

# A Review of Research on Rural Homestays in China Based on CiteSpace

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**Abstract** With the continuous advancement of the national rural revitalization strategy, rural homestays, as one of the important carriers for realizing the rural revitalization strategy, have positive social, economic and cultural values in optimizing the rural economic structure, promoting the integration of culture and tourism industries, and inheriting regional culture. Based on the data of 1,062 papers from China National Knowledge Infrastructure (CNKI) during 2006–2023, the spatial and temporal distribution characteristics and evolution trends of studies on rural homestays were systematically analyzed by using CiteSpace tool to draw a knowledge graph as well as the methods of bibliometrics and policy text analysis. It is found that the research on rural homestays can be divided into four stages according to time, mainly focusing on theoretical exploration (2000–2010), poverty alleviation (2011–2015), deepening research in line with national strategies (2016–2020), and refined research around digital transformation (since 2021). Research shows that the research context of rural homestays is highly coupled with the national policy cycle. Based on the research context, an in-depth analysis was conducted to reveal the research characteristics of the existing papers. The deficiencies and omissions of the current research in the context of the great development of homestays were analyzed. It is proposed that under the guidance of policies, multi-dimensional perspectives, and users' demands, qualitative and quantitative methods should be used to conduct in-depth research from multiple perspectives in the future, so as to provide theoretical and practical guidance for the upgrading of homestay construction and industrial optimization under the background of the rural revitalization strategy.

**Keywords** Rural homestay, Knowledge graph, Review

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With the in-depth advancement of the rural revitalization strategy and targeted poverty alleviation policies, the state has successively issued a number of documents, and various regions have also provided policy and economic encouragement and support based on their own characteristics. These measures have promoted the continuous development of rural homestays. Their functional positioning has also shifted from a “single accommodation function” to a multi-value carrier of “cultural inheritance-ecological protection-improvement of economic efficiency”. As one of the key measures for the revitalization of rural industries, rural homestays are enjoying the triple opportunities of policy dividend release, digital technology empowerment, and consumption upgrade drive. However, they also face practical challenges such as severe homogenization of business formats, lack of cultural connotations, uneven architectural design and construction quality, and weak sustainable operation mechanisms. Their transformation and upgrading path has become a core issue of common concern in both academic and industrial circles. Under this background, the CiteSpace software scientific knowledge graph was used to conduct a visual analysis of the research on rural homestays in China National Knowledge Infrastructure (CNKI). The development process, hotspots and trends of research on rural homestays were systematically sorted out, and future research

trends were explored to provide references for the research and practice of rural homestays.

## 1 Research method and data sources

In this study, data were obtained from the database system of China National Knowledge Infrastructure (CNKI), and a research paradigm combining bibliometrics and policy text analysis was adopted. The specific research method is as follows. Firstly, a full-domain search with “rural homestay” as the main term was conducted, with no limit on the range of search time. The target papers were obtained through manual screening, and a basic database of papers was constructed. Through repeated screening and organization of the retrieval results, irrelevant papers of conferences and newspapers were eliminated, and finally 1,062 valid papers were obtained. The papers were published from June 30, 2006 to February 20, 2025. Among them, a total of 223 papers have been included in the core journals of A Guide to the Core Journal of China, Chinese Social Sciences Citation Index (CSSCI), and Chinese Science Citation Database (CSCD). The data of the database was inputted into the CiteSpace 6.3.R1 software for the analysis of knowledge graph.

## 2 Data statistics and visual analysis

Pathfinder tailoring algorithm was adopted

in CiteSpace to optimize the network structure. In terms of parameter optimization, the visualization effect was improved by repeatedly adjusting the threshold (Top  $N=50$ ), the detection parameter of emergent words ( $\gamma=0.5$ ), and clustering module value ( $Q=0.7123$ ). Finally, the temporal characteristics and future development trends of research on rural homestays were identified through the temporal analysis of keywords, strength detection of emergent words and related policies.

### 2.1 Analysis of the number of published papers and prominent words

Based on the annual statistics of the number of published papers on rural homestays, the temporal pattern can be found (Fig.1). From 2000 to 2014, the number of papers on rural homestays was relatively small. In most years, 1–4 papers were published, and there were even no papers in 2008. The number of published papers began to increase significantly in 2015. Although there were fluctuations after 2019, it was basically large. It was up to the maximum (161) in 2021. The temporal characteristics of the number of published papers had a significant positive correlation with the introduction of relevant policies for rural development by the state. For instance, the number of papers on rural homestays began to rise significantly from 2015 to 2016 when the state issued policies such as the *Decision on Winning the Battle Against Poverty* to include rural homestays in the key

areas of targeted poverty alleviation. In recent years, the state has paid increasing attention to rural construction. With the stable development of homestay tourism, the number of future papers will be relatively high, and the research on rural homestays will become a relatively stable hotspot.

As an important tool for bibliometric research, the prominent graph of keywords can present the intensity and evolution trajectory of research hotspots through the visual changes in the temporal dimension, thereby helping researchers accurately capture the evolution process and trend of research hotspots. From the graph of prominent words (Fig.2), it can be seen that the core prominent words during 2016–2017 included “beautiful countryside” (with prominence strength of 2.23 and peak year of 2016), “targeted poverty alleviation” (with prominence strength of 3.01 and peak year of 2017), etc. It is worth noting that “targeted poverty alleviation” was the key node with the highest prominence strength and the longest duration during this period, which reflects that researchers paid more attention to the value of rural homestay industry in poverty alleviation. Meanwhile, the prominence strength of “development” and “beautiful countryside” was relatively high, reflecting the in-depth exploration of rural homestay industry by researchers. In addition, keywords such as “renovation”, “landscape design”, “old residences”, and “homestay tourism” also frequently emerged, indicating that issues such as the construction and renovation of rural homestays, the planning and design of rural landscape, and the development of homestay tourism were the focuses of researchers at that time.

## 2.2 Co-occurrence analysis of keywords

Based on the scientific knowledge graph technology, the knowledge structure of research on rural homestay was systematically deconstructed by the co-occurrence network analysis of keywords. The co-occurrence network of

high-frequency keywords was constructed by using CiteSpace software (Fig.3). The specific parameters are as follows: time slice 2006–2024; threshold selection Top  $N=10$ . Through the size, color and connection relationship of keywords, the core issues and research trends were revealed. The size of the nodes represents the frequency of occurrence, and the connection lines represent the strength of co-occurrence. From the co-occurrence analysis graph of keywords in this field, it is found that a total of 400 nodes and 472 connection lines were generated.

Table 1 shows the top 20 high-frequency keywords in the field of domestic rural homestays, which reflects the common themes of concern among scholars in this field. The top 10 keywords included rural homestay, rural revitalization, rural tourism, regional culture, landscape design, homestay design, countermeasure, homestay tourism, development strategy, and interior design. These thematic keywords constituted the key nodes and core themes in the field of research on rural homestay in China.

## 2.3 Cluster analysis of keywords

In the CiteSpace bibliometric analysis software, clustering analysis is usually used to identify hot topics, development trends and the correlations among different topics in the research field. By extracting keywords and co-occurrence relationship from the papers, clustering analysis can help researchers visually present the knowledge structure and development context of the research field.

Through the algorithm, clustering analysis was conducted on closely related keywords (Fig.4), and 10 clustering keywords were obtained, including “rural revitalization”, “rural tourism”, “countermeasure”, “integration of culture and tourism”, “spatial distribution”, “development path”, “design method”, etc. The indicators for measuring clustering effect include module value ( $Q$  value) and average contour value ( $S$  value). It is generally believed that when  $Q$  value is greater than 0.3, clustering structure is relatively clear;

as  $S$  value is greater than 0.5, clustering division is reasonable. The calculation results reveal that  $Q$  value is 0.484 4, and  $S$  value is 0.901 4, both of which meet the above standards, indicating that the results of clustering analysis are highly rational and reliable.

## 2.4 Analysis of time zone graph of keywords

The time zone graph of keywords can provide a visual analysis framework for researchers to systematically analyze the structural changes of research hotspots in the field by dynamically presenting the diachronic evolution trajectory of the research topic. The keyword timeline analysis of the papers was conducted by using CiteSpace. From Fig.5, it can be seen that rural homestays began to thrive in 2007. Academic research focused on the countermeasures and problems for the development of rural homestays in 2009. Rural tourism received widespread attention in 2010. The rural revitalization strategy was proposed in 2017, and was widely applied in the research field of rural homestays in 2018. From 2019 to 2025, research on homestays was diversified, such as interior design, spatial design, spatial layout, spatial and temporal evolution of rural homestays.

To better study the changing logic and influencing factors of the time zone graph of rural homestays, the “No. 1 documents” centered on “agriculture, rural areas and farmers” issued by the central government in 17 consecutive years from 2006 to 2023 were sorted out (Table 2). Through the comparison of the above-mentioned co-occurrence graph, clustering graph, and time zone graph of keywords and issued policies, it is found that there was a certain corresponding relationship between the release of national policies and the evolution of research on rural homestays.

It is found that the development process of rural homestays can be divided into the following four stages.

(1) Initial stage (2000–2010). In the initial

**Table 1 The top 20 high-frequency words**

No.	Keyword	Frequency	Centrality	Year of first appearance	No.	Keyword	Frequency	Centrality	Year of first appearance
1	Rural homestay	575	0.96	2007	11	Integration of culture and tourism	14	0.06	2021
2	Rural revitalization	161	0.32	2018	12	Targeted poverty reduction	13	0.05	2017
3	Rural tourism	111	1.10	2010	13	Development countermeasure	11	0.02	2017
4	Regional culture	34	0.11	2018	14	Influencing factor	11	0.12	2020
5	Landscape design	25	0.19	2017	15	Design strategy	9	0.02	2018
6	Homestay design	20	0.14	2017	16	Development model	9	0.03	2019
7	Countermeasure	19	0.79	2009	17	Service quality	9	0.02	2021
8	Homestay tourism	18	0.37	2017	18	Hainan	9	0.18	2017
9	Development strategy	17	0.14	2012	19	All-round tourism	9	0.06	2020
10	Interior design	16	0.05	2019	20	Local culture	8	0.02	2018

stage, keywords mostly included “rural tourism”, “homestay planning” and “local economy”, and research on rural homestays focuses on theoretical exploration and the initial construction of tourism forms. In the early 2000s, rural tourism began to attract attention, but homestays, as a new business form, had not yet gained widespread popularity. More studies focused on the overall development of rural areas and related planning and design of rural tourism. During this period, the gap between urban and rural areas in China gradually emerged, and academic research began to gradually focus on these emerging business forms.

(2) Development period (2011–2015). Under the dual background of the accelerated advancement

of new urbanization and the implementation of the “targeted poverty alleviation” policy, rural homestays in China have ushered in significant development opportunities. During the development period, with the acceleration of urbanization, the demand of urban residents for rural leisure has significantly increased, promoting the rapid rise of homestay economy as a new form of rural tourism. In terms of policies, the state has gradually incorporated homestays into the framework of rural revitalization and poverty alleviation. After the “targeted poverty alleviation” policy was proposed in 2013, rural homestays have been deeply integrated with tourism poverty alleviation, becoming an important means for employment and income

increase in poverty-stricken areas. Meanwhile, the government has successively issued policies for the protection of rural culture, promoted academic research to shift from a single economic effect to the integration of “cultural heritage”, “local characteristics” and “cultural tourism”, and emphasized the carrier role of homestays in the inheritance of local culture.

During this period, the practice of homestay industry presented the feature of “coexistence of exploration and contradiction”. The problem of extensive development is prominent. The architectural design of rural homestays often shows the phenomenon of simply transplanting the model of urban hotels. Regional culture is only presented in the form of surface decoration (such as traditional patterns), and lacks the construction of scene-based cultural experiences. In terms of operation and management, problems such as the lack of hygiene standards, uneven service quality and thin cultural connotations frequently occur in rural homestays. The promulgation of the industry standard *Basic Requirements and Evaluation for Tourist Homestays* in 2015 marked the launch of standardized governance.

(3) Peak period (2016–2020). The period from 2016 to 2020 was a crucial stage for the upgrading of rural homestays in China towards standardization and professionalization, as well as the peak period of academic research. In this stage, policy driving and industry practice have the feature of “dual-track common development”. At the policy level, the rural revitalization strategy proposed in 2017 incorporated rural homestays into the national strategic framework, clearly stating that they serve as a composite carrier for industrial revitalization, cultural inheritance and ecological protection. The establishment of the Ministry of Culture and Tourism in 2018 further promoted the deepening integration of culture and tourism, giving rise to cultural exploration models such as “intangible cultural heritage+homestays” and “festivals+homestays”. At this time, the research focus shifted to the effectiveness of policy implementation and paths of sustainable development. In this context, keywords such as “rural revitalization”, “homestay economic model”, and “ecotourism” have become the focus of the academic community. The research scope expanded from a single economic function to the collaborative mechanism of ecological protection, cultural revitalization, and community participation.

During this period, under the guidance of policies, industry practice presented three major breakthroughs. Firstly, the professionalization

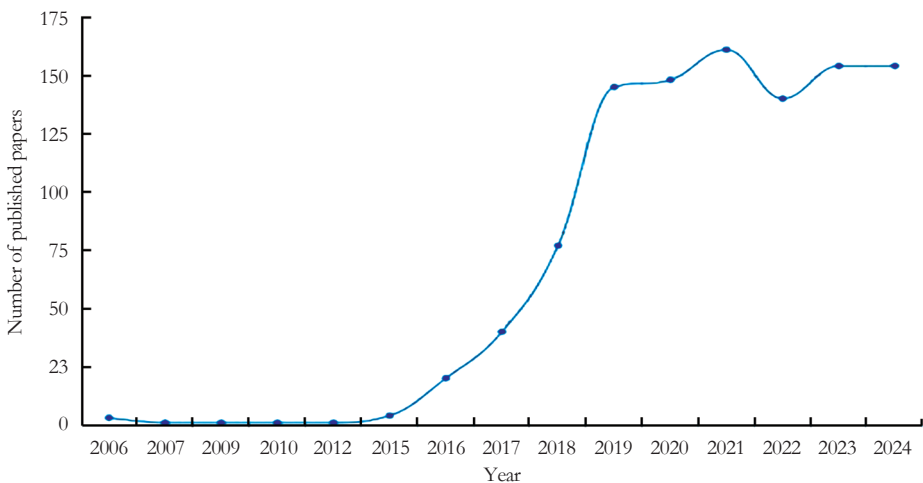


Fig.1 Number of published papers on rural homestays

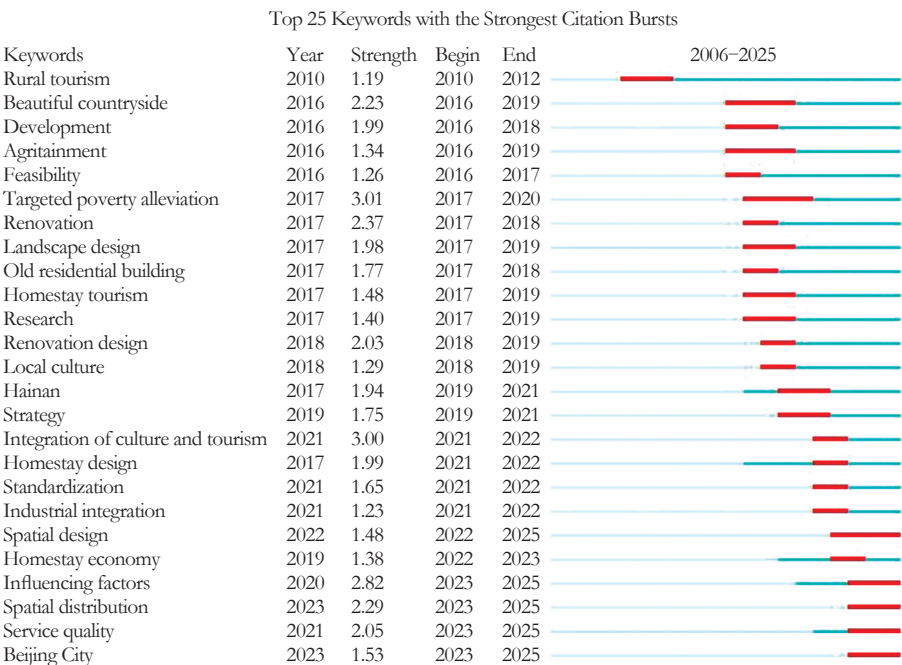


Fig.2 Graph of prominent words

of design accelerated, and the research was refined to areas such as landscape design (such as the construction of ecological buffer zones for bamboo forest homestays in the Mogan Mountain) and architectural technology (such as the innovative application of local materials for rammed earth walls in Yunnan); the design concept of green homestays began to be integrated with the LEED certification system. Secondly, the process of market standardization was accelerated. Su Kun proposed countermeasures for the cluster management of homestays based on the sharing economy model. Through the analysis of consumers' behavior, Zhang Pei revealed the core drivers of quality service and cultural identity, and promoted the improvement of industry standards and rating systems. Thirdly, a regional characteristic pattern has taken shape. Hainan has explored the coordinated development of tropical style homestays and all-round tourism based on the policies of the free trade port (such as the "integrated travel and residence" model of Sanya coastal homestay cluster), while a closed loop of the industrial

chain of "ecological homestays-intangible cultural heritage experience-e-commerce of agricultural products" have been formed in Zhejiang, Yunnan and other places. It is worth noting that at this stage, theoretical breakthroughs have been made in sustainable development research. The academic community has proposed tools such as the "carbon footprint measurement model for homestays" and "cultural ecological compensation mechanism", providing methodological support for the high-quality development of the industry.

(4) Maturity period (since 2021). In recent years, digitalization and intelligence have become important development directions in many fields. Rural homestays are no exception. Many homestays have begun to enhance their service experience by leveraging Internet platforms, smart home technologies and other means, providing more convenient and intelligent tourism services. With the gradual saturation of rural homestay market and the intensification of competition, researchers have focused on how to promote the high-quality development of rural homestays, emphasizing brand building,

innovation of management models, etc. Under the influence of community co-governance and sharing economy, homestays are no longer merely places for accommodation, and they are also closely integrated with local communities and residents, promoting the diversified development of rural homestays.

Since 2021, emerging keywords such as "digital transformation", "smart rural homestays", "high-quality development", and "community economy" have begun to emerge. China's rural homestays have entered a new stage of high-quality development centered on "digital empowerment" and "deep cultural integration". Under the policy framework of "national cultural digitalization strategy" and "high-quality development of rural revitalization", the industry presents a three-dimensional evolution feature of "technology-driven innovation, value of cultural reconfiguration, and community activation ecosystem". The deepening integration of culture and tourism has promoted cross-border practices such as "metaverse + intangible cultural heritage IP" (for instance, virtual reality was used to

**Table 2 "No. 1 documents" from 2006 to 2023**

Year	Important policy issued by the state	Main content
2006	<i>Several Opinions of the Central Committee of the Communist Party of China and The State Council on Promoting the Construction of a New Socialist Countryside</i>	Developing rural tourism and promoting the diversified development of rural economy
2007	<i>Guiding Opinions of the National Tourism Administration on Vigorously Developing Rural Tourism</i>	Clarifying the development direction of rural tourism and encouraging farmers to participate in tourism industry
2008	<i>Notice of the National Tourism Administration on Further Promoting the Development of Rural Tourism</i>	Emphasizing the role of rural tourism in promoting farmers' income growth and rural economic development
2009	<i>Opinions of The State Council on Accelerating the Development of Tourism Industry</i>	Vigorously developing rural tourism and promoting the adjustment of the rural economic structure
2010	<i>Notice of the National Tourism Administration on Promoting the Project of Enriching the People through Rural Tourism</i>	Launching the rural tourism project to enrich the people and promoting the integration of rural tourism and poverty alleviation
2011	<i>Opinions of the National Tourism Administration on Further Accelerating the Development of Rural Tourism</i>	Further clarifying the development goals and policy measures of rural tourism
2012	<i>Opinions of the National Tourism Administration on Encouraging and Guiding Private Capital to Invest in Tourism Industry</i>	Encouraging private capital to invest in rural tourism and promoting the development of rural homestays
2013	<i>Several Opinions of The State Council on Promoting the Reform and Development of Tourism Industry</i>	Vigorously developing rural tourism and promoting the development of new business forms such as rural homestays
2014	<i>Notice of the National Tourism Administration on Implementing the Rural Tourism Enhancement Project</i>	Launching the improvement project of rural tourism and promoting the standardization and branding development of rural homestays
2015	<i>Several Opinions of The General Office of the State Council on Further Promoting Tourism Investment and Consumption</i>	Supporting the development of rural homestays and promoting the quality improvement and upgrading of rural tourism
2016	<i>Guiding Opinions of the National Tourism Administration on Promoting the Development of All-round Tourism</i>	Incorporating rural tourism into the framework of all-round tourism development and promoting the integration of rural homestays and all-round tourism
2017	<i>Several Opinions of the Central Committee of the Communist Party of China and The State Council on Deepening the Side Structural Reform on the Agricultural Supply and Accelerating the Cultivation of New Driving Forces for Agricultural and Rural Development</i>	Developing rural leisure tourism industry and supporting new business forms such as rural homestays
2018	<i>Opinions of the Central Committee of the Communist Party of China and The State Council on Implementing the Rural Revitalization Strategy</i>	Developing rural tourism and rural homestays, and promoting the integration of the primary, secondary and tertiary industries in rural areas
2019	<i>Guiding Opinions of the Ministry of Culture and Tourism on Implementing the Tourism Service Quality Improvement Plan</i>	Improving the service quality of rural homestays and promoting the high-quality development of rural tourism
2020	<i>Guiding Opinions of the Ministry of Agriculture and Rural Affairs on Expanding Multiple Functions of Agriculture and Promoting High-Quality Development of Rural Industries</i>	Developing new business forms such as rural homestays and promoting the diversification of rural industries
2021	<i>Guiding Opinions of the Ministry of Culture and Tourism on Promoting High-Quality Development of Rural Homestays</i>	Introducing policies specifically on rural homestays for the first time to clearly define the standards and paths for the high-quality development of rural homestays
2022	<i>Opinions of the Central Committee of the Communist Party of China and The State Council on Doing a Good Job in Key Tasks for Comprehensively Promoting Rural Revitalization in 2022</i>	Vigorously developing rural leisure tourism and supporting the development of industries such as rural homestays
2023	<i>Opinions of the Ministry of Culture and Tourism on Promoting High-Quality Development of Rural Tourism</i>	Further clarifying the role of rural tourism and rural homestays in rural revitalization and promoting their high-quality development



restore the scene of ancient villages in the pilot project of “digital homestay” in Zhejiang Province), forming a triple empowerment of “technology, digitalization and culture”.

### 3 Review and summary of papers

From the systematic review of rural homestays and the research on the knowledge graph, it is found that the framework of rural homestays mainly focuses on policy orientation, emerging methods and market demand. While influencing the development of rural homestays, these three factors also form a closed-loop development of “policy foundation-technology empowerment-demand feedback”. That is, the policy environment provides application scenarios for emerging methods, and digital tools assist in meeting usage demands, while usage demands in turn affect the architectural design of homestays and promote the improvement of policy design. This collaborative mechanism promotes rural homestays to evolve from a single accommodation function to multiple values such as cultural inheritance, ecological protection, and community governance, ultimately achieving the optimal solution of social, economic, and ecological benefits.

#### 3.1 Studies on rural homestays under the guidance of policies

With the in-depth advancement of the rural revitalization strategy, the policy framework has gradually permeated from top-level design to grassroots practice. Existing academic studies focus on three core dimensions: policy mechanism construction, ecological and cultural collaboration, and service innovation driving. The dynamic adaptation relationship between policy tools and the development of homestays is deconstructed to reveal the paths of government guidance, market operation, and social participation and provide systematic theoretical support for the sustainable development of rural homestays. This review of domestic theoretical achievements aims to clarify the existing research and practical shifts of rural homestays under policy guidance, laying a cognitive foundation for subsequent theoretical expansion and practical innovation. The current research can be summarized into three dimensions as follows.

The first one is the policy mechanism in terms of multi-party collaboration. Through comparative research, Jin Ling et al.<sup>[1]</sup> pointed out that the success of rural homestays in developed countries relies on the dual guarantee of “policy standardization and association coordination” (such as the combination of legislative constraints

and industry autonomy). Domestic scholars have further refined the implementation paths. Tian Yan<sup>[2]</sup> emphasized that it is needed to strengthen government guidance and market regulation by improving regulations. Tian Dongyu<sup>[3]</sup> proposed a “four-dimensional co-governance” framework, that is, a multi-party collaborative mechanism can be constructed by government departments implementing supervision, business operators practicing ecological concepts, residents participating in supervision, and industry associations promoting public welfare.

The second one is the policy mechanism in terms of ecological protection and cultural inheritance. For instance, Liu Peilin et al.<sup>[4]</sup> demonstrated from the theoretical level that a green, low-carbon and ecological foundation is the prerequisite for the high-quality development of rural tourism. Wang Tianqi et al.<sup>[5]</sup> focused on design practice, and proposed that the application of local elements should take into account both cultural inheritance and environmental protection (such as the recycling of traditional building materials). Li Jianhua<sup>[6]</sup> took Guangxi as an example to verify the value of regional cultural empowerment. That is, the integration of Lingnan culture into the design of homestays through symbol translation, scene reproduction and other means can enhance cultural identity and increase economic added value.

The last one is the policy mechanism in terms of service innovation and talent support. For example, Xiao Yan et al.<sup>[7]</sup> conducted an empirical study on homestays in Chengdu. It is found that the ambiguity of industrial positioning and the simplification of services have led to an excess of mid-to-low-end products, and there is an urgent need to reconstruct the product system through stratified positioning (such as the coexistence of high-end customization and mass experience). Xiang Li<sup>[8]</sup> further proposed a dual-track strategy of “talent attraction+local cultivation”, namely introducing hotel management teams to enhance service standards, and building a localized training system (such as handicraft guided tours, ecological guided tours and other skill courses) to activate villagers’ subjectivity.

Overall, rural homestays, as an important practical carrier of the rural revitalization strategy, have a deep mutual construction relationship between their development process and policy orientation. Research shows that in terms of institutional design, it is necessary to break through the traditional one-way governance model led by the government and construct a composite policy framework integrating

“regulation, incentive and coordination”. In the dimension of ecological culture, the two-way empowerment of cultural identity construction and ecological protection mechanisms should be achieved through the creative transformation of local knowledge. In the field of service and innovation, it is urgent to establish a professional talent cultivation system featuring collaborative interaction among enterprises, universities and research institutions, so as to break through the bottleneck of structural shortage of human resources. This multi-dimensional research approach not only reveals the dynamic adaptation law between policy supply and industrial evolution, but also provides a systematic solution for the high-quality development of rural homestays.

#### 3.2 Studies on rural homestays under the guidance of multi-dimensional innovation

The current research focuses on the digital transformation of rural homestays. The reason is that digital technology innovation can significantly enhance the operational efficiency and service quality of rural homestays, and it is also the trend of future development. In this paper, this part is summarized into three dimensions (Table 3).

The first part is digital marketing and brand building, which focuses on the integration of all channels, precise marketing of homestays, as well as digital content design and the creation of brand culture IP. Wang Ce<sup>[9]</sup> studied development strategies for rural homestays in Bohai Town, Huairou District, Beijing, and proposed that it is needed to “increase brand promotion efforts” and enhance market competitiveness through digitalization. To solve the issue of digital marketing, Li Pengxiang et al.<sup>[10]</sup> suggested integrating channels, designing content and cultivating talents to directly reflect the optimization of marketing strategies. For the rural homestays in Ping’an Zhuang Village, Longsheng County, Cheng Yunyan et al.<sup>[11]</sup> proposed that it is needed to “enrich marketing content and attach importance to the operation of private domain traffic”, and focus on the application of digital marketing technology.

The second part includes digital management and operation optimization, which focuses on the digitalization of the management system for rural homestays. Zhu Shujing<sup>[12]</sup> took the development of digital homestays in Ganzhou as an example to analyze the digital optimization in service, management and marketing, and emphasized the application of intelligent devices and cloud computing platforms. Gu Xiuling<sup>[13]</sup> proposed the “digital quality improvement and

**Table 3** Dimensions of digital technology innovation

Dimension	Core objective	Typical measure	Policy relevance
Digital marketing	Enhancing market competitiveness	All-channel integration and precise push	Brand support policy
Digital management	Reducing costs and increasing efficiency	Intelligent system integration and data-driven decision-making	Technology subsidy policy
Digital infrastructure	Strengthening technical foundation	New infrastructure coverage and platform standardization	Digital economy planning

upgrading within the homestays” in Mashan, Wuxi to optimize systems such as reservation, payment, and customer management. Cheng Yunyan proposed “consolidating the foundation of intelligent operation”, which involves the improvement of the efficiency of digital management. In terms of digital infrastructure and technological innovation, the focus is on the research of data platform construction and technical standardization. In the research on the development of digital homestays in Ganzhou, Zhu Shujing proposed “building a high-quality industrial system by applying the Internet, big data and cloud computing”, and clearly defined the technical infrastructure requirements.

Overall, the research on rural homestays under the guidance of hotspots has provided important support for the high-quality development of rural industries. As a key carrier of rural cultural and tourism industry, rural homestays have promoted the sustainable development of the industry and given rise to new development models through their deep integration with digitalization. Although the application of digital media technology in the field of rural homestays has not yet been widely popularized, it is bound to become the core force promoting the development of rural industries and narrowing the gap between urban and rural areas.

### 3.3 Studies on rural homestays under the guidance of usage requirement

With the intensification of the diversification and personalization trends in tourists’ consumption demands, the attractiveness of homestays, the optimization of service supply, and the realization of subjective and objective values have become core issues of common concern in both academic and industrial circles. The current research has formed a relatively systematic theoretical framework around the development of rural homestays under the guidance of usage requirement. Its research context can be summarized into three dimensions: the psychological and behavioral mechanism of tourists, the evaluation of service quality and satisfaction, and the experience and behavioral decision-making of tourists.

Firstly, the research on the psychological and behavioral mechanisms of tourists focuses on the psychological driving factors of tourists (such as nostalgia and perceived value) as well

as the formation mechanism of loyalty. For instance, Tao Shuting et al.<sup>[14]</sup> adopted the SOR theory to construct a theoretical model of the influence of nostalgia, perceived value and unforgettable tourism experience on tourists’ behavioral intentions, providing empirical support for optimizing the development strategy of homestays. Chen Zhijun et al.<sup>[15]</sup> conducted a study on tourist loyalty based on the ABC attitude model, and concluded the effects of direct and indirect influencing factors on tourist loyalty. Long Fei et al.<sup>[16]</sup> found that there were problems in the development of rural homestays in Beijing, such as incomplete hardware facilities and functional equipment, insufficient cultural connotations, and uneven service levels, and proposed the suggestion of creating diversified products to improve homestays in Beijing.

Secondly, service quality and satisfaction evaluation related to tourists aims to construct a tourist satisfaction evaluation system (such as dimensions like facilities and equipment, hygiene and safety, and service attitude), identify service shortcomings through empirical analysis (questionnaires, and online reviews), and propose targeted improvement strategies to optimize the experience. Yu Tiancheng et al.<sup>[17]</sup> utilized crawler technology to obtain online review text data of homestays, conducted cluster analysis through the Word2Vec model and the K-means algorithm, and put forward targeted suggestions for improving the service quality of homestays based on local conditions. Guided by the demands of tourists, Zhang Junmou<sup>[18]</sup> constructed a satisfaction evaluation indicator system with four dimensions, and proposed the solution path for building excellent homestays.

Finally, tourist experience and behavioral decision-making focuses on tourists’ consumption decisions (price sensitivity) and experience quality (interaction between hosts and guests), which is directly related to tourists’ behavior and psychology. For instance, Wu Qian et al.<sup>[19]</sup> explored the spatial differentiation and influencing factors of the price of typical rural homestays in Guizhou. It is conducted that tourists’ experience had the greatest impact on the price of the homestays, and the influence of scenic spots on the price of the rural homestays was relatively significant. Zhang Haitao<sup>[20]</sup> explored the influence mechanism of interaction between hosts and guests on

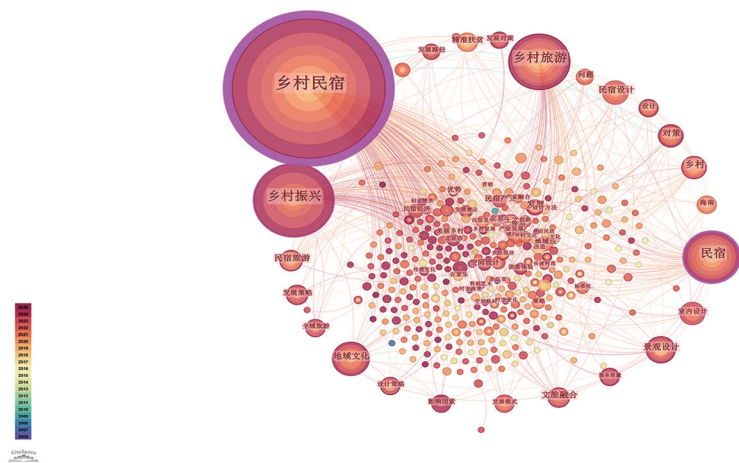
tourists’ experience (space, products, and interpersonal interaction). Zou Shijie et al.<sup>[21]</sup> studied the interaction process between hosts and guests and the influencing mechanism of tourists’ experience in rural homestays in Yangshuo County of Guilin.

Overall, the current research on homestays guided by usage demands mainly focuses on tourists. In the increasingly competitive tourism market, a high-quality tourist experience is the key for homestays to win market share. By constantly researching and improving tourists’ experience, homestays can enhance their brand image and market competitiveness, and attract more high-end customers and repeat customers.

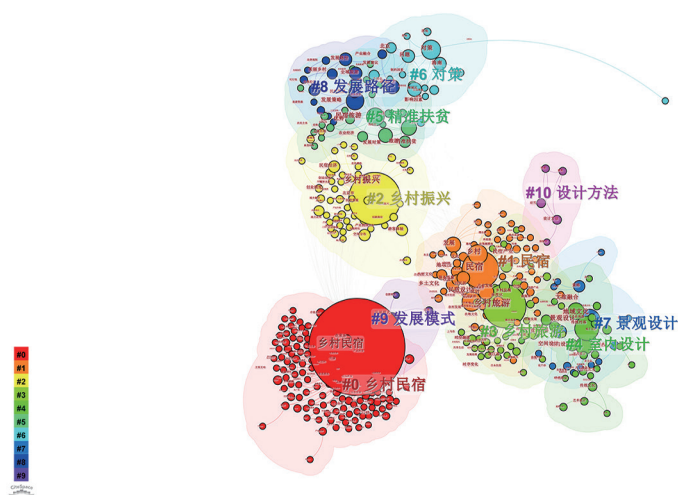
## 4 Summary and outlook

Based on the CiteSpace software, 1,062 papers on domestic rural homestays were analyzed, and the high coupling between the research context of rural homestays and national policies was revealed. The following conclusions were drawn. (i) Since 2000, the research has gone through four stages: theoretical exploration, poverty alleviation orientation, strategic deepening and digital transformation, and the core topics have gradually shifted from “rural tourism” and “targeted poverty alleviation” to “rural revitalization”, “integration of culture and tourism” and “digital transformation”. (ii) The clustering analysis of high-frequency keywords shows that policy driving, ecological protection, cultural inheritance and digital innovation constitute the main axis of research. (iii) Research under multiple guidance shows that the policy mechanism promotes the upgrading of business forms through the framework of “regulation-incentive-coordination”, and emerging technologies empower the reconstruction of operation and marketing system. The demand orientation of tourists focuses on the optimization of service experience and the co-creation of the value of hosts and guests.

Although the above conclusions provide a systematic cognitive framework for the research on rural homestays, the existing achievements still have shortcomings in terms of research perspectives, method adaptability and practical transformation. The current research on rural homestays still has the following limitations.



2. **Collaborative** - 合作式 與他人共同  
 3. **Concise** - 簡潔 - 簡明扼要  
 4. **Conciliatory** - 調解的 - 調解  
 5. **Concise** - 簡潔 - 簡明扼要  
 6. **Conciliatory** - 調解的 - 調解  
 7. **Concise** - 簡潔 - 簡明扼要  
 8. **Conciliatory** - 調解的 - 調解  
 9. **Concise** - 簡潔 - 簡明扼要  
 10. **Conciliatory** - 調解的 - 調解



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Future researchers need to mainly explore the collaborative governance framework of “policy guidance-industry self-discipline-community participation”, and establish differentiated project initiation and evaluation models based on regional characteristics. For example, environmental carrying capacity indicators should be added for ecologically sensitive areas, and cultural protection commitment clauses should be embedded in cultural heritage protection areas.

In future, researchers should focus on the low-carbon path of prefabricated homestays and use green building materials in all aspects, establish distributed energy systems (such as photovoltaic roof integration), and build a new construction model of “rapid construction-low environmental impact-cultural visibility”. It is suggested to set up special research topics, promote interdisciplinary cooperation among architecture, cultural anthropology and environmental engineering, and establish an evaluation index system for the adaptability of prefabricated technology in rural homestays.

(3) Under the guidance of usage demands, rural homestays have problems such as rigid architectural space design and difficulty in adapting to the dynamic changes in tourists'



behavior patterns. At present, the architectural design of rural homestays is mostly based on standardized service functions (such as the number of guest rooms and the division of public areas), but lacks detailed analysis of the demand characteristics of tourists (such as the spatial safety requirements of parent-child families, the barrier-free design requirements of the elderly group, and the disabled group), resulting in a disconnection between the spatial layout and the actual experience of tourists.

Researchers should construct a design paradigm driven by tourists' behaviors in future. The behavioral simulation techniques (such as spatial syntactic analysis and thermodynamic chart tracking) are employed to quantify the movement patterns of tourists and establish a mapping model of "demand-function-space". For example, an independent game monitoring area is designed for parent-child tourists, and the circular circulation line is combined to achieve the convenience of supervision. Healing gardens and elderly-friendly bathroom systems should be implanted for the health and wellness group. Through a series of studies, the paradigm transformation of rural homestays from "service containers" to "experience generators" is promoted.

Overall, through research and analysis, the dynamic evolution law of research on rural homestays has been revealed. Driven by policies, the development of rural homestays has formed a paradigm shift of "targeted poverty alleviation-rural revitalization-high-quality development". While the research has made progress, there are two limitations. Firstly, the sources of data in this study are mainly concentrated in Chinese papers. In the future, the research will jointly construct a research perspective of mutual learning between China and the West by systematically sorting out the theoretical paradigms and practical cases of rural homestay development in English papers, so that the research conclusions have more universal value. Secondly, due to the significant impact of national policies on the construction and land use of rural homestays, there are restrictions on the construction number and completion standards of rural homestays. In the future, forward-looking research should be conducted around national policies to guide the development of rural homestays.

By strengthening the above aspects, the

design of homestays can be effectively improved to better serve rural areas and better respond to the rural revitalization strategy.

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