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Analysis of Factors Affecting City Branding in the Development of Smart Tourism: A Quantitative Study

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A B S T R A C T

The present study was conducted with the aim of analyzing the factors affecting city branding in the development of smart tourism through a quantitative approach. The primary data collection instrument was a researcher-developed questionnaire. The items in this section were designed based on a five-point Likert scale to enable the measurement of attitude intensity and accurate evaluation of responses. The required sample size for the quantitative phase was estimated at 384 participants, assuming an unlimited statistical population and using a simple random sampling method; ultimately, analyzable responses were obtained. For data analysis, Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM) were employed. In addition, to examine the validity and reliability of the measurement instrument, procedures such as content validity assessment, the Content Validity Ratio (CVR) test, and statistical analyses using SPSS and SmartPLS software were applied. The research findings indicated that the components of smart tourism city branding—including city brand awareness, city brand advertising and marketing, smart tourism electronic services, social media, organizational factors, competitive advantage, tourist loyalty, and outcomes—have a positive and significant effect on smart tourism development ($p < .01$). The results further revealed that strategies exert the greatest influence on tourist loyalty ($\beta = 0.668$), competitive advantage ($\beta = 0.553$), and city brand awareness ($\beta = 0.539$). Moreover, contextual conditions, causal conditions, and intervening conditions were found to significantly affect different dimensions of city branding. Overall, the findings demonstrate that smart tourism city branding is a multidimensional and systematic phenomenon whose realization requires synergy among managerial strategies, institutional environments, and smart infrastructures. The results of this study can provide a scientific basis for policymakers and urban managers in designing effective smart tourism development strategies and strengthening urban branding.

Keywords: *Branding; City Branding; Tourism; Smart Tourism*

1. Introduction

The contemporary evolution of tourism has increasingly been shaped by rapid technological transformation, urban competitiveness, and the growing importance of place identity in attracting global visitors. Cities are no longer perceived merely as geographic spaces but as complex experiential platforms where economic, cultural, technological, and social elements interact to create distinctive tourism value propositions. Within this context, city branding has emerged as a strategic governance and marketing instrument that enables destinations to differentiate themselves in an intensely competitive tourism marketplace. The expansion of digital infrastructures, smart city initiatives, and data-driven decision-making has further transformed traditional tourism development models, giving rise to the concept of smart tourism destinations that integrate information and communication technologies with urban management and visitor experience design (Buhalis & Amaranggana, 2013; Chourabi & et al., 2012).

Urban tourism development increasingly depends on the capacity of cities to construct coherent brand identities that resonate emotionally with visitors while simultaneously aligning stakeholders' interests. Destination branding literature emphasizes that successful city branding involves coordinated collaboration among public institutions, private actors, citizens, and tourists themselves. Stakeholder-based branding models demonstrate that tourism attractiveness is strongly associated with perceived authenticity, service quality, and experiential differentiation, all of which contribute to destination competitiveness (Boivin & Tanguay, 2019; García et al., 2012). Moreover, branding strategies operate not only as marketing tools but also as governance mechanisms capable of shaping urban narratives and influencing public participation in policy processes (Eshuis et al., 2014).

The emergence of smart tourism has fundamentally reshaped how destinations design and communicate their brand identities. Smart tourism destinations rely on digital connectivity, real-time information systems, and intelligent services to enhance visitor experiences and optimize urban resource management. Information and communication technologies facilitate personalized tourism services, dynamic destination management, and integrated stakeholder networks, thereby strengthening the relationship between technological innovation and tourism competitiveness (Ivars et al., 2016; López & Sánchez, 2013). These transformations reflect a broader transition from traditional destination promotion toward digitally mediated tourism ecosystems where data analytics and user-generated content play decisive roles in shaping destination perception.

Digital transformation has also expanded the relevance of geomarketing approaches within tourism planning and branding strategies. Geomarketing integrates spatial analysis, consumer behavior data, and geographic information systems to support evidence-based decision-making in tourism development. By enabling policymakers to identify spatial patterns of visitor demand and consumption behavior, geomarketing contributes to more precise segmentation and targeted branding initiatives (Banerjee, 2019; Ergun et al., 2020). Innovative geomarketing technologies enhance strategic planning by linking geographic characteristics with consumer preferences, allowing destinations to optimize marketing investments and service delivery (Melnyk & Nyzhnyk, 2018; Nunes et al., 2014).

The application of geomarketing in tourism environments has proven particularly effective in coastal and urban tourism areas, where spatial differentiation significantly influences tourist decision-making. Studies demonstrate that location-based analytics improve destination visibility, support infrastructure allocation, and enhance competitiveness through localized branding strategies (Peñarubia-Zaragoza et al., 2019; Pilar & Zaragoz, 2019). Similarly, geomarketing techniques enable tourism managers to align retail, cultural, and service facilities with visitor mobility patterns, strengthening experiential coherence within urban destinations (Chacón-García, 2017).

Alongside technological advances, the success of urban tourism branding depends heavily on the perceived quality of destination components. Urban attractions, accessibility, cultural heritage assets, and service infrastructure collectively shape tourists' satisfaction and behavioral intentions. Empirical studies highlight that effective destination management improves both visitor experience and long-term brand loyalty, reinforcing the strategic importance of coordinated urban tourism planning (Beiki & Tardast, 2018). Destination image and brand perception significantly influence tourist satisfaction, revisit intention, and loyalty formation, thereby linking branding initiatives directly to tourism sustainability outcomes (Mohamad et al., 2015).

City branding within smart tourism contexts also involves managing symbolic meanings and narratives associated with urban identity. Regional tourism marketing strategies often encounter discursive tensions between authenticity and

commercialization, indicating the complexity of constructing cohesive destination brands across diverse stakeholder expectations (Jeuring, 2016). Consequently, successful branding requires continuous negotiation between economic objectives, cultural representation, and citizen engagement, ensuring that branding efforts remain socially legitimate and culturally meaningful.

In recent years, digital marketing has become a central driver of tourism competitiveness. Online platforms, social media ecosystems, and algorithmic recommendation systems increasingly shape tourists' destination selection processes. The adoption of digital marketing strategies among tourism enterprises enhances market reach, improves customer engagement, and strengthens brand awareness across global audiences (Sharma & Sharma, 2024). Machine learning applications further enable tourism organizations to analyze traveler behavior patterns, particularly among younger generations such as Gen-Z tourists whose travel decisions are strongly influenced by digital environments and social media interactions (Warintarawej et al., 2024).

The growing importance of content marketing and digital communication strategies has reinforced the role of data-driven branding models in tourism development. Research on tourism marketing innovation demonstrates that structured content marketing frameworks significantly contribute to destination visibility and marketing effectiveness in digital ecosystems (Zamani et al., 2024). Likewise, emerging tourism paradigms such as cloud-based tourism services represent new marketing models that integrate virtual experiences, online engagement, and smart service delivery into tourism branding processes (Subadra, 2024).

Smart tourism development is also closely associated with sustainability considerations and the responsible use of digital technologies. Smart solutions can support environmentally sustainable tourism practices by optimizing resource utilization, reducing congestion, and improving destination management efficiency. Digital technologies have been successfully applied in mountainous and forest tourism regions to promote sustainable development while maintaining ecological balance and enhancing visitor satisfaction (Shia & Sadeghi, 2024). These findings emphasize that smart tourism branding must integrate technological innovation with sustainability principles to achieve long-term resilience.

At the strategic level, city branding reflects broader transformations in consumer–brand relationships within hospitality and tourism industries. Modern tourists actively co-create destination brands through online reviews, social media engagement, and participatory experiences. Consumer–brand relationship research indicates that emotional attachment, perceived authenticity, and trust significantly influence tourists' loyalty toward destinations, highlighting the interactive nature of contemporary branding processes (Alizadeh & Kashani, 2023). The transition from passive marketing communication to interactive engagement underscores the necessity of integrating tourists into the branding ecosystem as active stakeholders.

Furthermore, urban tourism competitiveness increasingly depends on the integration of smart governance frameworks with branding strategies. Smart city models emphasize collaboration between technological infrastructure, governance capacity, human capital, and innovation ecosystems to enhance urban performance and attractiveness (Chourabi & et al., 2012). Within this framework, tourism becomes a strategic domain through which cities communicate innovation, sustainability, and cultural identity to global audiences. Smart tourism branding therefore represents a convergence of urban policy, digital transformation, and experiential marketing.

Despite extensive research on destination branding and smart tourism, significant gaps remain regarding the multidimensional mechanisms through which urban branding influences smart tourism development. Existing studies often examine technological innovation, marketing strategies, or tourist behavior independently, while fewer investigations integrate these dimensions into a comprehensive analytical framework. The complexity of smart tourism ecosystems requires a holistic understanding of how organizational factors, digital services, marketing strategies, and stakeholder participation collectively shape urban tourism branding outcomes.

Moreover, many developing and emerging tourism destinations face challenges in translating smart city initiatives into effective tourism branding strategies. Institutional readiness, technological infrastructure, stakeholder coordination, and citizen participation all influence the success of smart tourism implementation. Understanding the interplay among these contextual conditions is essential for designing evidence-based policies capable of strengthening urban competitiveness and enhancing tourism sustainability.

Given the accelerating digitalization of tourism markets and increasing competition among cities worldwide, investigating the determinants of city branding within smart tourism environments has become both theoretically

significant and practically necessary. Integrating insights from geomarketing, digital marketing, smart city governance, destination management, and consumer behavior literature provides a comprehensive perspective for understanding how cities can strategically position themselves in the global tourism system.

Therefore, the aim of this study is to analyze the factors affecting city branding in the development of smart tourism through a quantitative modeling approach.

2. Methods and Materials

The data collection method in the qualitative phase was based on library research. In this study, a questionnaire was employed as the primary data collection instrument. The statistical population in the quantitative section consisted of experts and senior specialists in the tourism and urban development fields. Considering the target population, a non-probability random sampling method was adopted, and a sample size of 384 participants was determined using G*Power software.

In the quantitative phase, field data were collected through a researcher-developed questionnaire designed based on criteria derived from the qualitative stage. Furthermore, the questionnaire was used to evaluate the research variables and gather empirical data. The instrument was prepared according to the indicators extracted from the identified influencing characteristics and distributed online among participants. After establishing validity (construct validity assessed through factor analysis) and reliability (calculation of Cronbach's alpha coefficient), the questionnaire was administered to respondents, who were asked to complete it voluntarily.

3. Findings and Results

In this study, assuming maximum variance and a 5% error level, more than 400 questionnaires were electronically distributed to increase the response rate and facilitate the research process. Out of these, 317 completed questionnaires were returned and used as the basis for data analysis and hypothesis testing.

In this study, the selected variables were examined according to a conceptual model. Data normality was evaluated using skewness and kurtosis indices. The final sample consisted of 317 respondents. Construct validity and reliability were assessed using the measurement model and hypothesis testing procedures, and model fit was evaluated through covariance-based Structural Equation Modeling (SEM) using SPSS software (Version 20) and SmartPLS software (Version 3).

The application of SEM enabled a more accurate representation of conceptual relationships among latent variables. As noted by Mittal et al., the Partial Least Squares (PLS) approach assumes that individual variables covary with others within the model and that resulting model fit indices are controlled within the measurement model assessment. Moreover, this method calculates an autonomous standard error and generates approximate t-values for testing the significance of structural paths. Accordingly, as shown in Table 1, all variables were found to be in an acceptable condition.

To assess questionnaire reliability, Cronbach's alpha and Composite Reliability (CR) were calculated. Reliability results for all variables exceeded the threshold value of 0.70, indicating satisfactory reliability. To evaluate validity, both convergent and discriminant validity were examined. Table 1 presents the findings related to convergent validity. The results indicated that convergent validity values for all latent variables were greater than 0.50, confirming the adequacy of the measurement models.

Table 1

Results of Construct Reliability Assessment

Variable	Cronbach's Alpha	Composite Reliability (CR)
City Brand Awareness	0.757	0.862
Tourist Value	0.788	0.904
Smart Tourism Content Sharing	0.717	0.842
Tourist Validation and Review	0.757	0.892
Tourist Trust	0.728	0.847
Smart Tourism City Branding	0.898	0.930
City Brand Advertising and Marketing	0.876	0.903
Tourist Intention	0.844	0.895

Smart Tourism Electronic Services	0.755	0.891
Social Media in City Branding	0.780	0.872
Performance of Smart Tourism Stakeholders	0.772	0.857
Organizational Factors Related to Smart Tourism	0.787	0.904
Competitive Advantage	0.726	0.846
Social Responsibility	0.755	0.891
Tourist Participation	0.914	0.940
Smart Tourism Service Innovation	0.829	0.898
Tourist Attitude	0.835	0.890
Tourist Loyalty	0.858	0.892

Based on Table 1, the Composite Reliability (CR) and Cronbach's alpha coefficients for all dimensions of the studied model exceed 0.70, indicating that the questionnaire possesses acceptable reliability.

In this context, the concept of validity addresses the extent to which a measurement instrument accurately assesses the intended construct. When correlations among scores obtained from tests measuring the same construct are sufficiently high, the questionnaire demonstrates convergent validity. Such correlations are essential to ensure that the instrument measures what it is intended to measure.

For convergent validity assessment, the Average Variance Extracted (AVE) and Composite Reliability (CR) were calculated. Convergent validity is confirmed when AVE values exceed 0.50. Additionally, CR values must exceed 0.70, and CR should be greater than AVE. When these three conditions are satisfied, convergent validity of the measurement model is established.

Figure 1 presents the results obtained from the SMARTPLS2 software output. According to the model results, factor loadings are statistically significant at the 95% confidence level, and all t-statistics fall outside the critical interval of −1.96 to +1.96.

Figure 1

Structural Model of the Study (Significance State)

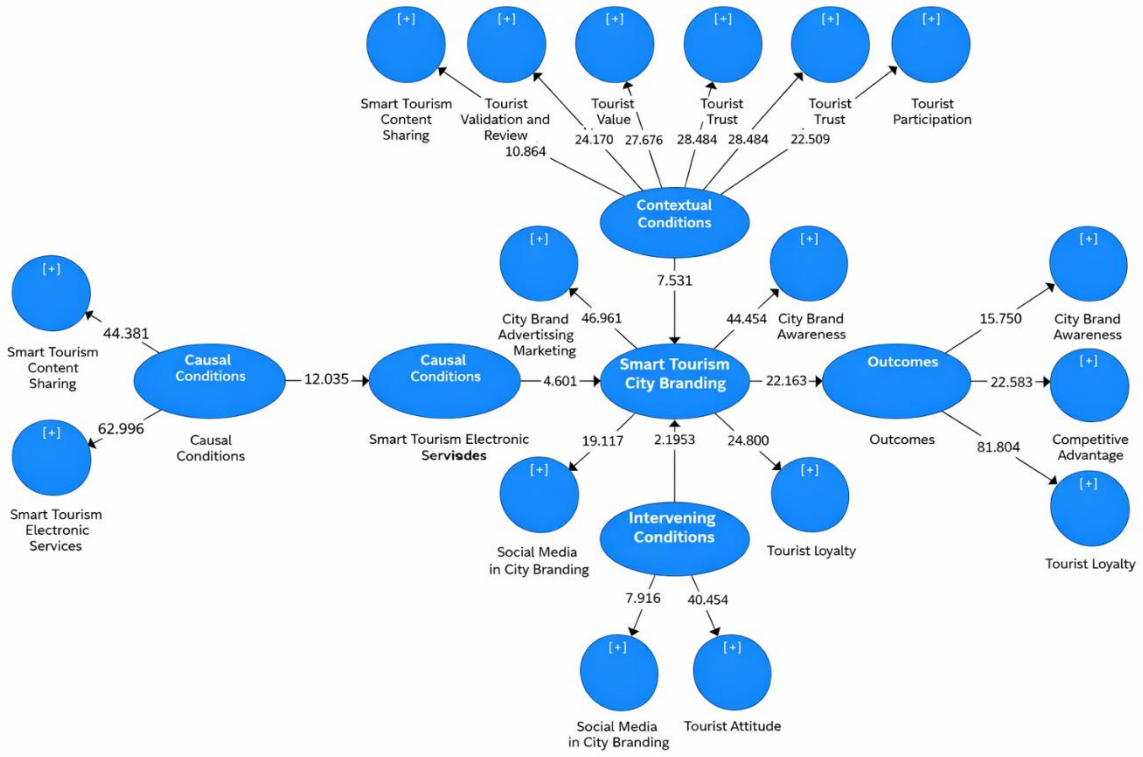
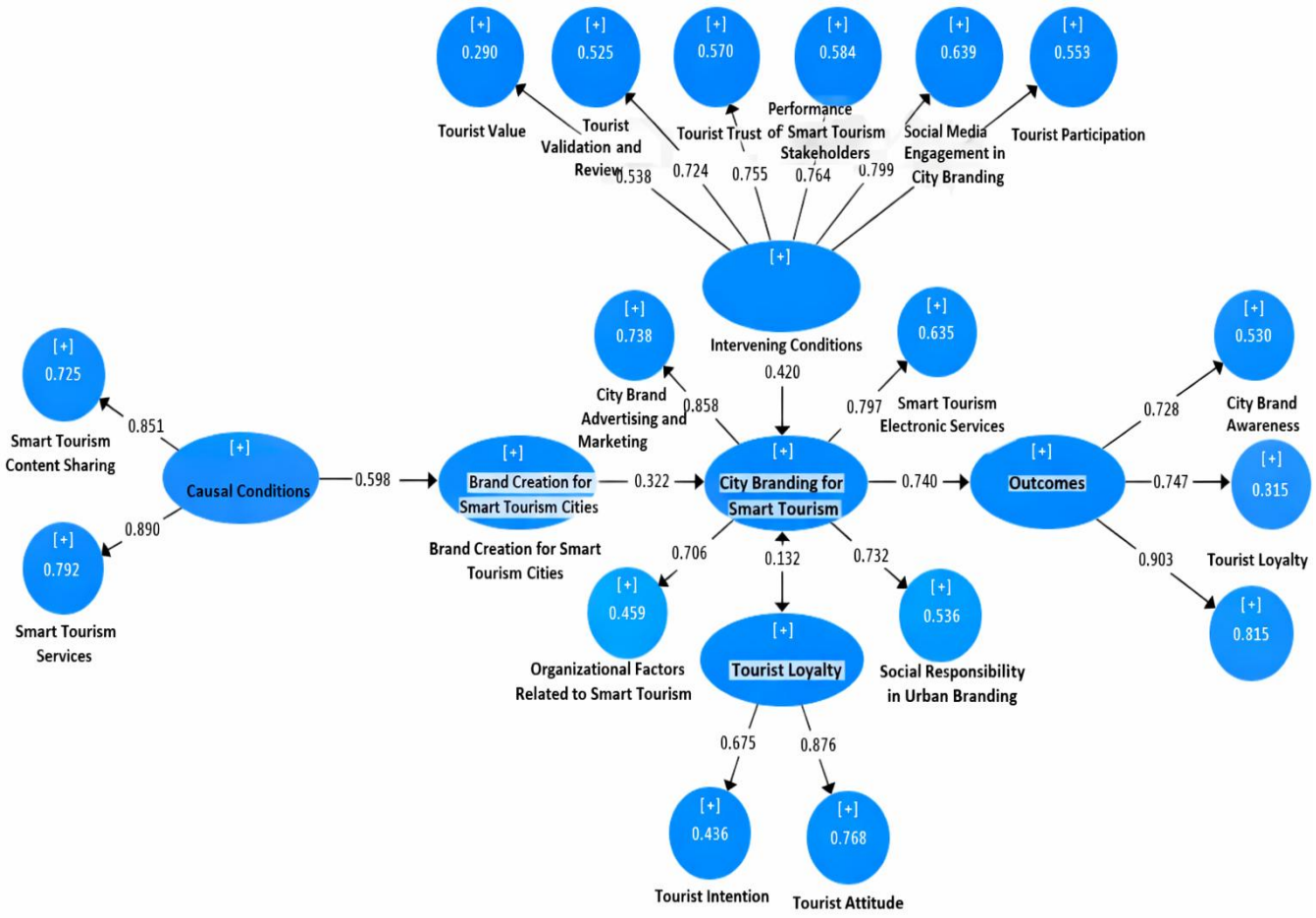


Figure 2

Structural Model of the Study (Standardized State)



The research model was analyzed using SmartPLS software. This analysis included identified variables, relationships among constructs, and comparison with previous empirical findings. Based on the obtained results, all factor loadings and path coefficients were reported as significant at the 95% confidence level. Specifically, the t-statistics associated with all structural paths were located outside the critical range of −1.96 to +1.96, indicating statistically significant relationships among the latent variables at the 5% significance level.

In the next step, the research model was analyzed using SmartPLS software. The analysis included identified variables, relationships among them, and comparison with previous studies. The results indicated that all factor loadings and path coefficients were statistically significant at the 95% confidence level. Specifically, all *t*-statistics associated with model paths were outside the critical interval of −1.96 to +1.96, confirming significant relationships among latent variables at a 5% error level.

After assessing reliability and convergent validity, discriminant validity was evaluated using the Fornell–Larcker criterion. This criterion states that each construct must share more variance with its own indicators than with other latent constructs. Statistically, the Average Variance Extracted (AVE) of each latent variable should be greater than the squared correlations between that construct and other constructs. To simplify calculations, the square root of AVE is compared directly with inter-construct correlations. The results of the Fornell–Larcker criterion are presented in Table 2.

Table 2

Convergent Validity of Research Variables

Variable	AVE	CR
City Brand Awareness	0.676	0.862
Tourist Value	0.824	0.904
Smart Tourism Content Sharing	0.640	0.842
Tourist Validation and Review	0.805	0.892
Tourist Trust	0.649	0.847
Smart Tourism City Branding	0.770	0.930
City Brand Advertising and Marketing	0.541	0.903
Tourist Intention	0.682	0.895
Smart Tourism Electronic Services	0.803	0.891
Social Media in City Branding	0.694	0.872
Performance of Smart Tourism Stakeholders	0.606	0.857
Organizational Factors Related to Smart Tourism	0.825	0.904
Competitive Advantage	0.647	0.846
Social Responsibility	0.803	0.891
Tourist Participation	0.798	0.940
Smart Tourism Service Innovation	0.745	0.898
Tourist Attitude	0.670	0.890
Tourist Loyalty	0.543	0.892

It can be observed that the Average Variance Extracted (AVE) values are consistently greater than 0.50, and the Composite Reliability (CR) values in all cases exceed 0.70 and are also higher than the corresponding AVE values. Therefore, convergent validity of the measurement model is confirmed.

The Goodness-of-Fit (GOF) index is applied to integrate the measurement and structural components of Structural Equation Modeling and reflects the extent to which changes in dependent variables are explained by independent variables within the model. A critical point is that the coefficient of determination (R^2) is calculated only for endogenous (dependent) constructs, while this value is zero for exogenous constructs. Higher R^2 values for endogenous constructs indicate better model fit.

Chin (1998) proposed three threshold values of 0.19, 0.33, and 0.67 representing weak, moderate, and strong explanatory power, respectively. Similarly, Henseler (2009) and Hair et al. (2011) introduced benchmark values of 0.25, 0.50, and 0.75 to evaluate weak, moderate, and strong structural model fit based on the coefficient of determination. According to the results illustrated in Figure 1, the R^2 values of the endogenous constructs in the research model are satisfactory. The coefficient of determination indicates that approximately 45% of the variance in the model variables is explained by the combined effects of independent and dependent constructs, which represents a strongly acceptable level of explanatory power.

4. Discussion and Conclusion

The present study aimed to analyze the factors affecting city branding in the development of smart tourism through a structural modeling approach integrating technological, organizational, marketing, and behavioral dimensions. The findings confirmed that smart tourism city branding is a multidimensional construct shaped by causal conditions, contextual conditions, intervening mechanisms, strategic actions, and resulting outcomes. Overall, the structural model demonstrated acceptable explanatory power, indicating that the selected variables jointly explain a substantial proportion of variance in smart tourism development and its branding outcomes.

One of the principal findings of the study is the significant effect of causal conditions—particularly smart tourism electronic services and smart tourism content sharing—on the formation of smart tourism city branding. This result highlights the central role of digital infrastructure and technology-enabled communication in contemporary destination development. The emergence of smart tourism destinations relies heavily on integrated information and communication technologies that enhance visitor interaction, personalize services, and facilitate real-time engagement between tourists and urban environments (Buhalis & Amaranggana, 2013; Ivars et al., 2016). The positive influence of digital services identified in this study aligns with research demonstrating that technological

innovation improves destination competitiveness by strengthening accessibility, service efficiency, and experiential quality (López & Sánchez, 2013).

Furthermore, the strong effect of smart tourism content sharing confirms the importance of user-generated information and digital communication networks in shaping city brand identity. Digital marketing ecosystems increasingly depend on interactive content environments where tourists actively participate in producing and disseminating destination narratives. Studies on digital marketing adoption in tourism emphasize that online content, social media engagement, and digital storytelling significantly influence destination awareness and tourists' behavioral intentions (Sharma & Sharma, 2024; Zamani et al., 2024). The findings therefore reinforce the argument that city branding is no longer exclusively institution-driven but emerges through collaborative digital participation between tourists, stakeholders, and urban managers.

The analysis also demonstrated that contextual conditions significantly influence smart tourism city branding. Variables such as tourist trust, tourist value perception, organizational performance, social responsibility, and tourist participation collectively shaped the branding process. These results are consistent with stakeholder-oriented branding models suggesting that destination attractiveness depends on social legitimacy, institutional coordination, and emotional engagement with visitors (Eshuis et al., 2014; García et al., 2012). Trust and perceived value, in particular, have been identified as critical determinants of consumer–brand relationships in hospitality contexts, strengthening emotional attachment and long-term brand loyalty (Alizadeh & Kashani, 2023).

The significant contribution of organizational factors highlights the importance of governance capacity in smart tourism development. Smart city frameworks emphasize coordination among public institutions, private tourism actors, and local communities as essential for implementing technological innovation successfully (Chourabi & et al., 2012). The results suggest that technological investment alone is insufficient; instead, institutional readiness and collaborative governance structures are necessary to translate smart initiatives into recognizable urban brands. Similar conclusions have been reported in studies examining destination management quality and urban tourism competitiveness (Beiki & Tardast, 2018).

Another important finding concerns the mediating role of intervening conditions, including social media engagement and tourist attitudes. The model revealed that these factors significantly facilitate the transformation of branding strategies into tangible outcomes. Social media platforms function as experiential intermediaries that amplify brand communication, enable co-creation of destination meaning, and shape tourists' perceptions before, during, and after travel experiences. Research on cloud tourism services and digital tourism ecosystems supports this interpretation, emphasizing the growing influence of online engagement environments in shaping tourist decision-making processes (Subadra, 2024). Likewise, machine learning–driven analyses show that digitally mediated interactions strongly influence destination selection among younger travelers, particularly digitally native generations (Warintarawej et al., 2024).

The findings also confirmed that strategic actions—especially city brand advertising and marketing, smart tourism services, and organizational innovation—play a direct and significant role in strengthening smart tourism city branding. This supports the geomarketing perspective, which argues that spatially informed marketing strategies enable destinations to better align tourism offerings with consumer behavior patterns (Banerjee, 2019; Ergun et al., 2020). By integrating geographic data with marketing analytics, cities can design targeted branding initiatives that enhance visibility and competitiveness. Previous studies applying geomarketing techniques in tourism environments similarly demonstrate improved destination positioning and market segmentation effectiveness (Peñarubia-Zaragoza et al., 2019; Pilar & Zaragoz, 2019).

The study further revealed that smart tourism city branding significantly affects key outcomes, including city brand awareness, competitive advantage, and tourist loyalty. These results are consistent with destination branding literature suggesting that successful brand development leads to stronger tourist satisfaction, positive destination image, and repeat visitation intentions (Mohamad et al., 2015). Tourist loyalty represents a particularly critical outcome because it contributes to sustainable tourism growth through repeat visits, positive word-of-mouth communication, and long-term destination advocacy.

The strong relationship between branding outcomes and competitive advantage confirms that city branding operates as a strategic economic resource rather than merely a promotional activity. Urban tourism competitiveness depends on differentiated experiences and symbolic value creation, both of which are enhanced through coherent branding strategies (Boivin & Tanguay, 2019). The findings also resonate with research highlighting that tourism

marketing strategies must reconcile economic objectives with cultural identity and authenticity to maintain long-term attractiveness (Jeuring, 2016).

Another notable implication concerns the integration of sustainability considerations within smart tourism branding. The results suggest that technological innovation and social responsibility jointly contribute to branding effectiveness. Sustainable tourism development increasingly requires digital solutions capable of balancing economic growth with environmental and social sustainability. Evidence from digitally supported sustainable tourism initiatives demonstrates that smart technologies improve resource management while maintaining visitor satisfaction and environmental protection (Shia & Sadeghi, 2024).

The comprehensive relationships identified in the model support the view that smart tourism city branding represents an ecosystem phenomenon rather than a single managerial activity. Knowledge-based decision-making, supported by geomarketing analytics and technological innovation, enables urban managers to design adaptive tourism strategies grounded in real-time data insights (Melnyk & Nyzhnyk, 2018; Nunes et al., 2014). Consequently, smart tourism branding should be understood as a dynamic interaction among technological capabilities, organizational coordination, stakeholder participation, and experiential marketing processes.

Overall, the study contributes to the growing body of literature linking smart city development with tourism branding and digital transformation. By empirically validating the relationships among causal, contextual, intervening, strategic, and outcome dimensions, the research extends existing theoretical frameworks and demonstrates how integrated smart tourism ecosystems enhance city branding effectiveness. The findings highlight that successful urban tourism development requires simultaneous investment in digital infrastructure, governance mechanisms, marketing innovation, and visitor engagement strategies.

Despite its contributions, this study has several limitations. First, the research relied on cross-sectional survey data, which restricts the ability to infer long-term causal relationships among variables. Second, the study focused primarily on experts and professionals in tourism and urban management, which may limit the generalizability of findings to broader tourist populations. Third, the use of self-reported questionnaires may introduce response bias related to subjective perceptions of branding and smart tourism performance. Additionally, contextual differences among cities were not examined in detail, potentially overlooking cultural or geographic variations influencing branding effectiveness.

Future research may adopt longitudinal designs to examine how smart tourism city branding evolves over time and responds to technological or environmental changes. Comparative cross-city or cross-country studies could provide deeper insights into contextual variations affecting smart tourism branding success. Researchers are also encouraged to integrate behavioral data derived from digital platforms, big data analytics, or real-time tourism monitoring systems to complement perceptual survey measures. Further studies could explore the role of artificial intelligence, immersive technologies, and metaverse tourism environments in shaping future urban branding strategies. Investigating tourists' emotional experiences and co-creation behaviors through mixed-method approaches would also enhance theoretical understanding of smart tourism ecosystems.

Urban policymakers should prioritize integrated smart tourism strategies that align technological infrastructure with branding objectives. Municipal governments and tourism organizations are encouraged to invest in digital platforms, intelligent tourism services, and coordinated marketing campaigns to strengthen destination competitiveness. Enhancing collaboration among public agencies, tourism businesses, and local communities can foster coherent brand identity and improve visitor experiences. Practical initiatives should also focus on strengthening social media engagement, promoting participatory tourism experiences, and supporting innovation among tourism stakeholders. Finally, adopting data-driven decision-making systems can help cities continuously evaluate branding performance and adapt strategies to changing tourism market dynamics.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethics Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were considered.

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