

Model and Case Analysis of the Innovative Development of Gansu's Service Industry Driven by Artificial Intelligence

Chunping Li¹, Sujie Zhou²

¹Department of Public Administration, Party School of Gansu Provincial Committee of CPC (Gansu Academy of Governance), Lanzhou, Gansu, 730070, China

²Gachon University, Seongnam, 13120, Republic of Korea

ABSTRACT

Facing the rapid development of artificial intelligence technology, China has entered a critical stage of digital transformation and social intelligence. Promoting the innovative development of the service industry is of great strategic significance for transforming the economic development mode and facilitating the high-end and rationalization of the industrial structure. However, in the model of innovative development of the service industry in Gansu driven by artificial intelligence, there exist some practical predicaments, such as insufficient driving force of knowledge-intensive service industry, weak benchmark effect of leading service enterprises, and the urgent need to improve policies on talent supply and introduction. In view of this, the construction of the corresponding innovative development model is proposed, with the expectation of providing theoretical guidance for the model and case analysis of the innovative development of the service industry in Gansu driven by artificial intelligence.

KEYWORDS

Artificial intelligence; Gansu Service; Industry DeepSeek

1 Introduction

With the continuous innovation and popularization of artificial intelligence technology, opening up a new track for the development of modern service industry through intelligence has become the focus of work for achieving industrial structure upgrading at the present stage. In May 2025, the Ministry of Industry and Information Technology and nine other departments issued the "Opinions on Accelerating the High-Quality Development of the Science and Technology Service Industry", clearly stating that "efforts should be made to promote the high-end, intelligent, green and integrated development of the science and technology service industry." The service industry, as the main driving force for economic and social development, undertakes the important task of promoting the steady development of the national economy. Therefore, this paper focuses on the case analysis and practical predicaments of the innovative development of the service industry in Gansu Province, and accordingly proposes the construction of an innovative development model, with the expectation of providing theoretical guidance for the model and case analysis of the innovative development of the service industry in Gansu driven by artificial intelligence.

2 Case analysis of the innovative development of gansu's service industry driven by artificial intelligence

With the rapid development of various domestic industries facilitated by artificial intelligence technology, promoting the full integration of the service industry with artificial intelligence technology and driving the intelligence of various service sectors such as medical services, cultural and tourism services is of strategic significance for achieving high-quality and innovative development in the service industry. For medical services, Gansu Provincial Maternal and Child Health Hospital has deeply recognized the powerful driving force of artificial intelligence technology. It has jointly built the DeepSeek-R1671B and 70B dual models with Gansu Mobile to create a "1+N" smart medical system. This system provides systematic AI companion services such as 24-hour medical guidance, medication advice and medical report analysis, offering precise medical services to patients, standardizing medical services and promoting the innovative development of the service industry in Gansu driven by artificial intelligence. For cultural and tourism services, the Gansu Provincial Museum has developed the "Wing Explanation" mini-program based on an AI large model. It generates tourist profiles around information such as tourists' preferences and the composition of tourist groups, and implements customized escort interpretation according to the characteristics of different profiles. This helps tourists deeply experience the historical and cultural heritage of Gansu, and further promotes the innovative development of the service industry in Gansu driven by artificial intelligence.

2 The practical predicaments of the innovative development of gansu's service industry driven by artificial intelligence

2.1 The driving force of knowledge-intensive service industries is insufficient

In today's society, promoting the development of knowledge-intensive service industries and facilitating the full application of artificial intelligence technology and data elements in the service sector are the core driving forces for the high-quality development of the service industry ^[1]. However, in the process of innovative development of knowledge-intensive service industries, there exists the problem of insufficient driving force. On the one hand, knowledge-intensive service industries mainly rely on foreign imports for core technologies and patents, generating a large amount of expenditure on the use of intellectual property rights, resulting in a trade deficit in services in China and restricting the development of the service industry. On the other hand, knowledge-intensive service industries are strictly regulated internally. In fields such as education and healthcare that undertake public service functions, there are problems such as high entry barriers and price control, which lead to insufficient market activity and further affect the innovative development of the service industry in Gansu driven by artificial intelligence.

2.2 The benchmarking effect of leading enterprises in the service industry is relatively weak

In the process of innovative development of the service industry in Gansu Province, the lack of leading enterprises to drive the high-quality development of the industry has led to insufficient influence of service brands, which in turn restricts the benchmarking effect of leading service enterprises. First, among the existing market entities, the number of high-level benchmark enterprises is relatively small, and the number of competitive unicorn enterprises is insufficient. This makes it difficult to stimulate healthy competition among market entities, and the internal driving force for industrial innovation, upgrading and transformation is insufficient. Second, compared with manufacturing brands, the construction of the service industry brand system is still in its early stage of development. Consumers have a low awareness, poor loyalty and weak association with time-honored service brands. Under the combined influence of multiple factors, the stickiness of the consumer group in the service industry is insufficient, which restricts the innovative development of the service industry in Gansu driven by artificial intelligence.

2.3 The policies for talent supply and introduction urgently need to be improved

In the process of integrating artificial intelligence technology into the innovative development of the service industry in Gansu Province, higher requirements are also put forward for technical talents. Firstly, in terms of talent supply, service industries such as healthcare, education, and culture and tourism, while integrating with artificial intelligence technology, have created a significant shortage of technical talents. Their demand for talents is not only limited to mastering intelligent technologies but also requires an understanding of professional knowledge in related fields ^[2]. Secondly, in terms of talent introduction, housing, children's education and medical security are the main issues that restrict external talents from empowering the innovative development of the service industry in Gansu. The insufficient number of professional human resource service institutions and the imbalance between the demand of emerging industries and the supply of market talents further hinder the innovative development of the service industry in Gansu driven by artificial intelligence.

3 Model construction for the innovative development of gansu's service industry driven by artificial intelligence

3.1 Technological innovation empowers knowledge-intensive service industries

Core technological innovation is the core internal driving force for industrial development and also a key link to enhance industrial competitiveness. First, local governments in Gansu Province should increase investment in the research and development of core technologies and patents in the service industry, provide special subsidies and financial incentives for the innovative research of service enterprises, encourage the independent development of branches of production-oriented service enterprises, and lay a solid economic foundation for the innovative development of the service industry in Gansu. Second, local governments in Gansu Province should optimize the management standards for the service industry, lower the entry threshold for private enterprises, and on the basis of ensuring the quality of public services such as education and healthcare, promote healthy competition among market entities, strengthen the role of market regulation in promoting the high-quality development of the service industry, and provide a strong driving force for the construction of an innovative development model for the service industry in Gansu driven

by artificial intelligence.

3.2 Build leading enterprises and service industry brands

Leading enterprises can guide the standardized development of the entire service industry chain, promote healthy competition in the market, and drive innovative reforms in the service industry. They are a key link in the innovative development of the service industry in Gansu Province. Firstly, leading enterprises in Gansu's service industry should join hands with private enterprises, intelligent technology research institutes, and higher education institutions with strong innovation capabilities to build an intelligent service industry integration. They should concentrate their efforts on leveraging the benchmark effect of leading enterprises to facilitate the innovative development of Gansu's service industry. Secondly, Local governments in Gansu Province should intensify the publicity of time-honored service brands, build service brands with local characteristics, enhance brand influence, and thereby promote the construction of a model for the innovative development of the service industry in Gansu driven by artificial intelligence.

3.3 Policy optimization lays the foundation for talent in the service industry

Comprehensive technical talents are the basic demand for the innovative development of the service industry and play a decisive role in the process of innovative development of the service industry in Gansu. On the one hand, local universities in Gansu should strengthen the interdisciplinary construction of artificial intelligence technology and service-related majors, pay attention to the cultivation of comprehensive technical talents, and jointly build industry-university-research talent cultivation bases with service enterprises, laying a talent foundation for the innovative development of the service industry in Gansu. On the other hand, local governments in Gansu Province should introduce corresponding policies to address issues such as housing, medical care, education and elderly care for migrant talents, and enhance the attractiveness of local service industries to migrant talents. Meanwhile, headhunting companies and professional human resources service institutions will be added in various places within the province to alleviate the contradiction between supply and demand of talents and industries, and promote the construction of a model for the innovative development of the service industry in Gansu driven by artificial intelligence.

Funding

This study is a phased achievement of the 2024 Innovation Project for Scientific Research and Consultation of the Party School of Gansu Provincial Committee of CPC (Gansu Administrative College) (No: 2024ZCQN15)

References

- [1] Kong Xiangli, Mo Zhenghui. Research on the Impact of Generative Artificial Intelligence on Employment in China's Service Industry [J]. Journal of Shaanxi Normal University (Philosophy and Social Sciences Edition), 2025,54 (01) : 102-114.
- [2] Wang Xiaoyan. Artificial Intelligence Empowering High-Quality Development of the Service Industry: Theoretical Logic, Practical Foundation and Practical Path [J]. Huxiang Forum, 2020,33 (05) : 136-144.