innovation ability, the cornerstone of urban economic development, the guarantee of industrial competitiveness improvement, the driving force of socially sustainable development, and the critical factor in determining the status of a region's participation in the international industrial division under the condition of globalisation [6, p. 80]. The scientific and technological innovation subsystem should emphasise the following two aspects: 1) strengthen scientific and technological publicity and vigorously create a favourable environment conducive to scientific and technological progress and independent innovation; 2) facilitate the training and introduction of talents. To support the first issue, there is a need to implement laws and regulations to popularise science in society. Establishing a sound mechanism of science popularisation led by the government and widely participated by the community could encourage and support social forces to set up science promotion undertakings. One should emphasise creating a suitable environment for scientific and technological innovation, stimulating creativity, innovative entrepreneurship, and a proper cultural and social atmosphere. The scientific spirit will be further carried forward, spreading scientific ideas, advocating scientific methods, and popularising scientific knowledge. Concerning talent promotion, creating a multi-

level training system with reasonable structure and good quality in line with China's economic and social development is of primary importance. This system could rely on the combination of government guidance and market promotion, a flexible structure conducive to the flow of talent, and an improved competition mechanism for developing various talents.

Economic development provides a necessary material basis for regional territorial communities' sustainability, as macroeconomic growth is closely related to sustainable development goals [7, p. 870]. However, there is a need to accelerate the transformation of the economic structure sustainably: to change the extensive mode of economic growth, develop the tertiary industry, and adjust the industrial system in backward areas. The transformation of traditional industries with advanced technologies in high-gradient areas facilitates the increase of resource efficiency. On the other hand, there is a need to eliminate backward production capacity, optimise energy production and consumption, and promote current services. All this drives the optimisation of industrial layout.

The ultimate purpose of sustainable development is to improve human well-being and society's development [8, p. 101]. When formulating sustainable development strategies, decision-makers should focus on factors affecting the community's sustainability and make proper planning and guidance. In this context, developing infrastructure and public facilities effectively achieves the community's development targets. Adequate infrastructure is an essential prerequisite for economic and social development. To ensure the smooth and timely construction of regional infrastructure, it is necessary to add special procedures for planning infrastructure and public facilities (for medical, general security, community services, sports, education, culture, and other public services) when formulating a regional sustainable development strategy [9]. Efforts should be made to promote comfortable people's livelihoods and drive the sustainable development of the regional community. Guaranteeing social equity and reducing the gap between rich and poor is another critical issue in enhancing

social sustainability. Regional strategic planning should serve the interests of the whole society, including vulnerable groups. This will safeguard the common interests of the vast majority of community members, neither the simple superposition of individual interests nor the interests of specific and partial groups. This could be achieved through the holistic and complex approach when making decisions on the community's strategic development.

Environmental quality is significant to regional territorial communities' sustainable development [10, p. 33]. Optimisation and improvement of the ecological subsystem can be achieved via the rational use and protection of natural resources. In this regard, the most critical issues to be solved are the efficient use of land resources as a spatial basis for regional development and the strengthening the environmental governance role and functions. To guarantee efficient land use, decision-makers should consider utilising limited land resources when planning regional development. This will help to solve problems such as construction land shortage, traffic congestion, and environmental degradation. Strengthening environmental governance means combining end-point authority with source governance, coordinating industrial and environmental relationships in time and space, and improving the capacity and efficiency of environmental planning.

Insights from this study and perspectives for further research in this direction. Based on the scientific connotation of sustainable development of regional territorial communities, this study puts forward relevant suggestions on strategic planning for China's regions from four aspects: economy, society, environment, science and technology. The Chinese government should make more efforts to promote innovations and talent growth; rationally plan regional agglomerations' spatial structure and layout; support social stability, inclusion and fairness; strengthen the environmental governance role and functions. The concrete steps and procedures guaranteeing the inclusion of these issues into the strategic planning process in China could constitute the area for further research in this field.

References

1. Fang, C., & Yu, D. (2017). Urban agglomeration: An evolving concept of an emerging phenomenon. *Landscape and urban planning*, 162, 126-136. doi: <https://doi.org/10.1016/j.landurbplan.2017.02.014>
2. He, Q., Zeng, C., Xie, P., Tan, S., & Wu, J. (2019). Comparison of urban growth patterns and changes between three urban agglomerations in China and three metropolises in the USA from 1995 to 2015. *Sustainable Cities and Society*, 50, 101-124. doi: <https://doi.org/10.1016/j.scs.2019.101649>
3. He, Y., Zhou, G., Tang, C., Fan, S., & Guo, X. (2019). The spatial organisation pattern of urban-rural integration in urban agglomerations in China: An agglomeration-diffusion analysis of the population and firms. *Habitat International*, 87, 54-65. doi: <https://doi.org/10.1016/j.habitatint.2019.04.003>
4. Simon, D., Arfvidsson, H., Anand, G., Bazaz, A., Fenna, G., Foster, K., ... & Wright, C. (2022). Developing and testing the Urban Sustainable Development Goal's targets and indicators—a five-city study. *Environment and Urbanization*, 28(1), 49-63. doi: <https://doi.org/10.1016/j.scitotenv.2022.147481>
5. Yan, Y., Wang, C., Quan, Y., Wu, G., & Zhao, J. (2020). Urban sustainable development efficiency towards the balance between nature and human well-being: Connotation, measurement, and assessment. *Journal of Cleaner Production*, 178, 67-75. doi: <https://doi.org/10.1016/j.jclepro.2020.01.013>
6. Ding, L., Shao, Z., Zhang, H., Xu, C., & Wu, D. (2016). A comprehensive evaluation of urban sustainable development in China based on the TOPSIS-entropy method. *Sustainability*, 8(8), 74-86. doi: <https://doi.org/10.3390/su8080746>
7. Yang, B., Xu, T., & Shi, L. (2021). Analysis on sustainable urban development levels and trends in China's cities. *Journal of Cleaner*

Production, 141, 868-880. doi:
<https://doi.org/10.1016/j.jclepro.2021.09.121>

8. Wang, X., Shi, R., & Zhou, Y. (2020). Dynamics of urban sprawl and sustainable development in China. *Socio-Economic Planning Sciences*, 70, 100-111. doi: <https://doi.org/10.2020/j.seps.2019.100736>
9. Hongyue W., & Koblianska I. (2021). Restructuring theoretical framework of urban sustainability from the health dimension. *Economy and Society*, 31. doi: <https://doi.org/10.32782/2524-0072/2021-31-13>
10. Mordvinov, O., Kravchenko, T., Vahonova, O., Bolduiev, M., Romaniuk, N., & Akimov, O. O. (2021). Innovative tools for public management of the development of territorial communities. *Ad Alta: Journal of interdisciplinary research*, 1(11), 33-37. URL: <http://ep3.nuwm.edu.ua/id/eprint/20399>