Analysis of the Harmonious Development Path of Urban Management and Internet Celebrity Cities under Digital Perspective

Xiaoyu Li[1,a,*]

[1]*School of Economics and Management, Chongqing Jiaotong University, 66 Xuefu Avenue, Nanan District, Chongqing, China*
a. lixiaoyuu0926@gmail.com
*corresponding author

Abstract: Technological advances and the Internet's rapid development have fueled the rapid rise of Internet celebrity cities, providing a unique impetus to urban development (mainly tourism) and economic vitality. However, the ensuing controversies have been persistent. In order to promote a thriving urban tourism industry and alleviate urban economic and employment pressures, it is essential to address the issue of Internet celebrity cities and fully realize their economic and social potential. This study summarizes the multiple problems in the operation of traditional Internet celebrity cities, reveals their challenges to urban management, and proposes ways to build a digital Internet celebrity city system using "digital" technologies. These digital tools can effectively overcome the difficulties faced by traditional Internet celebrity cities and provide strategic guidance for the long-term and healthy development of the Internet celebrity city economy.

Keywords: Internet celebrity city, Wanghong, city management, digitization

1. Introduction

Internet celebrity cities, also known as Wanghong cities [1], have become famous through social media and the Internet [2]. These cities emerged in China in 2018 [3] and have experienced a surge in popularity with the rise of live streaming and short video platforms in 2019 [4]. With their unique charm, vibrant culture, delicious food, and one-of-a-kind activities, these cities attract a large number of tourists and netizens flocking to them. The photos, videos, and personal narratives they share on social media further push the popularity of these cities to the top, boosting the cities' tourism industry [5]. During the five days following the May Day holiday in 2023, 27 tourist attractions in Changsha's old red net town welcomed 1,949,500 visitors, generating a total income of 92,105,100 yuan. In addition, the tourist orders in the new net red city of Zibo increased by 441% compared to 2019 [6]. In just three days of the 2024 New Year, Harbin welcomed over 3 million tourists and generated more than $800 million in revenue [7].

The rise of Internet celebrity cities has posed several challenges that need immediate attention. The increase in tourism has resulted in problems like insufficient urban management and environmental stress, putting the sustainability and resilience of these cities at risk [8]. Therefore,

leveraging digital technology to balance urban management and Internet Celerity City's economy is vital. This urgent need must be addressed with utmost priority [9].

This paper centers on digitization and the widespread implementation of digital technology in managing urban areas and the economy of Internet celebrity cities. It proposes a series of targeted measures and recommendations to foster the healthy development of Internet celebrity cities, aiming to achieve a mutually beneficial economic and social situation for all stakeholders involved. This paper would be an invaluable reference for city managers and researchers striving towards this common objective.

2. DRAWBACKS OF INTERNET CELERITY CITIES AND CHALLENGES TO URBAN MANAGEMENT

2.1. Drawbacks of Internet Celebrity Cities

2.1.1. Difficulties in Managing Abortion

Internet celerity cities often become popular tourist destinations [10]. However, this sudden increase in tourism poses significant challenges for urban management. The transportation network, which was initially designed for daily commuting, can become overwhelmed during peak tourism. This results in slow-moving traffic, frequent accidents, and increased travel time and costs for tourists, negatively impacting their travel experience.

Additionally, the influx of tourists can cause inconvenience for urban residents. They may experience longer commute times and reduced travel efficiency. There is also a shortage of accommodation facilities, which results in higher prices and fewer options for tourists. Overloading these facilities can lead to a decline in quality, such as inadequate room cleanliness and damaged facilities, further reducing tourist satisfaction. Therefore, urban management must address these challenges to maintain a high quality of life for residents and ensure tourism can continue.

2.1.2. Severe Environmental Pollution

With increased tourism and commercial activities, popular cities' historical and cultural areas are experiencing significant environmental pressure [11]. The large influx of people and traffic has resulted in problems such as air pollution, noise pollution, and garbage accumulation, severely threatening the preservation and display of historical and cultural heritage. In addition, some merchants disregard regulations on protecting cultural relics and make unauthorized changes to the environment around them, further accelerating the destruction of cultural heritage.

Moreover, excessive commercialization can also damage the ecological balance of the natural environment in urban areas [12]. To attract tourists and promote economic development, many popular cities are exploiting natural resources and constructing commercial facilities and tourism projects on a large scale. This development model often overlooks the protection and restoration of the natural environment, resulting in the destruction of ecosystems and the reduction of biodiversity. The influx of tourists has also caused damage to the natural environment, such as littering and the destruction of vegetation. Unfortunately, many may prioritize short-term economic benefits and overlook long-term protection and inheritance of these valuable resources. This change in mentality and behavior has further exacerbated the threat to historical and cultural heritage and the natural environment.

2.1.3. Economic Bubble Risk

The net celebrity effect can help quickly increase a city's popularity and economic activity. However, relying too much on this model in the long run can lead to some potential risks.

Firstly, the net celebrity effect is inherently unstable and uncertain. As a widespread cultural phenomenon, the rise and fall of Internet celebrities are often influenced by various complex factors, such as changes in personal image, public aesthetic trends, and policy adjustments of social media platforms. These changes can cause the net celebrity effect to weaken or even disappear rapidly, which can significantly impact the urban economy. If the influence of Internet celebrities weakens, the city's tourism, catering, retail, and other related industries may face a severe impact, resulting in a slowdown or stagnation in economic growth.

Secondly, relying excessively on a single net celebrity effect can lead to an imbalance in the urban industrial structure. If the urban economy is overly concentrated in a particular net celebrity or net celebrity industry, the development of other industries may be negatively impacted. This imbalance in industrial structure weakens the risk resistance of the urban economy and limits innovation ability and competitiveness. In the case of the weakening or disappearance of the net celebrity effect, the urban economy may face serious transformation difficulties or even fall into a stagnant predicament.

Additionally, depending on a single net celebrity effect can exacerbate economic inequality within cities. The economic growth brought about by the net celebrity effect is often concentrated in specific regions or groups, increasing the gap between the rich and poor within cities. This uneven development model may not only cause social dissatisfaction and contradictions but may also negatively impact the stability and harmony of the city.

2.2. Challenges to Urban Management

2.2.1. Challenges to Urban Planning

The rise of net celebrity cities has attracted many tourists, leading to unprecedented challenges in urban planning. The concentration of net celebrity attractions may result in a lack of social infrastructure, such as public toilets and drinking water supplies. Traffic congestion and parking problems have become increasingly prominent, straining urban roads and parking spaces[13]. Therefore, city managers must develop comprehensive and effective traffic management policies, promote the upgrading and development of public transportation, and innovate parking solutions to facilitate smooth and orderly urban traffic.

Furthermore, the surge in the number of tourists has also heightened security and safety risks in the city. To ensure the safety of residents and visitors alike, city managers must enhance public security management, improve the intelligence level of the monitoring system, and guarantee the safety and stability of the city.

2.2.2. Challenges to Environmental Protection

The rise in tourism to popular destinations has created a critical need for environmental protection in urban management. The visitor surge is taking a toll on the city's surroundings, resulting in heightened waste, ecological harm, and resource depletion. Therefore, city managers must prioritize environmental protection measures such as waste management strategies, renewable energy usage, and urban green initiatives. Urban managers must balance economic expansion and environmental protection while effectively managing and preventing environmental pollution.

2.2.3. Challenges to Scientific Decision-making by City Managers

Managing a city experiencing a significant influx of tourists can pose challenges for city managers. To tackle these challenges, decisions must be made based on scientific evidence and data. The first challenge is the pressure on housing and rentals. An increase in tourists can spike the demand for housing, thereby driving up rents and house prices. This, in turn, makes it difficult for residents to afford living in their city. To address this issue, city managers must develop and implement scientific housing policies, strengthen housing market supervision and regulation, and safeguard residents' housing rights and interests.

Apart from the housing challenge, managers must also address the economic imbalance. Over-reliance on tourism can make the urban economy more fragile and vulnerable to market fluctuations. This can create a situation where the city's economy is overly dependent on tourism, making it challenging to survive economic downturns. To address this issue, city managers must work towards diversifying the city's economy and reducing its reliance on tourism as the sole source of income. By taking these measures, city managers can guarantee that their city will remain an excellent place to live, work, and visit for years.

3. INTERNET CELEBRITY CITY MANAGEMENT BASED ON DIGITAL TECHNOLOGY

To overcome the problems and management challenges in the operation of traditional net celebrity cities, this study proposes a strategy for using digital technology to build a digital net celebrity city system. Specifically, the efficiency and level of urban management can be improved through the construction of an intelligent urban management system; through the establishment of a digital tourism service platform, the optimal allocation and efficient utilization of tourism resources can be realized; and through the use of technologies such as big data and cloud computing, accurate analysis and scientific decision-making of urban development can be realized. Using these digital means can effectively solve the problems faced by traditional net celebrity cities and promote the healthy and sustainable development of net celebrity cities.

3.1. Planning and Supervision System Based on the Internet of Things

3.1.1. Traffic supervision

Real-time traffic monitoring and data analysis, IoT and high-definition cameras, and real-time collection of road traffic flow, speed, congestion index, and other data. Extensive data analysis makes it realize accurate prediction and early warning of traffic conditions and provides decision-making support for traffic management departments. An intelligent signal control system, through intelligent algorithms, adjusts the time and phase of signal lights according to real-time traffic data, improves road traffic efficiency, and reduces congestion. At the same time, it realizes the linkage between signal lights and traffic monitoring systems and responds to unexpected traffic events in time. Intelligent management of public transportation, through an intelligent scheduling system, optimizes the routes and frequency of public transportation, such as buses and subways, and improves the coverage and punctuality of public transportation. At the same time, it promotes electronic payment and real-time query functions to enhance passengers' travel experience.

3.1.2. Community Supervision and Services

Noise pollution can significantly impact our daily lives, but there are effective ways to manage it. One such approach is to use noise monitoring equipment that detects levels in real time, providing

valuable data for analysis. By analyzing urban noise data, we can identify areas with elevated noise levels and implement measures like sound insulation and noise reduction to mitigate the adverse effects on people's daily lives. In addition, an intelligent life service platform can integrate essential services like shopping, dining, and entertainment for residents' convenience. This platform can analyze resident data to provide targeted marketing suggestions for merchants, promoting community business growth. With these measures, our communities can be safe, healthy, and enjoyable places to live, work, and play.

3.2. Urban Service System Based on Big Data and Cloud Computing

A sophisticated digital platform has been established to streamline the delivery of government services. The platform has been crafted to enhance the quality and efficiency of government services by simplifying data sharing and optimizing processes. This is particularly vital in urban areas, where informed decision-making heavily relies on data analysis. The platform features several tools that aid governments in managing urban areas more effectively. For instance, it can thoroughly analyze urban management, public security, and public services data. This allows for identifying areas that require improvement and laying a solid foundation for policymaking and decision-making.

One of the most significant benefits of this platform is that it facilitates data sharing among government agencies. This enables the government to collaborate in addressing urban management, public security, and public services, leading to improved citizen outcomes. Furthermore, the platform offers a user-friendly interface for citizens to access government services online. This empowers citizens to access government services from anywhere, anytime, eliminating the need to visit government offices physically. As a result, citizens save time, and the burden on government offices is decreased, making service delivery more efficient.

3.2.1. Data Collection and Analysis System

The proposed system is designed to gather real-time information on tourism-related aspects such as tourist numbers, spending habits, booking trends, economic conditions, and the local housing market. This will be achieved using cutting-edge technologies such as big data analytics and artificial intelligence, which will analyze the data and provide meaningful insights. For example, the system can pinpoint peak tourism seasons, popular tourist attractions, and high-demand accommodation types. Furthermore, it can assess the effects of tourism on the local economy, including employment, businesses, and the environment.

By harnessing big data and artificial intelligence capabilities, the system can offer city managers accurate and current information on tourism's impact. This can assist in developing precise policies that account for tourism's actual effects on the city and its residents.

3.2.2. Digital Management Program

Utilizing digital management solutions can provide city managers with invaluable insights into the housing market and enable them to address economic imbalances. By utilizing technology to track changes in supply and demand, managers can make better-informed decisions regarding housing policies to mitigate the effects of tourist influxes, such as expanding the housing supply or limiting the rate of increase in housing prices. Additionally, digital platforms can help enforce regulations in the housing market, preventing illegal practices and ensuring the protection of residents' rights. This can create a fair and safe environment for all involved parties.

Moreover, digital management solutions can help managers analyze the interplay between tourism and other industries in the city's economy. By examining this relationship, they can establish more reasonable policies for industrial development, such as promoting and supporting the growth of other

industries. This can reduce dependence on tourism and create a more resilient and stable economy for the city. By leveraging technology, managers can make data-driven decisions that benefit the community.

4. Conclusion

The Internet Celebrity City is an innovative urban development that has revolutionized the traditional concept of cities. This city is designed to meet the needs and lifestyles of internet celebrities, who are constantly in the public eye, by providing them with a platform to showcase their talents and build their brand.

This groundbreaking concept brings several opportunities and challenges to urban management. The city must be designed in a way that caters to the unique needs and preferences of internet celebrities, which includes the provision of digital infrastructure, high-speed internet, and social media-friendly spaces. Additionally, the city must be able to handle the influx of tourists who come to visit these internet celebrities, which requires efficient management of resources and facilities.

Fortunately, digital tools play a critical role in addressing these challenges, enabling efficient management of such cities. These tools promote sustainable development and effective management of urban spaces, ensuring that the city functions at its best. By using data analytics, machine learning, and artificial intelligence, urban managers can make informed decisions that promote the well-being of residents and visitors alike.

As technology continues to advance, managing such cities promises to become even more intelligent, refined, and personalized, contributing to the growth and prosperity of cities. With the help of digital tools, urban managers can gain valuable insights into how the city is functioning and make informed decisions that promote the well-being of its residents. This, in turn, ensures that the city remains a desirable destination for internet celebrities, tourists, and locals alike.

References

[1] Dippner, A. (2018). How Much Is My Face Worth? Neoliberal Subjectification, the Beauty Economy, and the Internet Celebrity Culture in China. ASIEN: The German Journal on Contemporary Asia, 147, Article 147. https://doi.org/10.11588/asien.2018.147.14490

[2] Gao, B. (2023). A Study on the Communication Mode of Tik Tok's" online celebrity City" Image: Taking Xi'an City Image Communication as an Example. International Journal of Education and Humanities, 6(3), 151–155.

[3] Zhang, Z. (2021). Infrastructuralization of Tik Tok: Transformation, power relationships, and platformization of video entertainment in China. Media, Culture & Society, 43(2), 219–236. https://doi.org/10.1177/0163443720939452

[4] Zhang, Y., Liu, Y., Wang, Y., Liu, D., Xia, C., Wang, Z., Wang, H., & Liu, Y. (2020). Urban expansion simulation towards low-carbon development: A case study of Wuhan, China. Sustainable Cities and Society, 63, 102455. https://doi.org/10.1016/j.scs.2020.102455

[5] Fan, T., & Lin, Z. (2022). Toward Tourists–Media–Cities Tourism: Xi'an as a Wanghong City. Sustainability, 14(19). https://doi.org/10.3390/su141911806

[6] Hou, W. (2023). Has your city become a "Internet celebrity." https://www.lwxsd.com/pcen/info_view.php?tab=mynews&VID=38081

[7] CGTN. (2024). Chinese "ice city" heats up for real! https://radio.cgtn.com/podcast/news/5/Chinese-ice-city-heats-up-for-real/2710344

[8] Pan, W. (2021). Research on the coordination between tourism economic development and environmental protection in "Internet celebrity city "– Based on short video platform. IOP Conference Series: Earth and Environmental Science, 632(5), 052047. https://doi.org/10.1088/1755-1315/632/5/052047

[9] Cao, L. (2024). From online to onsite: Wanghong economy as the new engine driving China's urban development. Environment and Planning A: Economy and Space, 0308518X231224142. https://doi.org/10.1177/0308518X231224142

[10] Guo, C. (2024). The Influence of Internet Celebrity Effect on the Development of Modern Tourism Industry: Case of Litang. Advances in Economics, Management and Political Sciences, 73, None-None. https://doi.org/10.54254/2754-1169/73/20231243

[11] *Zihan Zhao, & Dai, Y. (2022). How Social Media Impact the Economy in Rural Areas in China. In Zige Liu (Ed.), Proceedings of the 2022 8th International Conference on Humanities and Social Science Research (ICHSSR 2022) (pp. 2711–2715). Atlantis Press. https://doi.org/10.2991/assehr.k.220504.492*

[12] *Goodman, M. K., Littler, J., Brockington, D., & Boykoff, M. (2016). Spectacular environmentalisms: Media, knowledge and the framing of ecological politics. Environmental Communication, 10(6), 677–688. https://doi.org/10.1080/17524032.2016.1219489*

[13] *Che, W., Yang, M., & Li, J. (2022). The impact of Internet celebrity economy on sustainable city design: From the perspectives of economics and carbon emissions. Sustainable Cities and Society, 78, 103631. https://doi.org/10.1016/j.scs.2021.103631*