

Research on Regional Economic Development and Public Policy Integration of Smart City Construction in the Digital Economy Era

Chang Wang*, Weiyu Zhang

School of Finance and Public Administration, Shanghai Lixin University of Accounting and Finance,
Shanghai, 201620, China

wangchangsnow@163.com, zwy693987@163.com

Keywords: Digital economy era; Smart city construction; Regional economic development; Public policy integration

Abstract: In the era of the digital economy, smart city construction has become crucial to promoting regional economic development. With "mass entrepreneurship and innovation" as the core, this paper explores the innovation and transformation of digital technology and smart cities and the collaborative creation of regional economy and public policy. However, the regional economy faces many challenges in digitization, including the digital divide, predicament, and domination. This paper proposes strategies to address these challenges, including using two-way coordination to eliminate the digital divide, optimizing the multiple sharing of public policy governance, correcting digital dominance, and promoting the coordinated development of the smart city industry. Through these efforts, the regional economic balance is expected to be restored, and sustainable development of the economy in the digital economy era will be achieved. In conclusion, this paper makes an in-depth analysis of the regional economic development and public policy integration in the construction of smart cities in the era of the digital economy and puts forward feasible countermeasures and suggestions.

1. Introduction

The rise of the digital economy era has made smart city construction a core element in promoting regional economic development. This paper focuses on the new changes in the regional economy. It reveals the critical mechanisms in the time's transformation through an in-depth discussion of the innovation of digital technology and smart city, as well as collaborative innovation with regional economy and public policies. However, the digitization process has also brought challenges, including the digital divide, the operational obstacles of smart cities, and the potential threat of digital dominance to regional economic development. This paper proposes strategies to address these challenges, including using two-way coordination to eliminate the digital divide, optimizing the multiple sharing of public policy governance, correcting digital dominance, and promoting the coordinated development of the smart city industry. It helps the regional economy to achieve a balance.

In the era of digital economy, we need to pay more attention to the problems and challenges in developing the digital economy to meet the growing demand for high-quality development. Based on the dynamic evolution of the development of the digital economy, this paper makes a theoretical analysis. We proposed countermeasures for the digital divide, the digital technology dilemma, and digital dominance. We attach importance to two-way coordination, multiple sharing, and digital dominance. This paper provides a practical solution for regional economic development and public policy integration in constructing smart cities in the digital economy era. In exploring high-quality development paths, we aim to promote the benign interaction between smart cities and regional economies through the strategies proposed in this paper and realize sustainable economic development.

2. Achieve Mass Entrepreneurship and Innovation with New Changes in the Regional Economy: Digital Technology and Smart City

2.1 Innovative Digital Technology

"Mass entrepreneurship and innovation" is a concept developed with the regional economy. It reflects the idea of innovation and entrepreneurship, highlights the dual orientation of the regional economy in the new era, and reflects the innovative strategies of digital technology and smart city construction. However, when we use some fixed standards to construct the essence of "mass entrepreneurship and innovation", it is still challenging to get a consensus.

Innovation and change in the field of digital technology show multi-level connotations. The innovation fields of digital technology content include but are not limited to artificial intelligence, big data analysis, and the Internet of Things. These technologies continue to evolve, giving birth to new business models and service methods and promoting the upgrading of the regional economy. Building a smart city has become essential to achieve "mass entrepreneurship and innovation initiative"[1]. The application of digital technology in urban management, transportation, and environmental monitoring has made urban operations more efficient and intelligent.

In this context, this paper will deeply explore the core content of digital technology in innovation and transformation and how digital technology can be integrated with smart cities to promote the formation of a new development model for regional economies.

3. Regional Economic Challenges and the Digital Divide in Smart Cities

3.1 Imbalance of Regional Economic System Creates Digital Divide

The digital divide is an essential criterion for measuring regional economic differences and explicitly expressing the degree of digitization in different regions. Scholars discussed the digital divide in the field, including perspectives on society, the economy, and technology. Some people believe that the digital divide is due to differences in the degree of digitization in the region. In contrast, others define it as unequal access to and use of information. In addition, some scholars believe that the digital divide is due to the popularity and application of digital technology in different regions or digital inequality. Because the digital divide reflects the imbalance of regional development to some extent, it belongs to the science with the purpose of digitization [2].

The history of the digital divide can even be traced back to the early days of the digital age. The main activities include the promotion and application of digital technology. Furthermore, the concept of the digital divide and smart city construction is closely related to the digitization of the regional economy. By measuring the digital divide, smart city construction has become an important responsibility of the regional economy [3]. The main contribution of the digital divide theory in the digital age is to evaluate the degree of regional development imbalance in the background of digital development. Therefore, the digital divide concept initially focused on the measurement standard of regional development based on the attributes of digital standards.

3.2 The Dilemma of Regional Economic Operation

Unlike the traditional model, the digital dilemma emphasizes the relationship between digital technology and smart cities in regional economic operations and has a high degree of intelligence. Although some scholars question that it may not be directly related to the process of regional economization, most scholars advocate that it can rationally evaluate the regional economy. The classical model that includes various elements has been proposed. Since then, the model has become a typical tool for the intelligent operation of the regional economy, thus developing the concept of digital dilemma. Scholars advocate that the digital dilemma is highly intelligent and representative of the digital economy era [4]. As digital technology and smart cities integrate, digital dilemmas will occur. To sum up, the digital dilemma is the result of regional economic operations in the era of the digital economy. The current situation of regional economic development in the construction of smart cities is shown in Figure 1.

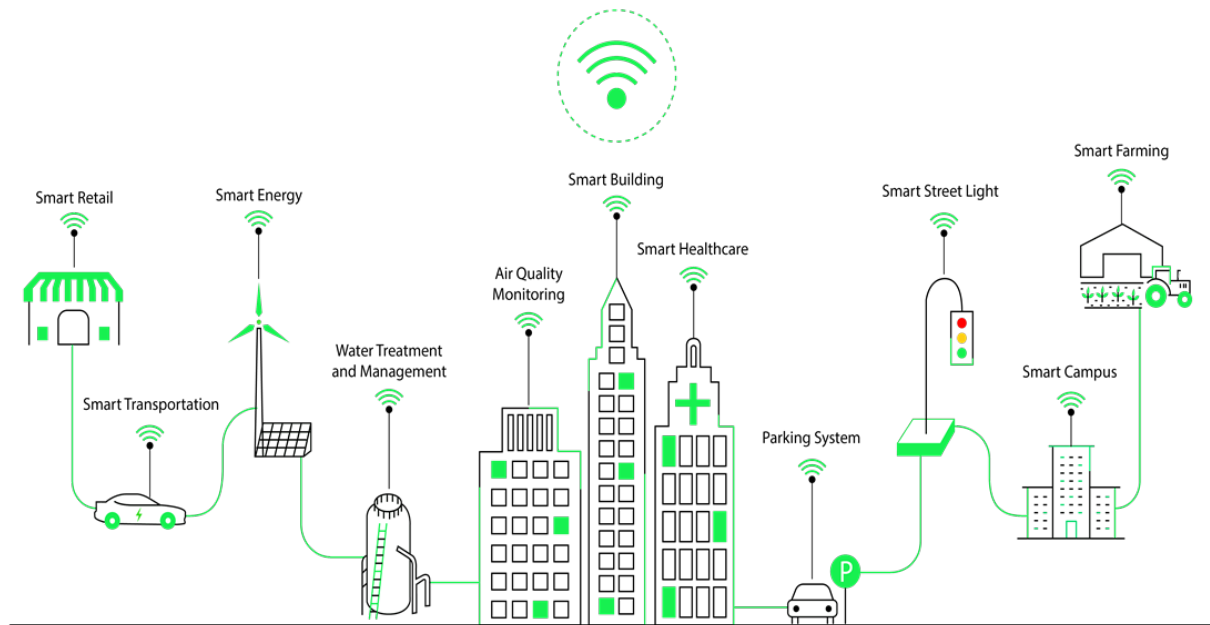


Figure 1 The current situation of regional economic development in the construction of smart city

In addition, some scholars have summarized the digital dilemma into two models: the economic model based on digital technology and the operation model based on smart cities. The former focuses on the application of digital technology, and the latter focuses on the all-round operation of a smart city. Although scientists have experienced some practical failures, they can comprehensively improve the efficiency of regional economic processes in the digital economy era. As a result, the digital dilemma has gradually become a part of the research and practice of regional economic development.

3.3 Risks to Regional Economic Development: Digital Dominance

Digital dominance focuses on the problems digital technology may cause in regional economic development. It is the application of digital thinking in regional financial operations. To overcome the difficulties of digitization, it has entered the research field as a new model: a digital dominance framework. The basic ideas of the framework are as follows: First, with the help of digital dominance, we should ensure the long-term development of digital technology in the regional economy. Second, set professional standards for regional output. Third, the use of digital technology to capture the potential risks of the regional economy. Fourth, measure the development of the regional economy. The digital dominance framework reconstructs the development mode of the regional economy, focusing on technology transparency and improving the sustainability, resilience, innovativeness, and inclusiveness of the digital regional economy. This way, we can more comprehensively understand and reduce the risks in regional economic development in the digital era and promote the regional economy to move forward more steadily.

4. The Coping Strategies in the Coordinated Industrial Development of Smart City

4.1 Eliminating the Challenge of Digital Divide with Two-way Coordination

In the smart city industry collaborative development process, two-way coordination is one of the strategies to address the digital divide, highlighting the needs of the digital age. It directly reflects the relationship between urban development and digital technology applications. Local governments pay much more attention to the operation and long-term outcome of smart cities and actively explore and establish a city-level smart operation service system that matches technical support and system construction. The operational model is essential for the sustainable development of smart cities because the effectiveness of smart city construction depends on the operational efficiency of the

project. Some elements of smart city development are gradually forming, and digital technology and various evaluation systems have received attention [5]. However, in the application, some smart city practices remain at the primary level, contrary to the logical framework and generation mechanism. It gives rise to problems related to the digital divide.

The implementation of a two-way coordination strategy means not only to promote the broad application of digital technology in cities but also to ensure that urban development and digital development promote each other. Implementing two-way coordination strategies in urban planning, social governance, and infrastructure construction can narrow the digital divide and promote the industry's overall development. Therefore, this paper will comprehensively discuss the implementation process and strategy of two-way coordination to eliminate the challenges brought by the digital divide in the construction of smart cities and realize the shared prosperity of cities and digital technology.

4.2 Optimize Public Policy Governance

From the perspective of optimizing public policy governance, multiple sharing is the basis of public policy and the core embodiment of the coordinated development of the smart city industry. Therefore, multiple sharing takes joint participation as the main generating logic. Public policy is the primary tool to mobilize all parties to participate, and it is also the main body of governance for coordinated development. At this stage, multiple sharing strengthens the effect of public policies from the governance perspective, and there are three primary forms to implement [6]. The first is to emphasize the collaboration among the government, enterprises, and society. The second is to regulate the formulation process of public policy. Managers formulate policies, evaluate standards, and disclose them to the public to achieve standardized control of public policies. The third is to optimize the internal process of public policy. In recent years, the government has used digital means to perfect the formulation, implementation, and evaluation of public policies, improving their effectiveness. However, in the current situation, the multiple sharing of public policy needs to be further enhanced. This paper will intensely discuss the strategy and implementation to optimize public policy governance and achieve a virtuous circle in the coordinated development of the smart city industry.

4.3 Using Digital Dominance to Restore the Balance of Regional Economy

The fundamental difference between digital dominance and regional economy lies in its attributes. The governance standards and guidelines of digital dominance are based on digitization, and the development of digital dominance is reflected in the application of digital technology and smart cities [7]. In the governance framework, measuring, regulating, standardizing, and utilizing digital technology are the core values and the highest criteria for developing digital dominance. At present, the diversity and the differences in digital technology cause the complex situation of digital dominance. Digital technology constantly innovates, and upgrades, but an effective governance mechanism is needed for digital dominance. Therefore, some shortcomings hinder the overall progress of regional economic digitization. This paper comprehensively analyzes the practices of digital dominance. It proposes strategies to modify digital dominance and restore regional financial balance to better maintain regional economic balance in the digital economy era.

Users believe that digital dominance cannot accurately provide the services they need. Satisfaction evaluation mainly reflects the usage, but digital dominance lacks the user's relevant information and feedback mechanism. The root cause of this problem may be the low user participation. In digital dominance, users are usually described as "governed objects", and their satisfaction with service quality directly reflects personal feelings. However, there needs to be more user feedback on the information reflected by the user experience. Usually, user requirements are difficult to obtain or measure. Information asymmetry and the drawbacks of digital dominance directly lead to low user engagement. Therefore, digital dominance faces a series of challenges in serving users. It is necessary to increase user engagement and optimize information feedback mechanisms to improve the effectiveness of digital dominance. To sum up, this paper profoundly studies user engagement and proposes solutions to build a more user-friendly and interactive digital dominance system.

5. Conclusion

Digital dominance has profoundly affected the regional economy and smart city construction, which poses new challenges and requirements for the governors. Digital dominance is one of the symbols of the digital age. It is an essential means of governance. It is also an urgent need to realize the application of digital technology and maintain social control. In essence, it reflects the inherent requirements of management. Due to the progress of digital technology, people construct the theoretical analysis framework and practical mechanism of digital economy and smart city. In recent years, modern information technologies such as digital technology have promoted the development of projects, improving the accuracy of online governance. The research value conforms to the internal logic of the government. Therefore, the research based on digital dominance also provides a new management method. In summary, the sustainable development of digital dominance will help to better cope with the challenges of the digital economy era and contribute to the scientific, accurate, and sustainable development of smart city construction.

References

- [1] Xie H. Analysis on the Technology Business Incubator and Accelerator Industry in China[D]. Politecnico di Torino, 2023.
- [2] Billon M, Lera-Lopez F, Marco R. Differences in digitalization levels: a multivariate analysis studying the global digital divide[J]. Review of World Economics, 2010, 146: 39-73.
- [3] Kumar T V, Dahiya B. Smart economy in smart cities[J]. Smart economy in smart cities, 2017: 3-76.
- [4] Orlikowski W J, Iacono C S .The Truth Is Not Out There: An Enacted View of the "Digital Economy"[J]. 2000.
- [5] Weibin P, Liuqing F, Xiaojing L .Digital Governance for Smart City and Future Community Building: From Concept to Application[J]. 2022.DOI:10.1007/978-981-16-7410-5_4.
- [6] Beztesna L, Pivovarchuk L .ANALYSIS OF INSTITUTIONAL SUPPORT FOR THE IMPLEMENTATION OF SOCIAL SECURITY STATE IN SCIENCE[J].International Journal of New Economics and Social Sciences, 2016(2).DOI:10.5604/01.3001.0010.4552.
- [7] Schachtner C .Wise Governance – Elements of the digital strategies of municipalities[J].Smart Cities and Regional Development (SCRD) Journal, 2022, 6.