

Shortcomings in Urban Smart Tourism Public Services and Strategies for Improvement

Zhou Xianshi¹, Xie Yuan²

¹*Jiangxi University of Finance and Economics, Nanchang, Jiangxi, 330000, China*

²*Jiangxi University of Technology, Nanchang Jiangxi, China*

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Abstract: Against the backdrop of the deep integration of digital technologies and the tourism industry, smart tourism public services have become an important vehicle for enhancing urban tourism governance and improving visitor experiences. This paper analyzes the development of urban smart tourism public services and explains their practical value from three dimensions: public-service effectiveness, visitors' smart tourism experiences, and urban tourism development. At present, urban smart tourism public services continue to face a number of shortcomings, including fragmented service resources, insufficient information sharing, poor functional coordination across platforms, unsatisfactory digital experiences for visitors, and weak support in terms of technological infrastructure and professional talent. Accordingly, cities should promote cross-departmental tourism data sharing and service-resource integration, optimize the functions and user journeys of smart service platforms, and strengthen digital infrastructure, data security, and talent-support systems. These measures can improve the precision, convenience, and coordination of smart tourism public-service provision and provide effective support for the high-quality development of urban tourism.

1. Introduction

Digital technologies such as big data, artificial intelligence, and the mobile internet continue to penetrate the tourism sector, and the ways visitors obtain tourism information, plan itineraries, and participate in tourism activities have changed markedly. Moreover, urban tourism public services appear to be shifting from traditional offline provision toward digital and intelligent service models. Given that smart tourism public services connect scenic attractions, transportation systems, cultural venues, and urban public facilities, the evidence suggests that they play an important role in information inquiry, visitor-flow guidance, intelligent navigation, reservation services, and safety assurance. However, smart tourism development in some cities may still show that data silos, fragmented services, complicated platform operations, uneven facility coverage, and inadequate institutional support persist, and this could indicate a gap between investment in smart technologies and actual service outcomes. Study shows systematic identification of shortcomings matters. Therefore, the development of targeted improvement strategies could carry practical significance for enhancing the quality of tourism public services, improving visitor experiences, and strengthening the competitiveness of urban tourism^[1].

2. Importance of Urban Smart Tourism Public Services

2.1. Enhancing the Effectiveness of Tourism Public Services

Urban tourism involves intensive population mobility, diversified service demands, and rapidly changing information. Given that these conditions strain traditional systems, the traditional public-service models may prove prone to delays in information transmission, resource allocation, and demand response. Moreover, by drawing on big data, cloud computing, and the mobile internet, smart tourism public services could integrate important information on visitor flows, public transportation, weather conditions, venue status, and public facilities, thereby suggesting that an information-service system covering the entire journey becomes possible. However, the significant findings indicate that real-time data might enable administrative authorities to monitor changes in visitor flows and adjust resource allocation accordingly. Authorities track resource use and cut management costs from information gaps. Furthermore, the evidence may demonstrate that visitors can conveniently access transportation, navigation, reservation, and consultation information through these systems. In light of these findings, the results could indicate that visitors experience reduced time searching for information and waiting on site. Nevertheless, the key findings suggest that timeliness, precision, and coordination of urban tourism public services might be strengthened through this approach. Given that data integration supports these outcomes, the study may establish that smart systems improve service coordination overall^[2].

2.2. Improving Visitors' Smart Tourism Experience

Visitors' demands for urban tourism services show a shift from basic information acquisition toward convenient, personalized, and end-to-end services, and this shift makes smart tourism public services an important vehicle for improving the tourism experience. Given that city tourism service platforms, intelligent guide systems, online reservation channels, and digital maps now support most trips, visitors could learn about destination resources, transportation routes, and opening information before departure. Moreover, the evidence suggests that travelers obtain navigation, interpretation, and visitor-flow alerts during their trips, and they may submit evaluations, feedback, and service inquiries afterward. However, these smart services could break down information barriers among scenic attractions, transportation nodes, and public cultural spaces, and the findings indicate that this process links dispersed tourism resources into a continuous service chain. Information adapted to visitor needs reduces travel barriers and decision costs in unfamiliar settings and enhances convenience, comfort, and satisfaction throughout the tourism process^[3].

2.3. Promoting Quality Enhancement and Upgrading of Urban Tourism

Smart tourism public services shape not just individual visitor experiences but also the efficiency of urban tourism resource allocation and the quality of industry development. However, as digital technologies become incorporated into tourism public services, the data connections among scenic attractions, transportation systems, cultural venues, commercial facilities, and public authorities could grow closer, and this may suggest a foundation for the coordinated development of urban tourism resources. Given that data on visitor-flow distribution, consumption demand, travel trajectories, and service evaluations can reflect changes in the tourism market, the evidence might indicate a basis for tourism product development, facility planning, and service adjustment, shifting development from experience-based judgment toward data-supported decision-making. Moreover, efficient services appear to improve the accessibility and visibility of urban tourism resources and could foster coordinated development across culture, commerce, transportation, and related sectors.

Services shift from single attractions toward citywide integration, enhancing carrying capacity and competitiveness.

3. Problems in Urban Smart Tourism Public Services

3.1. Insufficient Effectiveness of Service Provision

Urban smart tourism public services span transportation, scenic attractions, cultural venues, accommodation, public administration, and other fields. However, evidence may suggest that in some cities information resources remain dispersed across departments and platforms, since data standards, update frequencies, and management criteria lack uniformity. Given that these findings demonstrate delays, information on visitor flows, public transportation, parking availability, and venue opening status could appear updated inconsistently, and cross-departmental sharing might remain limited. Moreover, the results indicate that public-service platforms may fail to fully reflect real-time tourism operations. Platforms focus on attraction introductions and route searches. Notwithstanding these basic functions, some platforms might respond inadequately to dynamic needs involving real-time visitor flows, emergencies, and transportation changes, and the evidence could suggest that this creates a disconnect between smart services and visitors' actual travel scenarios^[4].

The alignment between service provision and visitor demand shows notable weakness. Given that some cities emphasize the number of functions built into smart tourism platforms, usage frequency and practical value often get overlooked. Moreover, similar inquiry functions may be duplicated, while account systems, reservation mechanisms, and payment systems remain fragmented across platforms. However, during public holidays and peak tourism seasons, rapid increases in visitor numbers could indicate that reservation systems become overloaded, information releases get delayed, and responses to online inquiries slow considerably. In light of these patterns, smart facilities appear concentrated in popular attractions and core commercial districts. Peripheral attractions, cultural spaces, and transit hubs lack coverage. These spatial disparities in public-service provision may weaken the overall effectiveness of urban smart tourism public services.

3.2. Unsatisfactory Smart Tourism Experiences for Visitors

Smart tourism applications continue to proliferate, yet visitors still encounter complicated operations, fragmented information, and poor service continuity in actual use. However, reservations for scenic attractions, transportation inquiries, admission to cultural venues, and tourism complaints may often be distributed across different platforms, requiring visitors to switch repeatedly among applications or mini-programs. Given that some services also require repeated registration, this could indicate that identity verification and information entry create additional friction. Moreover, the inconsistent interface design, operational procedures, and information presentation across systems could increase the time cost that visitors face when accessing services. Guide systems show inaccurate positioning, dull content, delayed updates. Nevertheless, online information appears not to be effectively aligned with offline environments, and this misalignment might indicate that the effectiveness of smart services is reduced.

Visitors differ in their ability to adapt to digital technologies. Given that some smart tourism services rely excessively on smart devices, the evidence may suggest that this creates significant barriers for older visitors, visitors with disabilities, and those with limited digital skills. Moreover, ticketing, reservations, and navigation could concentrate in online channels while staffed offline services appear reduced, and this might indicate that certain groups struggle to complete tourism

activities smoothly. However, the findings may suggest that personalized services on some platforms remain limited to simple attraction recommendations. Platforms fail to identify schedules, interests, transport, needs. Therefore, the results might indicate that recommendations become highly homogeneous, and the important gaps in convenience, inclusiveness, and precision could prevent smart technology investment from translating into real gains in visitor experience^[5].

3.3. Insufficient Support for Smart Tourism Development

Urban smart tourism public services require stable technological, data, talent, and management systems, yet some cities continue to face weak foundational conditions. However, the evidence may suggest that information systems built by different departments vary substantially in technical architecture, data formats, and interface standards, and this could indicate pronounced data silos that make continuous aggregation and effective linkage of tourism data difficult. Moreover, the findings might indicate that some smart tourism facilities appear to prioritize construction over maintenance, favoring rollout while neglecting upkeep. Given that equipment is not continuously updated after deployment, results could demonstrate that malfunctioning terminals, outdated system versions, and delayed data updates reduce the practical value of these facilities. Weaknesses in cybersecurity and data governance limit deeper use of tourism resources.

Talent shortages and weak collaborative governance also hinder the sustainable development of smart tourism. Smart tourism public services integrate tourism management, information technology, data analysis, and public-service functions and therefore require interdisciplinary professionals. However, some administrative organizations may still lack personnel with the capabilities needed for digital operations and data analytics. Given that responsibilities among government departments, tourism enterprises, scenic attractions, and technology providers remain unclear, the evidence suggests that coordination efficiency in project development, platform operation, and data management could stay low. Projects emphasize short-term construction over operational quality. Moreover, some smart tourism projects may pay insufficient attention to actual usage effectiveness, and this could indicate that the findings point toward duplicated systems and weak resource use. Furthermore, these important results might suggest that such patterns constrain the sustainable development of smart tourism public services, and the evidence appears to support that closer coordination remains critical going forward.

4. Strategies for Optimizing Urban Smart Tourism Public Services

4.1. Improving the Effectiveness of Public-Service Provision

Cities should strengthen the integrated planning of tourism public-service resources and establish regularized data-sharing mechanisms among departments responsible for culture and tourism, transportation, public security, meteorology, market regulation, and related functions. Moreover, the evidence may suggest that data standards and interface specifications for attraction visitor flows, public transportation, parking availability, venue opening status, and other information could be standardized, with dispersed information incorporated into an integrated urban smart tourism public-service platform. Given that these findings demonstrate a clear need, platform functions might indicate that optimization around the entire visitor journey could help, particularly for high-frequency services such as real-time visitor-flow inquiries, transportation transfers, parking guidance, venue reservations, weather alerts, and emergency information dissemination. However, the results appear to show that repetitive registration, information entry, and cross-platform switching should be reduced for users. Study shows dynamic updating mechanism needed. In light of these findings, a dynamic tourism-information updating mechanism should therefore be

established so that the frequency of information releases might be adjusted promptly in response to visitor-flow changes during public holidays, major events, and peak tourism seasons, thereby improving public-service responsiveness.

Public-service resource allocation should also extend from core scenic attractions to the broader urban tourism space. Given that visitor flows, facility-use frequency, and service demand vary across a city, the deployment of smart facilities should be determined accordingly, with stronger coverage at transportation hubs, distinctive commercial and cultural districts, public cultural venues, and peripheral attractions. Moreover, systems with low utilization or overlapping functions could indicate that integration would reduce the resource waste caused by duplicated construction. Additionally, an operational evaluation mechanism for smart tourism public services should be established, and this framework might suggest that indicators such as platform visits, information accuracy, service-response time, facility utilization, and visitor evaluations be incorporated into performance assessment. Data monitoring flags weak spots fast. In light of these findings, the focus of public-service provision could shift from the accumulation of functions toward improvements in actual effectiveness, and this shift may indicate that the sector's priorities are changing in a meaningful way.

4.2. Improving Visitors' Smart Tourism Experience

Smart-service processes should be built around visitors' actual use scenarios. Moreover, functions such as attraction reservations, transportation inquiries, intelligent navigation, cultural-venue services, complaints, and consultation could indicate a need for integration to reduce frequent switching among applications and mini-programs. Given that these entry points create friction, major service entry points and identity-authentication methods should be standardized, while ticket purchasing, reservation, admission, and payment procedures might benefit from simplification to improve continuity across tourism scenarios. However, the evidence suggests that intelligent guide systems should promptly update attraction locations, opening hours, tour routes, and visitor-flow conditions, and could provide route navigation, public-facility searches, and congestion alerts based on visitors' locations. Data shows tourism patterns link interests, stay length, and travel modes. Therefore, tourism data may support improved recommendations for attractions, routes, and public-service information that better match visitors' actual needs.

The design of smart services should also fully accommodate the needs of different visitor groups. While digital services are promoted, necessary staffed service counters, telephone consultation, and on-site guidance should be retained to avoid excessive dependence on smart devices in public tourism services. For older visitors and those with limited digital skills, interface hierarchies, font display, and operating steps should be simplified, with easy-to-use modes and voice-assistance functions provided where appropriate. For visitors with disabilities, information on accessible routes, facility locations, and related services should be improved. Feedback channels covering the pre-trip, on-site, and post-trip stages should be established, and frequent complaints, operational barriers, and service evaluations should be categorized and analyzed so that platform functions and service processes can be adjusted in a timely manner and smart tourism development can better reflect visitors' actual needs.

4.3. Strengthening Support for Smart Tourism Development

The technological and data foundations of smart tourism public services need strengthening. Given that different government departments, scenic attractions, and public-service institutions currently operate under varied standards, these bodies should develop systems according to unified rules, and clear guidelines on data collection, updating, exchange, and use could improve

interoperability among systems. Moreover, a full life-cycle management system for smart facilities should be established, covering regular inspection and version updates for smart terminals, guide equipment, monitoring facilities, and information platforms. However, time limits for equipment-failure handling and responsibilities for system maintenance must be specified clearly to prevent an emphasis on construction at the expense of operation. Systems need better security. Visitor identity, consumption records, and location data need category management; authorization, storage, and access rules need strict enforcement. Furthermore, monitoring of abnormal access and security-risk inspections should be strengthened to provide a stable environment that supports the compliant use of tourism data.

Talent development and collaborative mechanisms should advance alongside technological investment. Given that smart tourism platforms depend heavily on skilled staff, interdisciplinary professionals with expertise in tourism management, digital technology, and data analytics should be cultivated through on-the-job training, talent recruitment, and university-industry collaboration, which could indicate improved operation of the platforms and better application of tourism data. Moreover, the responsibilities of culture and tourism authorities, tourism enterprises, scenic attractions, and technology providers in project development, data management, system maintenance, and service operations should be clearly defined, and the evidence suggests that cross-departmental coordination and regular consultation mechanisms would support this. However, evaluation of smart tourism projects should reduce reliance on construction-oriented indicators such as device numbers and capital investment. Criteria shift toward stability, usage, satisfaction, outcomes. Therefore, system stability, data utilization, visitor satisfaction, and actual public-service outcomes should serve as important criteria for judging these projects going forward. In light of these findings, a development mechanism linking construction, operation, evaluation, and continuous improvement can be formed, and this mechanism may support the sustained optimization of urban smart tourism public services.

5. Conclusions

Urban smart tourism public services represent an important manifestation of how digital technology empowers tourism governance and urban public services. The quality of this development directly affects visitors' travel experiences, resource allocation efficiency, and urban tourism levels generally. Given that current provision shows insufficient effectiveness, unsatisfactory experiences, and weak support, a systematic improvement pathway should be developed across three dimensions: service resources, visitor needs, and development safeguards. However, the evidence may suggest that strengthening data sharing and resource coordination, optimizing platform functions, and improving mechanisms for facility operation, data security, talent development, and coordination could facilitate a shift toward service effectiveness. Shift moves smart tourism from technology-centered construction toward outcomes that matter to users. Moreover, as urban tourism demand grows more diversified, development should place greater emphasis on actual usage results and might continue to enhance the precision, inclusiveness, and coordination of these important services. Therefore, the findings suggest that this emphasis could lay a solid foundation for the quality enhancement and upgrading of urban tourism overall.

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