

# Paths and Constraints of Rural Cultural Tourism E-Commerce: A Case Study of Homestay Industry in Langya Town, Qingdao, China

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**Abstract:** Against the backdrop of China's rural revitalization, cultural-tourism integration, and digital rural development policies, the e-commerce transformation of homestays has become a vital approach to rural industrial upgrading and resource revitalization. Using Langya Town in Qingdao as a case study, this paper examines its policy and regulatory system and the current state of homestay e-commerce development, and analyzes the practical difficulties and underlying constraints in its development. The findings indicate that Langya Town has established a homestay policy framework that integrates organizational structure, industrial standards, and incentive mechanisms, thereby achieving large-scale homestay clustering and omnichannel online settlement. Nevertheless, its development is characterized by widespread channel adoption yet superficial online operations. Prominent challenges include insufficient digital literacy among operators, semi-digitalized operation and management, homogenized cultural tourism products, and the sluggish transformation of intangible cultural heritage resources. This development is constrained by operator competencies, the local industrial foundation, and inadequate policy-market coordination. Based on local realities, this paper proposes optimized pathways for the in-depth development of homestay e-commerce from three perspectives: cultivating operators through tiered empowerment, innovating product forms via cultural-tourism integration, and improving mechanisms to break down barriers between policies and markets. It aims to provide references for the digital transformation of homestay businesses in coastal towns, the value conversion of cultural tourism resources, and rural

industrial revitalization.

**Keywords:** Rural Cultural Tourism E-Commerce; Homestay Industry; Rural Revitalization

## 1. Introduction

Against the backdrop of rural revitalization and cultural-tourism integration-major strategic initiatives for advancing agricultural and rural modernization and reshaping urban-rural relations in China-policy documents such as the Opinions on Implementing the Rural Revitalization Strategy and the Digital Rural Development Action Plan (2022-2025) explicitly identify cultural-tourism integration and rural e-commerce as key priorities of rural revitalization. These documents establish the policy direction of harnessing digital technologies to revitalize rural resources and to deeply integrate cultural-tourism formats with rural development [1]. Within this institutional framework, homestays function as multi-functional carriers that feature the display of local culture, the creation of consumption scenarios, and the organization of community participation [2]. They serve as vital links connecting rural resources with external markets, drive the upgrading of rural consumption and the restructuring of employment, and are widely regarded by local governments as core instruments for fostering rural industrial clusters and promoting industrial upgrading.

As digital infrastructure extends into rural areas, e-commerce models are increasingly embedded in rural cultural tourism operations, particularly in the production and sales stages of homestay businesses [3]. This integration can shorten industrial value chains, expand market accessibility, and revitalize the value of local cultural symbols. While boosting direct tourism income, it also restructures the functional

framework and factor allocation of rural industries, facilitating a gradual shift from a traditionally agriculture-dominated economy to a modern service-oriented economy.

Nevertheless, profound obstacles to transformation remain. Current practices face structural dilemmas: a capability gap exists between practitioners' generally insufficient digital literacy and the high operational demands of the platform economy; the seasonal fluctuation of tourism demand conflicts with the fixed nature of homestay assets, aggravating supply instability; the contradiction between personalized local services and standardized platform management reduces the efficiency of adaptation; and ineffective transmission between policy investment and the actual gains of market entities lowers the conversion rate of institutional dividends. From a broader perspective, these problems stem from a structural decoupling between macro-level institutional supply, micro-level actor capabilities, and industrial foundation support [4]. While policy formulation emphasizes sound top-level design, implementation is constrained by insufficient human capital, rigid organizational modes, and underdeveloped factor markets [5-7]. This makes it difficult to translate policy objectives into tangible development capacity for market players, creating a core bottleneck that constrains the high-quality development of rural cultural tourism e-commerce [8].

Existing studies have explored various integration modes and e-commerce application paths, yet most remain limited to phenomenon summarization and case narration, lacking systematic theoretical analysis of the micro-level mechanisms underlying the ineffective transmission among policy, capability, and industry. Insufficient theoretical attention and empirical interpretation have been devoted to the organizational tensions and capability deficiencies of homestay operators-key actors in integration-as they navigate institutional embedding, technology adoption, and market adaptation.

Against this background, this study selects Langya Town in Qingdao, Shandong Province-an area endowed with profound historical heritage and superior coastal ecological resources-as a case to explore breakthrough paths for the e-commerce transformation of rural cultural tourism.

## **2. E-Commerce Development Status of the Homestay Industry in Langya Town Driven by Policies**

Langya Town is located in the southwest of the Qingdao West Coast New Area, bordered by the Yellow Sea to the east, with a high-quality coastline stretching 26 kilometers. Longwan Beach is characterized by gentle terrain and clear waters. As a nationally protected key cultural relic site, Langya Terrace has long been renowned as a scenic spot for sunrise viewing and sea worship ceremonies. The town preserves a profound historical and cultural heritage, including the three eastern inspection tours of Emperor Qin Shi Huang and the legendary ocean voyage of Xu Fu. It also boasts diverse forms of intangible cultural heritage, such as the Langya sea worship tradition, bamboo craftsmanship, and steamed flower pastry art. These resources constitute the core competitive advantage for the differentiated development of local homestays. Nevertheless, the local industry faces a major challenge in converting cultural resources into tangible and marketable tourism products and in bridging the gap between cultural inheritance and market commercialization.

### **2.1 Policy Framework and Regulatory System**

To promote the standardized development and e-commerce transformation of the homestay industry, Langya Town has established a well-structured policy support system centered on organizational architecture, industrial standards, and incentive mechanisms.

As early as 2008, Wangjiatai Hou Village took the lead in founding the Longwan Professional Tourism Cooperative, which specified service criteria and star-rating rules for homestays, thereby achieving initial intensive management of homestay services. Building on this foundation, the town integrated resources from scenic spots, homestays, and catering businesses to establish the Langya Tourism Service Association. By adopting a model of unified standards, unified training, and unified pricing, it effectively accelerated the clustered growth of the homestay industry and laid a solid organizational foundation for e-commerce transformation.

In 2024, the town officially promulgated star-rating standards for homestays and fisherman-

style feasts, establishing a core evaluation system characterized by "four merits and three strengths." Tourist reviews were set as a mandatory assessment indicator, which aligns with the online reputation management required for e-commerce development and facilitates the incorporation of scattered homestays into standardized operations.

With regard to incentives, a dynamic management model combining a membership system with a point system was implemented. Points are awarded quantitatively based on hygiene conditions, service quality, and online reviews. Homestays with high scores enjoy priority access to government promotional resources and professional training [9]. Diversified cooperation models, such as the "Community branch-cooperative-household" structure, have been widely promoted. Villagers are encouraged to contribute their idle houses to the Hailongwan Common Prosperity Project, thereby stimulating industrial vitality through income from housing shares, wages, and project dividends[10].

## 2.2 Specific Manifestations of Homestay E-Commerce Application

Guided by relevant policies, homestay e-commerce in Langya Town has achieved initial results, characterized by widespread online channel adoption yet limited depth of operational application. In terms of online marketing, OTA platforms such as Meituan and Ctrip have become the primary channels for tourist reception, and online listing has become an industry norm, signaling the completed shift of customer acquisition channels to the digital domain. Only a small number of operators have acquired short-video editing and content creation skills through training at the Langya Coastal Story Local Influencer Training Base, enabling them to conduct independent promotion on platforms such as Douyin and Xiaohongshu. Most homestays, however, merely accept orders passively on basic platforms [11,12], failing to realize the full value of online marketing.

In terms of operation and management, online room reservation has been fully popularized. Nevertheless, core processes such as room availability management, customer relationship maintenance, and material procurement still rely on traditional methods, including WeChat communication and paper-based registration,

and the adoption rate of digital management tools remains low. Some homestays engage in online operations solely to meet the point-assessment requirements of the association, rather than integrating digital modes into daily management, resulting in a superficial transformation.

In terms of product presentation, severe homogenization exists among online homestay products, which mainly consist of basic accommodation charged per room per night with limited integration of local cultural elements. The abundant intangible cultural heritage resources have not been deeply embedded into homestay services [13]; only a few homestays have launched relevant experiential programs, and these have not been promoted at scale. Specialty goods, such as dried seafood and cultural and creative products, are predominantly sold offline. The closed-loop online sales system remains underdeveloped, leading to low product added value.

## 2.3 Completed Platform Access with Insufficient Operational Innovation

Driven by policy incentives, more than 120 local homestays in Langya Town have established a presence on mainstream e-commerce platforms such as Meituan and Ctrip, collectively offering over 5,100 beds online. The average annual income of homestay operators exceeds 150,000 yuan, indicating that the construction of basic e-commerce channels has been largely completed and that the industry has successfully transitioned from traditional offline customer acquisition to multi-channel online marketing [14].

Nevertheless, despite this extensive platform access, most operators still lack essential digital operational capabilities. Their engagement with online channels remains largely passive and transactional: proactive online marketing efforts are rare, user data analytics are seldom employed to inform business decisions, and refined customer relationship management-such as personalized follow-ups, membership cultivation, and tailored service recommendations-is almost entirely absent. As a result, online operations remain rudimentary and superficial, falling far short of the value-adding potential that digital platforms can offer.

Moreover, online product innovation has been notably sluggish. Intangible cultural heritage resources, which constitute a distinctive local

endowment, are poorly integrated with homestay services. The vast majority of online offerings remain limited to basic room-night accommodation packages, while innovative experience products that embed local cultural elements—such as immersive craft workshops, heritage-themed culinary events, or culturally narrated coastal tours—have not been systematically developed. A competitive and diversified product system that differentiates Langya's homestays from generic alternatives is thus yet to emerge.

This structural imbalance between mature channel access and backward operational and product innovation has become a major bottleneck constraining the high-quality development of the local homestay e-commerce industry. Without substantive upgrading in operational competence and product design, the mere presence on digital platforms risks becoming a hollow shell that generates limited added value and fails to translate cultural resources into sustainable competitive advantage [15].

### **3. Suggestions on Promoting the In-Depth Development of Homestay E-Commerce**

The e-commerce transformation of the homestay industry in Langya Town is currently constrained by three fundamental bottlenecks: insufficient digital operational capabilities on the part of market entities, an underdeveloped industrial foundation characterized by product homogenization and weak cultural integration, and inefficient coordination between top-down policy deployment and bottom-up market operation. Individually, each of these bottlenecks presents a significant barrier to development; collectively, they constitute a multidimensional dilemma in which weaknesses in one domain reinforce deficiencies in the others. Such systemic constraints cannot be effectively resolved through isolated, piecemeal interventions. Rather, they demand synergistic progress achieved through systematic capacity empowerment and institutional innovation, whereby operator skills, product structures, and governance mechanisms are upgraded in a mutually reinforcing manner.

Drawing on the specific development context of Langya Town's homestay sector, this study proposes targeted and practicable development strategies structured around three interconnected core dimensions: operator competency

upgrading, product model innovation, and policy-market coordination optimization. The first dimension addresses the capability deficit by promoting hierarchical training and digital tool adoption, the second seeks to overcome product homogenization through deep cultural-tourism integration and the creative conversion of local heritage resources, and the third aims to bridge the gap between institutional design and market vitality by refining incentive mechanisms and coordination platforms. Together, these strategies are designed to drive the transformation of local homestay e-commerce from its current state of superficial online settlement—where digital platforms serve primarily as booking channels—toward a model of refined, in-depth digital operation that embeds local cultural value, data-driven management, and diversified service offerings into the core of everyday business practice.

#### **3.1 Empowering Business Entities: Hierarchical Training and Hands-on Accompanied Mentoring**

The digital operational capabilities of homestay operators in Langya Town exhibit significant heterogeneity, ranging from tech-savvy young entrepreneurs to elderly owners with minimal digital exposure. This diversity renders the conventional one-size-fits-all training model ineffective, as it fails to address the differentiated practical needs and learning capacities of distinct operator groups. To bridge this gap, hierarchical training mechanisms should be designed and implemented in accordance with the individual attributes, existing competency foundations, and business models of heterogeneous operators. For younger operators who demonstrate strong learning initiative and high receptivity to digital tools, training programs can be strategically oriented toward advanced skills such as short-video content creation, live-stream marketing, and user data analytics, thereby empowering them to adopt proactive and precision-driven online marketing strategies that expand market reach and enhance brand influence. In contrast, senior operators, who may face more constraints in technology adoption, should be prioritized with practical skill training covering fundamental OTA platform operations, online customer communication, and online reputation governance. This foundational training aims to stabilize their online order reception capacity,

ensure basic digital functionality, and facilitate the gradual improvement of their digital operational proficiency through repeated practice and low-barrier learning modules.

However, short-term centralized training alone is insufficient to resolve the practical operational dilemmas encountered in the long-term digital transformation process, as the acquisition of digital skills requires sustained practice, timely troubleshooting, and context-sensitive adaptation. This highlights the necessity of continuous follow-up tutoring and on-site guidance. It is therefore recommended that local governments and industry associations procure professional third-party services to establish a dedicated e-commerce service team that provides on-site, one-on-one industrial tutoring. Such full-process practical guidance should cover diverse operational links, including online storefront optimization, marketing content planning and calendar management, operational data interpretation, and customer feedback analysis, enabling operators to independently master professional digital operation capabilities step by step. This mechanism effectively bridges the practical gap between standardized classroom-style training and the complexities of real-world application, transforming generic knowledge into actionable, context-embedded skills.

Furthermore, high-performing local operators can be strategically leveraged as benchmark examples to generate industrial spillover effects and peer learning dynamics. This study proposes prioritizing the cultivation of returned young entrepreneurs who combine in-depth local cultural cognition with mature digital operation capabilities, supporting them to build distinctive Internet-famous homestay brands that demonstrate the tangible benefits of e-commerce transformation. The mature and replicable operational experiences of these benchmark enterprises-covering digital marketing workflows, cultural product design, and customer engagement models-can then be systematically summarized, codified, and disseminated within the industry through workshops, field visits, and experience-sharing platforms, thereby providing practical references and confidence for peer operators. This demonstration-and-diffusion mechanism substantially contributes to the widespread adoption of e-commerce operational concepts and digital skills across the local homestay

industry, gradually raising the overall digital competency baseline from passive platform presence to active, innovation-driven operation.

### **3.2 Product Model Innovation: Standardized Experience System and Off-Season Product Development**

The inherent non-standard characteristics of homestay services conflict with the large-scale, standardized operational logic of online platforms, significantly restricting the operational efficiency of homestay e-commerce transformation. To address this dilemma, industry associations may take the lead in cooperating with intangible cultural heritage inheritors and local artisans to develop procedural and standardized cultural experience modules. Specifically, unified specifications regarding service duration, operational procedures, and quality assessment criteria can be formulated for locally characteristic tourism activities, including traditional flower pastry making and tidal flat exploration. Homestay operators can then flexibly combine these standardized modules according to their differentiated market positioning. This design achieves a synergy between unified service quality and personalized product features, thereby balancing industrial standardization with market differentiation.

The historical, cultural, and ecological resources of Langya Town exhibit low seasonal sensitivity, providing fundamental support for the development of off-season tourism products and the mitigation of seasonal imbalances in visitor flows. During the low tourist seasons of autumn and winter, diversified multi-day experiential products centered on cultural immersion tourism, ecological bird-watching, and intangible cultural heritage study programs can be systematically developed. By adopting pre-sale mechanisms and targeted online content marketing strategies, homestays can precisely capture niche customer groups, improve off-season occupancy rates, and further smooth the seasonal operational fluctuations of the local homestay industry.

In addition, industry associations can foster industrial synergy between homestay businesses and surrounding commercial sectors to establish a digital micro commercial alliance. Cross-industry cooperation among homestays, catering services, handicraft workshops, and cultural and creative retailers can be fully leveraged.

Preferential policies and consumer benefits offered by partner merchants can be embedded into online booking interfaces and offline scenario-based QR codes, facilitating passenger flow sharing and interactive consumption linkages. This approach helps build a closed-loop consumption system covering accommodation, cultural experience, and featured shopping, ultimately improving the added value and comprehensive economic returns of local homestay products.

### **3.3 Mechanism Optimization: Breaking Institutional Barriers between Policy Implementation and Market Operation**

The existing policy evaluation and incentive system is decoupled from the actual revenue generation of homestay businesses, which weakens the incentive effectiveness for market operators. To mitigate this mismatch, local governments can establish an effective linkage mechanism among the official point-based governance system, star-rating assessment results, and real-time operational data from OTA platforms. Homestays with high star ratings and outstanding performance can be granted official endorsement labels and algorithmic search weighting privileges on mainstream tourism platforms. This institutional arrangement translates administrative credibility into tangible online traffic advantages, allowing operators to capture substantial economic returns from standardized management and digital transformation, thereby stimulating their endogenous motivation for e-commerce upgrading.

Tourism industry associations need to transform their functional positioning from single-dimensional administrative supervision to comprehensive industrial service governance. On behalf of local homestay operators, associations can negotiate with OTA platforms to reduce commission charges and optimize platform cooperation terms. Furthermore, collective procurement of operational supplies and shared service resource allocation can effectively lower the operational costs of individual homestay businesses. Organizing unified live-streaming campaigns and online tourism exhibitions can enhance the collective brand exposure of Langya's homestay industry. In addition, the construction of a regional talent-sharing mechanism enables the flexible engagement of professional photographers, data

analysts, and other specialized service providers. This model balances industrial scale economies with the operational flexibility of micro and small homestay entities.

A standardized and data-driven decision-support mechanism should be established to facilitate scientific operational governance. Government departments and industry associations can integrate multi-source data resources, including OTA operational statistics and industrial supervision evaluation results, and compile regular operational reports on homestay e-commerce development. By systematically organizing core operational indicators-such as booking trend dynamics, tourist source structural characteristics, and consumer review sentiment features-institutions can deliver targeted data feedback to market players. Such information support provides an empirical basis for operators' dynamic pricing adjustments, product iteration, and refined marketing strategy formulation.

Deepening university-local cooperation serves as a critical approach to resolving the structural talent shortage that constrains rural e-commerce development. A part-time expert engagement system can be implemented to attract urban digital economy professionals to provide long-term remote guidance and periodic on-site tutoring. Relying on university practice bases, students majoring in e-commerce and tourism management can participate in front-line digital operation practices, supplementing grassroots human resources for industrial development. Meanwhile, cross-regional collaborative talent introduction mechanisms can be adopted to flexibly attract high-quality digital talent, thereby continuously bridging the intellectual resource gap in rural homestay digital transformation and achieving sustainable industrial empowerment.

### **4. Conclusion**

Set against the institutional backdrop of rural revitalization and cultural-tourism integration, this study conducts a case analysis of the homestay industry in Langya Town, systematically examining the evolutionary characteristics and practical status of its policy-driven e-commerce transformation. The empirical results indicate that, endowed with superior coastal ecological resources and profound intangible cultural heritage, Langya Town has, under policy incentives, established a

comprehensive institutional support system for homestay development. These institutional arrangements have facilitated the large-scale clustering of homestay businesses and their comprehensive presence on mainstream online platforms, effectively promoting industrial upgrading and raising the household incomes of local rural residents.

Nevertheless, the e-commerce transformation of Langya's homestay sector remains at a superficial operational stage, falling short of in-depth digital empowerment. The industry is confronted with multiple institutional and operational dilemmas, including insufficient digital literacy among market operators, severe homogenization of tourism products, inadequate conversion of local cultural and tourism resources into market value, and a disconnection between policy design and market operation. Fundamentally, the high-quality development of local homestay e-commerce is constrained by three core bottlenecks: the competency limitations of individual operational entities, a fragile industrial foundation, and inefficient policy-market coordination mechanisms.

To further advance the sustainable and in-depth digital transformation of the homestay industry, this study proposes three optimization strategies. Specifically, hierarchical and scenario-based training systems should be implemented to address the capability deficiencies of business operators; local cultural and ecological endowments should be fully leveraged to realize differentiated product innovation; and institutional mechanisms should be optimized to reduce operational frictions and bridge the gap between policy supply and market demand.

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