The Influence of Digital Economy on Tourism

-- Taking Hefei as an Example

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Abstract

Digital transformation is gradually changing the industrial boundary and production mode of China tourism, which greatly affects the future development mode of China's tourism industry. Therefore, digital travel is not only a new technology application scene, but also an important carrier to seek a new model and qualitative change for the value of travel resources. Focusing on the long-term healthy development of tourism in the atmosphere of the whole society, the author sorts out the relevant literature on digital economy, digital tourism and business model reconstruction, analyzes the current situation and bottlenecks of Hefei tourism, and gives the corresponding reconstruction ways and development strategies in combination with the reality.

Keywords

Digitalization; Digital Tourism; Business Model Reconstruction; Hefei.

1. Introduction

China is experiencing a great transformation from a traditional economy to a digital economy. According to the latest data of China Institute of Communications and National Bureau of Statistics in 2022, the scale of digital economy in China will reach 39.2 trillion yuan in 2020, accounting for 38.6% of GDP. In 2021, the scale of digital economy in China exceeded 45 trillion yuan, and the proportion of digital economy in GDP exceeded 40%. In fact, not only in China, but also in other countries in the world, the digital economy is the fastest growing part. According to the "White Paper on Global Digital Economy" published by China Institute of Communications, this paper compares the development of digital economy in major economies in the world. The results show that the added value of digital economy in 47 countries around the world has reached 32.6 trillion US dollars. In 2022, the State Council officially issued the "Tenth Five-Year Plan for Digital Economy Development". By 2025, China's digital economy will move towards a comprehensive expansion period, and the digital era has arrived. In the field of tourism, digital technology and Internet technology have accelerated their integration in the field of culture and tourism, and new formats closely related to cultural and tourism activities, such as digital exhibitions, digital performing arts, digital cultural relics and digitalization of works of art, have emerged constantly. The integration of digital technology and tourism formats has gradually deepened and extended to develop into a new space for urban and rural tourism consumption. Therefore, taking Hefei, Anhui Province as an example, it is of great significance to analyze the new situation of tourism under the background of digital tourism, study the path of reconstruction of tourism business model and explore the future development strategy of digital tourism[1].

2. The Oretical Review and Prospect

2.1. Digital Economy

For the traditional tourism industry, the digital transformation of tourism is undoubtedly a long and difficult process that needs to start from all aspects. However, the digital economy also provides the industry with a "fast track" for the development of enterprises that the traditional economy cannot give (Jing Hao, Liu Ya, Xu Xianying, 2017). Compared with the decades and hundreds of years of industry development in the traditional economy, it takes much shorter time for industry development to reach scale under the background of digital economy. Zhang Hui and Lin Shi (2019) summarized the development of digital economy: from 1970 to 1990, the invention of personal computers and the progress of network technology gave birth to the development of digital economy. Around 2000, with the birth and development of the Internet, the IT industry began to develop rapidly and the digital economy began to take off. Around 2016, with the progress of new technologies such as cloud computing, Internet of Things and big data, the digital economy has once again made great progress. For example, big data has promoted the digital transformation of most enterprises in the tourism industry, making many companies' business models move towards the digital economy[2]. Zhang Hui (2019) believes that the digital economy has a strong dependence on science and technology. It can even be said that without the progress of science and technology, there would be no birth of digital economy. Li Xiaohua (2018) also holds a similar view: every development of digital economy is inseparable from technological innovation, which shows that in the field of digital economy, scientific and technological progress and innovation are also very high-frequency and concentrated. This is significantly different from the traditional economy outside the digital economy: the development of industries in the traditional economy, whether it is enterprises in the industry or the industry itself, is a long time. In this process, scientific and technological progress will occur, but most of them will be a gradual process-there will be no "subversive" technological innovation that often appears in the digital economy. On the other hand, the scientific and technological progress under the digital economy not only has subversive changes for the whole industry, but also has the effect of reducing the dimension of the industry that blends with the industry[3].

2.2. Digital Tourism

Digital economy is giving birth to great industrial changes, and tourism is one of the key industries involved in this change. Under such a macro-framework, tourism is transforming from simple industrial scale expansion to service quality improvement. Digital transformation will gradually change the industrial boundary and mode of China tourism, and greatly affect the future development mode of China's tourism industry[4]. Therefore, this is not only the application of a new technology, but also an important carrier for the qualitative change of the tourist resource value seeking mode in China. Digital tourism is regarded as an important embodiment of industry integration in academic circles, which will drive the upgrading and innovation of tourism industry. At the same time, digital tourism is also regarded as the initiator of tourism virtual format cluster, which allows traditional tourism to break through geographical limitations, realize the aggregation and exchange of massive tourists and service providers and other stakeholders in virtual space, and quickly and flexibly solve the needs of tourists and the supervision requirements of government departments. From the analysis of components, digital tourism is mainly divided into software and hardware facilities, digital services and digital tourism industry[5]. Digital tourism has some obvious characteristics in changing the development mode of tourists. First, the interactive iteration of reality and reality, the travel experience brought by virtual reality technology and the localized reality experience are in parallel, which promotes information iteration and business model innovation. The

second is the optimization and matching of cultural assets. Intelligent tourism information can realize the cross-space redistribution between physical tourism resources and virtual tourism resources, thus further realizing the Pareto optimal state of tourism industry clusters. Third, the value boundary is broken. Big data enterprises reshape the industrial growth mode by using the virtual enterprise generated by digital division of labor, making the tourism industry more modular and virtual, thus gradually breaking the original value chain boundary[6].

2.3. Comprehensive Review

Generally speaking, the first pillar of the digital economy is the progress of science and technology. Therefore, for the tourism industry, the development of digital tourism needs to make full use of emerging digital information technologies such as big data and cloud computing. While changing the external conditions of the industry, the tourism industry also needs to cognize and examine the new situation of the industry and rebuild the matching business model[7]. Only when the external technology and the internal business model of the industry evolve at the same time can the whole industry iterate the interaction between reality and reality, optimize the allocation of resources and reshape the value boundary, and truly realize the digitalization of tourism.

3. Hefei City, The Bottleneck of Tourism Development

3.1. The Environmental and Social Risks Brought by Tourism Hinder its Sustainable Development

Due to the expanding scope of tourism industry, it has caused some damage to the natural environment resources and social humanities on which it depends, and also limited its sustainable development process. Mainly in three aspects. First, the construction of tourist facilities has caused pollution to the soil environment, including the reduction of habitats, the landfill of natural wetlands, soil erosion, etc., and the living environment of wild animals has been seriously weakened[8]. Secondly, the resource supply pressure brought by tourists to tourist attractions and their regions, as well as the impact on social and economic benefits. For example, holiday travel makes the population quickly flow to scenic spots in a short period of time, resulting in the imbalance and out-of-control of scenic spot management and supporting service facilities, soaring regional prices, insufficient water and electricity supply and other problems, which have a great negative impact on the lives of local residents. Third, excessive tourism has destroyed the human environment, local culture has been integrated, replaced and abandoned, and traditional customs and customs have gradually faded out of people's horizons[9].

3.2. Sustainable Investment and Financing Channels Need to be Further Expanded

At present, there have been some problems in the main investment and financing channels of China's tourism industry, and the constraints on the financing chain have also become the bottleneck for domestic tourism to achieve sustainable development. Mainly in three aspects[10]. First of all, at present, most tourism companies in China are small in scale, with a large degree of randomness in operation and finance, and their ability to resist risks is relatively weak. Second, because the tourist scenic spots are under the jurisdiction of different government administrative departments, the ownership is unclear, and most of the tourist natural resources are the key protection objects in China, and their fixed assets are not pledged, which makes financial organizations reluctant to get involved too much out of careful consideration. Third, the investment in tourism infrastructure construction and the development and utilization of scenic spots resources is often too large, and the investment cycle is long[11]. Other financial institutions do not know much about the operation and

management mode, development plan, project development and investment demand of the tourism industry, and they cannot correctly evaluate the development prospect, expected profit and investment risk of the project, nor can they meet the needs of tourism development.

4. Hefei Digital Economy's Impact on the New Situation of Tourism

4.1. Consumption Classification and Sinking

According to CEIC data, in the sixth population census, consumers in China's third-tier and below cities accounted for more than 70% of the country's GDP, accounting for 59% of the country's GDP, and third-tier and below cities contributed two-thirds of China's economic growth. Especially with the convenience of transportation and the rapid growth of urban network, third-and fourth-tier cities show high consumption growth[12]. At present, the consumption capacity of first-tier cities is gradually saturated, and non-first-tier cities have become an important engine for the business development of most enterprises. How to effectively tap the market potential of non-first-tier cities will be an important core for most enterprises to maintain stable growth. Under the background of new economy, the stratification and decline of social consumption of China's tourism industry will be further accelerated, and the layout of tourism consumption will be more and more subdivided in the future, moving towards professional and meticulous services. The level of tourism consumption behavior will further drive the tourism industry to open up new development space, and the demand of diversification will force the creative reform and development of tourism companies. How to optimize the industrial structure, establish a more effective and meticulous tourism market strategy, and use the new business strategy to improve the experience of tourism consumption behavior, and stimulate and release the potential of more people's travel consumption behavior is an important academic topic in the future of China's international travel industry[13].

4.2. Big Data Management

Tourism big data mining mainly includes scale layout information, customer location information, statistical analysis of tourists' trips, route layout analysis, statistical analysis of activity tracks, scenic spots and early warning. The biggest difficulty of data mining is the scientific and efficient data mining method. For example, Getui's "Individual Travel" tourist big data monitoring platform uses intelligent visual big screen to display the tourist status of cities and scenic spots, and its big data analysis content includes multi-dimensional data analysis such as regional population heat map, customer images and comparison of tourist change trends, which is helpful for government departments and tourist institutions to carry out dynamic information monitoring, early warning and decision-making. Its tourism trajectory classification system includes the distribution and ranking of tourist destinations, and the proportion of routes chosen by tourists during inter-provincial mobility, which is of great reference value for travel teams to grasp the tourist dynamics in an all-round way. Generally speaking, it is difficult to avoid redundancy and repetition in tourism data analysis. Especially on holidays, because the mining of big data analysis pays attention to real-time and immediacy, when facing a large number of tourists, tourism companies lack scientific and effective means of tourist data collection and customer segmentation. If they can't deeply understand their tourism characteristics and consumption characteristics, they can't push the corresponding marketing strategy. Therefore, how to collect tourists' data through limited funds has become the focus of the tourism industry. At present, tourism companies realize the accuracy of big data analysis by constantly iterating user images, and use data analysis to drive the transformation and development of tourism, thus enhancing the brand stickiness of tourism. At the same time, tourism companies also get customer information of multi-terminal new media platforms, mobile terminal Internet platforms and offline platforms by accelerating the transformation to

digitalization, and concentrate them in the big data analysis pool to break through the closed status of data islands and promote the sharing of information resources between platforms. The current technology can describe the routes, places and projects that tourists travel according to the location information of pictures released by tourists on a social platform, and give accurate portraits to tourists, and form an efficient business model by understanding their consumption trajectory and habits.

4.3. Internet Marketing

The large-scale and fragmented promotion environment has excessively consumed tourists' attention interest when they see the news, and caused tourists' aversion and resistance mentality, which led to the bad situation that the promotion benefits could not be measured and the interests of tourists could not be transferred. Therefore, digital tourism needs to control the way, opportunity and rhythm of information push in time, so as to narrow the psychological distance between enterprises and tourists, thus forming a cultural tourism enterprise with temperature. Tourism data management department can use marketing data to drive insight, realize dynamic monitoring and statistical analysis of tourists, find hot spots in scenic spots and tourist interests, and guide travel companies to formulate corresponding travel strategies and plan related travel products. Then use quantitative data to analyze the best promotion way, select the best time to communicate and interact with tourists by studying their catalytic habits, and improve the content initiation. At the same time, use the propaganda characteristics of the media to guide tourists to actively participate in tourism marketing communication, and finally link tourists and travel companies to analyze tourism data, tourism commodities and consumption data, and gradually form an accurate promotion platform.

5. Digital Tourism Development Strategy

5.1. Building a Digital Tourism Platform

At present, the travel data model is generally constructed by the data platform and the tourist attractions, with various forms of expression and characteristics. However, because there is usually no necessary connection between the scenic spots in different regions, it is very difficult to build an independent system for small scenic spots with insufficient digitization level. Therefore, it is necessary to build a unified digital tourism network platform in various regions, which will be built by local tourism authorities first, and then the corresponding scenic spots will be stationed for content recommendation. It is suggested that the tourism authorities should comprehensively summarize the advantages of tourism resources in all parts of the country, and make overall planning and integrated management to further realize resource sharing. Usually a big data platform will consist of two parts. The first is the customer information application platform, which needs commodity sales module, comment service module, tour guide service module and guidance service module, and can scientifically use the information advantages of digital tourism to conduct immersive tours, thus effectively mobilizing tourists' desire to travel. The second is the data analysis platform, including data analysis module, automatic monitoring and early warning system module, monitoring system module and financial management system module. At the same time, we need to strengthen the application of modern integrated communication means such as Tik Tok, WeChat, Weibo and APP.

5.2. Product and Service Value Creation

The process of value co-creation is a dynamic process of creating value through the integration of information resources and interactive sharing of services among participants. The digital economy has brought value co-creation between tourists and travel companies. For tourists, tourists' integration into the service experience process of commodity search, selection and

sharing is a dynamic replacement process of social value creation, and the related content generated by large-scale user demand will form the main channel and way of social value creation of tourism services. For tourism companies, the digital economy not only creates a lot of effective information about tourists' supply and demand, but also promotes the communication and cooperation between tourists and tourism companies, resulting in great group ability, improving and rebuilding the interactive environment created by tourists' commodity and service prices. At the same time, digital tourism has also changed the innovative development mechanism of tourism consumer products. Different from other consumer behavior methods, digital tourism has the characteristics of invisibility, remoteness and complexity, which puts forward higher requirements for the dynamic collocation and agile response of tourism products. At present, the characteristics of tourists' "imitative wave-discharging" demand are gradually weakening, and the diversification and complexity of tourists increase the uncertainty of tourism product creation, so the supply-oriented product creation model is no longer suitable. Digital economy highlights the necessity of the value co-creation model oriented by tourists' demand, and the development and creation of tourism products will rely more on the participation and integration of tourists.

5.3. Mining Customers

The process of numerical value of dimensional resources-assets-capital can realize the optimization and upgrading of resources on the supply side of tourism industry. On the demand side, the industry should constantly meet the demands and aspirations of customers, which is also the internal driving force of industrial innovation and development. In the development of consumption upgrading, tourism consumption bears people's beautiful yearning for life. In this process, tourism consumption should not only be simple sightseeing, but also come from interest-driven and personalized demands. A large number of personalized demands will lead to the long tail effect, which will lead to a large number of segmented products with their own characteristics in the market. In the further full market competition, each segmented type will produce competing products with little differentiation in service quality. With the development of this trend, the traditional division of large and small customer groups has lost its significance. Therefore, the industry needs to deconstruct the market demand from the new customer dimension. In the era of digital tourism, there are two dimensions that need to be considered. One is to dig and match the customer's digital intelligence tags, and the other is to value the customer's full role. First of all, in the face of customers with different demands, we should accurately capture their interest points, take interest as the main line, deeply and extensively explore their value demands through multi-dimensional links at the social circle level, and match and establish digital intelligence labels. Secondly, customers are no longer simple consumers, but also producers and disseminators. Consumers will spread new content, such as the evaluation of tourist destinations, short videos on the journey, etc. These valuable content and digital resources spread and split in their social circles. This process not only brings about the identity transformation among consumers, producers and communicators, but also stimulates the update of customers' own digital labels. How to effectively value the data generated by customers from the perspective of full role is a very valuable research topic for the tourism industry. The era of digital tourism will create rich tourism consumption scenes for customers, and customers will also stimulate more colorful needs, establish brand-new customer dimensions, tap and match customers' multi-level diversified needs, and create a broader new world of tourism consumption.

5.4. Green Finance Supports Industrial Development

In recent years, with the in-depth development of the concept of green sustainable development, green finance has become the mainstream. Green financial tools such as green bonds, green funds and green asset securitization can not only expand the investment and

financing channels of domestic tourism, but also introduce environmental protection concepts into investment and financing decisions, urge tourism to reduce its negative impact on the environment and guide it to develop in a green and sustainable direction.

(1) Green bonds

Because many domestic tourist attractions rely on good natural environment construction, they have certain green industry elements, which meet the specific requirements and conditions of natural forest resources protection, animal and plant resources protection, nature reserve construction and operation, and ecological function area construction and maintenance and operation in the Catalogue of Green Bond Support Projects (2021 Edition). In recent years, many tourism enterprises have begun to actively try to issue green bonds to expand financing channels. However, in terms of scale and quantity, the overall issuance scale of green bonds of tourism enterprises in China is small at this stage, which needs to be further expanded.

(2) Green Eco-tourism Industry Investment Fund

Green eco-tourism construction projects can be declared, and China's green eco-tourism industry investment fund can be established to win investment support. This method is dominated by major consortia, and the joint investment of capital from all walks of life requires mutual understanding and effective connection with investment projects and investment and financing management institutions, so as to build a good and sustainable long-term mechanism for the combination of culture, tourism, industry and finance. This method can not only promote the establishment and improvement of the investment and financing system of cultural tourism industry in all parts of the country, but also promote the sustainable and healthy development of cultural tourism industry. It can also release the great opportunities in the economic development of local cultural industries and social tourism investment, and facilitate the further cultivation and construction of national famous cultural tourism destination brands.

(3) Green Asset Securitization Financing

Asset securitization is one of the most available investment and financing tools for theme parks and scenic spots. Tourism companies can implement asset securitization for scenic spots with good asset quality, development prospects and good credit rating, mainly for some scenic spots with unique human and natural landscapes and rich human landscapes. When the scenic spots are initially established, they will generally generate continuous, steady and considerable cash flow, with great potential development space and good expected returns, which meets the requirements of asset securitization business for basic assets. Therefore, in order to ensure the sustainable development of the tourism industry, the government can take the liabilities of scenic spots or service charges as stocks, and take the formed capital flow as the highest return on investment, so as to attract funds from all sectors of society to invest in the value-added development of tourism capital and further broaden the financing channels.

6. Conclusion

Under the background of digitalization, the digital economy has made the tourism industry undergo earth-shaking changes, and the underlying logic, business model and development strategy of the industry need to be adjusted accordingly, but it is also a great opportunity for the development of China's tourism industry. At present, the new situation of tourism industry under the background of digitalization can be analyzed mainly from three aspects. First of all, in the macro aspect, the consumption classification and sinking trend of tourism are becoming increasingly obvious; Secondly, big data plays an increasingly important role in management and operation; Finally, in the publicity and marketing of tourism, the proportion of Internet and self-media new media has gradually increased. Products and services (suppliers), consumers, digital platforms and investors constitute the development strategy of digital tourism. First, we should create value together in products and services, and promote consumers' participation

and integration. The second is to explore the customer dimension in depth and expand the tourism consumption space. The third is to build a digital tourism platform and give full play to the advantages of the digital age. Fourth, actively develop green investment in terms of investors and broaden the investment and financing space of enterprises.

Acknowledgments

References

[1] Wu Dandan, Feng Xuegang, Ma Renfeng, Hao Chen, Wu Yang. The nonlinear effect of the development of digital economy on the total factor productivity of tourism [J]. Journal of Tourism, 2023,38 (02): 47-65. DOI: 10.19765/J.CNKI.1002-5006.

[2] Zou Qinghai, Dong Yu, Lu Zaishui. The new logic, new mechanism and new path of digital economy enabling the high-quality development of sports tourism [J]. Journal of Physical Education, 2022,38 (05): 16-21. DOI: 10.16419/J.CNKI.42-1684/G 8.

[3] Tang Rui. Analysis of spatial characteristics of high-quality development of digital economy and tourism in the Yangtze River Delta [J]. Economic system reform, 2022(05):51-59.

[4] Zhang Jiahui, Tang Xiaodan. Research on the promotion path of the docking of tourism industry and digital economy in Jilin Province [J]. Shopping mall modernization, 2022 (16): 123-125. DOI: 10.14013/j.cnki.scxdh.2022.16.036.

[5] Yang Mingxiao, Guo Yan. Research on the problems and countermeasures of rural tourism development under the digital economy [J]. Tourism and Photography, 2022(14):31-33.

[6] Wang Wei. Research on the Digital Economy Empowering the High-quality Integration and Development of Cultural Industry and Tourism-Taking Chaohu Lake National Tourism and Leisure Zone as an Example [J]. Tourism Overview, 2022(14):19-22.

[7] Yang Chunmei, Liu Lin, wei li, Xu Xishuai. Research on the high-quality development path of ice and snow tourism in Heilongjiang Province under the digital economy [J]. Shandong Textile Economy, 2022,39(05):5-8.

[8] Sun ying. research on the digital transformation of tourism in China [D]. Jilin university, 2022. doi: 10.2162/d.cnki.gjlin.20010.000000000606.

[9] Xie Pan, Ma Chunyi. Cultural capital and high-quality development of tourism: China experience [J]. social sciences review, 2022,37 (02): 100-109. DOI: 10.16745/j.cnki.cn62-1110/c.2022.02.

[10] Yong Yang, Wu Xue. From digital economy to digital divide: new logic and new problems of tourism development [J]. Journal of Tourism, 2022,37 (04): 3-5.doi: 10.19765/j.cnki.1002-5006.2022.04.

[11] Zhao Lei. The connotation and dimension of digital economy enabling the high-quality development of tourism [J]. Journal of Tourism, 2022,37 (04): 5-6.doi: 10.19765/j.cnki.1002-5006.2022.04.003.

[12] Zeng Yulan, Shen Keyin. Trend analysis and innovation path of sports tourism in the era of digital economy [C]//. Summary of papers of the 12th National Sports Science Conference-Special Report (Sports Industry Branch). 2022: 111-112. doi: 10.26914/C.CNKIHY.10000.0000000000005.

[13] Zhang Lei. Singapore: Review in 2021 and Prospect in 2022 [J]. Southeast Asia, 2022(01):92-102.