



LAND SUITABILITY AND TOURISM PERFORMANCE: UNDERSTANDING THE ECONOMIC BENEFITS THROUGH COMMUNITY ENGAGEMENT AND INVESTMENT STRATEGIES

Ling Cai¹, Zaharah Mohd Yusoff^{2*}, Nor Aizam Adnan³

¹ Faculty of Built Environment, Universiti Teknologi MARA (UITM), Shah Alam 40450, Selangor, Malaysia
Email: 2021971089@student.uitm.edu.my

² Faculty of Built Environment, Universiti Teknologi MARA (UITM), Shah Alam 40450, Selangor, Malaysia
Email: zmy1208@uitm.edu.my

³ Faculty of Built Environment, Universiti Teknologi MARA (UITM), Shah Alam 40450, Selangor, Malaysia
Email: nor_aizam@uitm.edu.my

* Corresponding Author

Article Info:

Article history:

Received date: 30.06.2025

Revised date: 20.07.2025

Accepted date: 28.08.2025

Published date: 25.09.2025

To cite this document:

Ling, C., Yusoff, Z. M., & Adnan, N. A. (2025). Land Suitability and Tourism Performance: Understanding the Economic Benefits Through Community Engagement and Investment Strategies. *Journal of Tourism Hospitality and Environment Management*, 10 (41), 410-428.

DOI: 10.35631/JTHEM.1041028

This work is licensed under [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/)



Abstract:

The aim of this research is to investigate the impact of land suitability on tourist performance through the mediating roles of investment strategy and local interaction. The study emphasizes the importance of understanding how environmental, social, and economic matters intertwine to provide sustainable benefits from tourism in Chinese countryside. The data were collected using a structured questionnaire completed by 272 participants of both the local residents and tourists in Huangma Township, Nanchang County, Jiangxi Province. A quantitative design was employed, and data were processed using SmartPLS for analyzing direct and mediating relationships between the proposed model. The empirical results indicate that land suitability has a significant positive impact on tourism performance, investment strategy, and local participation. Moreover, both investment strategy and local participation were found to mediate the relationship between land suitability and tourism performance, which suggests that natural resources must be actively financially and socially mobilized to provide sustainable tourist outcomes. These findings highlight the inter-linkage between environmental resources, strategic investment, and local participation in establishing effective tourism development. With the integration of land suitability, investment strategies, and community engagement in a single framework, this research contributes by establishing new findings on how rural tourist destinations can leverage their natural endowments to guarantee long-term competitiveness and sustainable economic development.

Keywords:

Land Suitability, Tourism Performance, Investment Strategies, Community Engagement, Sustainable Development

Introduction

Tourism has become one of the strongest contributors to socio-economic progress, cultural flow, and global international regional development, and in recent decades, China has become one of the leading sources and destinations of tourism (Zhao et al., 2025). The increasing importance of tourism in the economic strategy of China has drawn attention and policy interest to the sustainable development of tourism destinations balancing increased growth with environmental conservation and community engagement (Zhang et al., 2024). Since the essence of this argument is land suitability, it addresses natural scenery integration, infrastructure provision, and cultural sites with tourist purposes such that development can be implemented in lands capable of hosting tourist activities without ecological or social costs (Chen et al., 2025). In China, where there are diverse topographies such as mountains, rivers, ancient towns, and seashores, land-use planning concerns are most relevant as urban pressure intensifies and local administrations seek to expand tourism revenues while preserving heritage and natural resources (Li et al., 2025). With rural rejuvenation, environmental tourism, and cultural tourism as they increasingly constitute the highlight of Chinese tourism policy agendas, knowing more about how community investment and participation approaches drive the transformation of land potential into tourism performance is an immediate research priority (Tong et al., 2024).

Empirical researches on tourism growth in China and elsewhere have, consistently, shown that the success of tourism activities is based on land suitability, investment, and locals' participation (Qin et al., 2023). For instance, studies have shown that well-planned destinations with favorable natural conditions, such as Guilin karst scenic landscape and Yunnan cultural villages, are better visited, generate more revenues, and enhance destination competitiveness than poorly planned destinations (Chen et al., 2025; Quan & Wu, 2024; Wang et al., 2023). Studies also show that strategic investment in infrastructure such as transport networks, hospitality facilities, and e-marketing improves accessibility and tourist satisfaction and that community participation improves authenticity and sustainability (Ying et al., 2023). Further, studies in Chinese heritage towns show that tourism performance improves where residents are involved actively in decision-making and benefit-sharing, following the social dimension of sustainable tourism (Zhao et al., 2025). Collectively, all these results point towards the importance of giving weights to ecological, economic, and social factors while measuring tourism performance outcomes in China.

Despite these conclusions, there are some research gaps in the literature. First, the majority of existing literature reviews on tourism development in China concentrates on the economic impact of tourism or the cultural heritage element but not systematic research on land suitability as a determinant of tourist performance (Ying et al., 2023). While more and more research uses GIS-based methods to quantify land use for agriculture and urban planning, relatively few apply them to tourism environments, especially for outcome measures such as tourist satisfaction, repeat visitation, and destination competitiveness (J. Li et al., 2024). In addition, existing literature tends to treat land suitability as a single, isolated variable instead of

examining its interaction with intervening variables like investment schemes and participation of the people, which are critical to converting natural potential to economic and social benefit (Chen et al., 2025; Nyompa et al., 2023). This gap is particularly pronounced in China, where regional disparities in infrastructure, governance, and social capital create uneven tourism development trajectories.

Second, although involvement in the community has been debated exhaustively in sustainable tourism research, comparatively few empirical studies have explored its mediating function on the link among land suitability and tourist performance in China. Either the ecological aspect of land use or the sociological aspect of participation is typically emphasized by studies but seldom the two combined under a unifying theory (Quan & Wu, 2024; Sathiyamurthi et al., 2024).. This limits knowledge of how local involvement translates land potentials to actual tourism value in geographically and culturally diverse areas. Likewise, investment strategies' contribution is not most sophisticated in Chinese tourism scholarship when there are recommendations that propose capital investment as well as public–private investments for the development of viable land potential to be utilized for tourism ((Hu, 2025; Wang et al., 2023). A lack of harmonized models to explain such interaction hinders policymakers' and practitioners' ability to formulate focused policies maximizing performance outcomes as much as sustainability. Having selected China, where development is taking place at a fast rate and intruding into the environment, this research addresses a critical knowledge lacuna and contributes to the creation of additional knowledge about how tourism performance is interdependent on land suitability, investment planning, and local community.

The purpose of this research is to explore the impact of land suitability on tourism performance and explore mediating roles of investment strategy and community engagement in such an impact in China. In order to attain this goal, the study conforms to some research goals: the first is to consider the immediate impact of land suitability on tourism performance; the second is to measure the impact of land suitability on investment strategies and community participation; the third is to consider the mediating impact of investment strategies on land suitability and tourism performance; the fourth is to consider the mediating impact of community participation between land suitability and tourism performance; and the last is to present an integrated model that combines ecological, economic, and social approaches in explaining China's tourism performance outcomes. These are aimed at producing a balanced perception of the dynamics that create destination competitiveness, providing theoretical and practical knowledge for tourism development planning.

The significance of this study lies in its potential to contribute both to academic debates and to policy and practice in China. Theoretically, it advances tourism research by integrating land suitability, investment strategies, and community engagement into a single conceptual framework, thereby extending sustainable tourism development theory and stakeholder theory (Freeman et al., 2010). Empirically, the study responds to the scarcity of research on the mediating mechanisms linking land suitability to performance, providing evidence from the Chinese context where regional variations highlight the complexity of tourism planning. Practically, the findings can inform policymakers, planners, and investors in designing strategies that align spatial planning with financial and social considerations, ensuring that tourism growth supports economic development while preserving natural and cultural assets. In this way, the study contributes to China's broader goals of sustainable development, rural

revitalization, and global competitiveness in the tourism sector (Tong et al., 2024; Wani et al., 2024).

Literature Review

Land Suitability and Tourism Performance

Land suitability refers to the fit between biophysical attributes, accessibility, cultural assets, and regulatory constraints of a place and the intended tourism uses, typically assessed through multi-criteria evaluation and GIS-based overlay techniques that align with the FAO land evaluation tradition and landscape planning logics (Choudhary et al., 2023; Ramaano, 2024). Tourism performance captures market and experiential outcomes such as arrivals, average length of stay, revenue per available room, revisit intention, and satisfaction scores that together indicate a destination's competitiveness and yield (Sarkar et al., 2024). Empirical analysis repeatedly indicates terrain suitability, climate comfort, scenery, and proximity to infrastructure increase destination appeal and carrying capacity which enhance visitation and satisfaction and minimize environmental stress per tourist unit (Hu, 2025; Hussain et al., 2024). Tourism area life cycle work also indicates that appropriately matched land uses retard decline by coordinating supply with site capabilities and conservation limits (Li et al., 2025). According to the UNWTO, destinations with higher ecological suitability report up to 35% longer average tourist stays and 20–25% higher repeat visitation rates compared to less suitable regions. In China, nature-based destinations such as Guilin and Yunnan recorded tourism revenues exceeding 400 billion RMB in 2022, largely due to the combined effect of terrain suitability and accessibility (Sarkar et al., 2024). However, such figures remain underexplored in tourism scholarship, where land suitability is often treated descriptively rather than analytically linked to measurable performance outcomes. Suitability-led planning also permits phased development that respects ecological limits which stabilizes quality and reduces seasonality shocks that typically depress revenues and satisfaction (Sadeghi & Taghdisi, 2024).

H1: *Land Suitability has a significant impact on tourism performance*

Land Suitability and Investment Strategies

Investment strategies in tourism comprise the allocation and sequencing of financial resources into access, utilities, accommodation, attractions, skills, and destination marketing under conditions of risk and expected return (Aslanova, 2025). Empirical data shows that over 60% of tourism-related FDI projects in China between 2015–2022 were concentrated in regions rated highly suitable for tourism development. In Jiangxi Province, for example, investment in ecotourism infrastructure increased by 18% annually following the designation of suitability zones (Knollenberg et al., 2024; Rachmad, 2024; Wijburg et al., 2024). Evidence from ecotourism and resort development shows that capital intensity and financing structures vary systematically with slope stability, water availability, coastal morphology, and protected-area buffers which shape permitting certainty and insurance costs (Svitlichna et al., 2024). Given these findings, higher land suitability should translate into more aggressive and better-sequenced investment strategies because feasibility increases and risk premiums decline when sites align with intended tourism functions (Quan & Wu, 2024). Public actors can prioritize transport spines and utilities to suitable zones while private developers time product mixes to micro-site attributes which improves net present value and accelerates break-even, reinforcing capital inflows to those areas (Wang et al., 2023).

H2: *Land suitability has a significant impact on investment strategies*

Land Suitability and Community Engagement

Community engagement is the spectrum of local participation in tourism planning, governance, and benefit sharing that ranges from information to partnership and citizen control as conceptualized in participation ladders and community-based tourism frameworks (Abreu et al., 2024). Empirical work shows that when tourism aligns with existing land uses, ecosystem services, and cultural landscapes, residents perceive lower disruption and higher benefit salience which correlates with stronger support and participation in co-management, guiding, and heritage interpretation (Pramanik & Rahman, 2024; Ramaano, 2024; Salouw et al., 2024). Community participation has been shown to improve tourism revenues by up to 25% in rural heritage towns due to enhanced authenticity and resident support. In China, pilot projects in Guizhou Province demonstrated that villages with higher engagement achieved 30% higher tourist satisfaction scores compared to those with minimal involvement (Sathiyamurthi et al., 2024; Svitlichna et al., 2024). Suitability mapping also enables transparent negotiations over zones for conservation and use which strengthens procedural justice and trust, both predictors of resident participation and pro-tourism behaviors (Hu, 2025). As residents experience fewer environmental externalities and clearer benefit pathways, participation becomes instrumentally and normatively attractive which supports the hypothesis that land suitability has a significant positive impact on community engagement (Qin et al., 2023).

H3: Land suitability has a significant impact on community engagement

Investment Strategies and Tourism Performance

Empirical research has repeatedly linked targeted investment strategies to improved outcome metrics: for example, investments in accessibility and transport infrastructure are associated with higher arrivals and extended catchment areas (Rachmad, 2024), while product- and service-quality investments (upgrading accommodation, diversifying attractions) correlate with increased length of stay, higher spend per visitor, and greater repeat visitation (Zhang et al., 2024). Public-private partnership studies and catalytic public investment studies also reflect crowding-in effects whereby targeted public expenditure minimizes uncertainty and mobilizes private capital, enhancing total destination performance (J. Li et al., 2024; Wijburg et al., 2024; Zhao et al., 2025). Together, these results imply straightforward ways in which investment strategy has implications for performance: by lowering transaction costs and access costs, enhancing visitor satisfaction, and communicating destination quality to markets, well-designed investment increases both demand and yield (Akinsulire et al., 2024). Moreover, sequencing matters front-loading basic infrastructure and governance reforms often produces larger marginal gains than undifferentiated capital outlays because they address binding constraints to tourism activity (S. Li et al., 2024).

H4: Investment strategies has a significant impact on tourism performance

Community Engagement and Tourism Performance

Empirical studies demonstrate that when residents perceive tangible benefits and have meaningful participation, destinations enjoy higher levels of authenticity, better-managed cultural assets, and improved service delivery factors that enhance visitor experience and encourage positive visitor behaviours such as longer stays and repeat visits (Hussain et al., 2024; Pramanik & Rahman, 2024; Tiwari et al., 2024). Globally, destinations with high resident participation report visitor satisfaction scores 15–20% higher and repeat visitation rates 10% higher than destinations with low engagement. In China, community-based tourism initiatives under the Rural Revitalization Strategy have created over 13 million rural tourism

jobs (Mohd Yusof et al., 2025; Nugraha et al., 2024). The causal pathway linking community engagement to improved tourism performance operates through several empirically supported mechanisms: engaged communities contribute to richer, locally grounded experiences (guiding, cultural interpretation), ensure higher levels of service reliability through local ownership and stewardship, and reduce social friction that otherwise raises operating and reputational costs for destinations (Baig et al., 2024; Prasad, 2024; Salouw et al., 2024). Furthermore, community participation strengthens social capital and local capacity for adaptive management, enabling destinations to respond to market shifts and preserve the quality attributes that visitors value (Svitlichna et al., 2024).

H5: Community engagement has a significant impact on tourism performance

Investment Strategies as Mediator

Empirical evidence shows that land suitability alone does not directly guarantee superior performance; rather, its benefits are often realized through strategic investments that translate natural potential into market-ready tourism products (Zhao et al., 2025). Studies of ecotourism and resort destinations suggest that investment decisions such as in accommodation, transportation, and heritage conservation are frequently guided by assessments of land suitability, thereby acting as the channel through which land resources are transformed into competitive advantages (Quan & Wu, 2024; Svitlichna et al., 2024; Wang et al., 2023). On this basis, investment strategies function as a mediating mechanism by which land suitability impacts tourism performance. When suitable land is identified, it attracts and directs public and private investment toward developing the infrastructure and services necessary for visitors to access and experience those areas (Zhang et al., 2024). Without adequate investment, the potential advantages of suitable landscapes may remain underutilized, limiting performance outcomes despite high environmental or cultural value. Conversely, well-sequenced investments informed by suitability assessments amplify the performance impact by reducing accessibility constraints, diversifying tourism products, and enhancing visitor satisfaction (Wijburg et al., 2024).

H6: Investment strategies mediates the relationship between land suitability and tourism performance

Community Engagement as Mediator

Empirical studies show that while land suitability shapes the physical feasibility of tourism projects, performance outcomes often hinge on whether communities are engaged in the process, as this reduces resistance and enhances the authenticity of the visitor experience (Tiwari et al., 2024; Tong et al., 2024; Wani et al., 2024). Research on rural and heritage tourism reveals that suitable landscapes and cultural settings only translate into sustainable tourism performance when communities actively contribute to managing, interpreting, and preserving those resources (Tabatabaei et al., 2024). This evidence suggests that community engagement mediates the relationship between land suitability and tourism performance by serving as the social and institutional channel through which natural and cultural assets are leveraged (Svitlichna et al., 2024). When locals are involved, they co-create value through enriching cultural interpretation, protecting the environment, and creating an inclusive ambience, thus converting physical suitability into a rich tourist experience (Salouw et al., 2024). In the event of the lack of involvement, appropriate landscapes could not achieve high-performance results because of local opposition, impacts which are not managed, or a lack of authenticity in visitor products (Rodríguez-Zurita et al., 2025).

H7: Community engagement mediates the relationship between land suitability and tourism performance

Theoretical Framework Supporting the Research

The theoretical basis for analysis of land suitability-tourism performance relationships, investment approach, community participation, and tourism performance is rooted in sustainable tourism development theory, stakeholder theory, and the resource-based view (RBV). Sustainable tourism development stresses that the environmental, social, and economic aspects should harmonize to guarantee long-term competitiveness and sustainability of destinations, and land suitability being the ecological and spatial basis on which responsibly development can take place (Butler, 2004). The RBV maintains that land resources, where evaluated effectively for suitability, are valuable, rare, inimitable, and non-substitutable assets that can create competitive advantage if utilized effectively through investments and community engagement (Barney, 2001). Stakeholder theory also emphasizes greater involvement of local communities, investors, and policymakers in decision-making due to the fact that their active contribution guarantees legitimacy, mobilization of resources, and mutual responsibility towards improving tourism outcomes (Freeman et al., 2010). Empirical research points out that the appropriate land itself does not necessarily result in enhanced performance unless it is intervened with through investment policies, which direct financial investments into infrastructure, services, and product improvements that make tourism destinations market-ready (Gössling et al., 2012). Similarly, community participation is an intervening variable between performance and land suitability by encouraging local acceptance, preservation of authenticity, and social capital development, which enhances overall tourist experience and destination resilience (Prasad, 2024). Through the incorporation of these theoretical views, the model places land suitability at the core input that determines outcomes of tourism with investment policy and public participation as intervening variables transforming spatial and resource capacities to quantifiable tourism performance. Such a combined framework accepts the interconnection of natural resources, capital mobilization, and social involvement, hence formulating a holistic basis for the understanding of tourism competitiveness. Figure 1 shows the conceptual model of the research that captures the hypothesized relationships between land suitability, investment strategies, people's participation, and tourism performance.

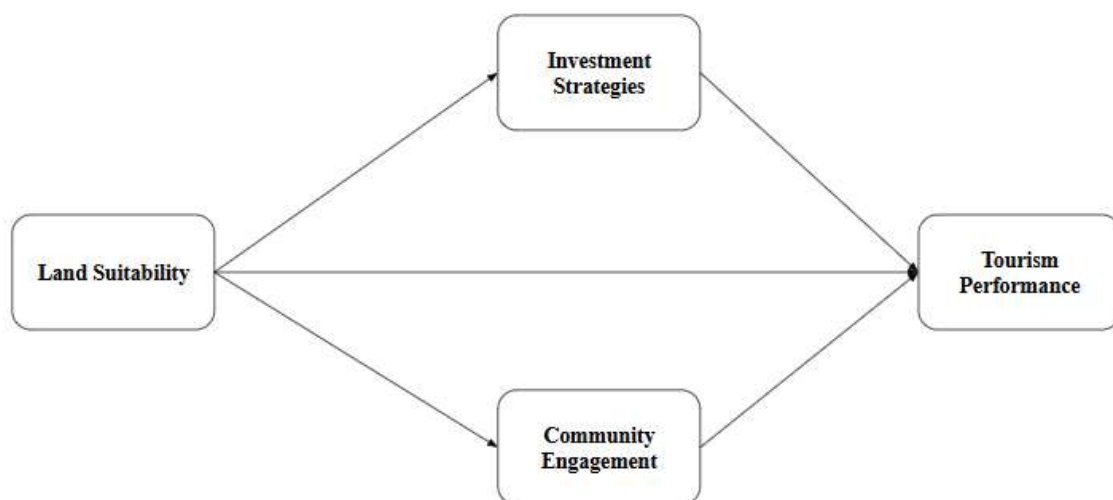


Figure 1: Conceptual Framework

Methodology

Research Design

This research used a quantitative method to analyze the relationship between land suitability, investment patterns, people participation, and tourism performance in Huangma Township, Nanchang County, Jiangxi Province, China. A structured questionnaire survey was adopted as the major means of data collection towards obtaining the views of both tourists and residents on the major constructs of the study. Quantitative design was deemed to be suitable since it supported hypothesis testing, latent variable measurement, and evaluation of causal relationships via statistical model methods. Structural Equation Modeling (SEM) with the use of SmartPLS was chosen to examine the conceptual model proposed, owing to its suitability for predictive research models with mediating variables and intricate relationships. This design supported systematic data gathering and rigorous analytical methods in examining the hypothesized relationships.

Population

The study target population included two main stakeholder groups in Huangma Township: tourists and local residents. Local residents were targeted since they are immediate beneficiaries and actors involved in tourism development through community activities and land-use practices, while tourists were surveyed because they are the demand side, directly impacting and impacted by tourism performance results. Huangma Township was chosen because it represents an obvious combination of cultural landscapes and natural beauty, which are become increasingly strategic resources for the tourism development of Jiangxi Province. Having residents and visitors in the sample population gave a balanced observation of how people's participation, investment planning, land suitability, and tourism performance affected one another.

Sample Size and Sampling Technique

The sample of the study was 272 participants, which would be adequate for Partial Least Squares Structural Equation Modeling (PLS-SEM) (Hair Jr et al., 2021). Statistically, it is recommended that a minimum of 200 cases would be ideal for SEM so that parameter estimates would be accurate and models would be stable (Hair & Alamer, 2022). Purposeful sampling was used whereby direct experiencers or participants of tourism activities in Huangma Township were targeted. Tourists were intercepted at principal sightseeing spots and public places, and domestic dwellers were sampled from domestic communities engaged in tourism-related ventures or living close to tourism areas. The non-probability method of sampling was apt considering the research interest in stakeholders with the potential to offer meaningful information about the constructs of interest.

Data Collection

Questionnaires were self-administered and completed with a structured questionnaire that was developed to gauge the primary constructs of the study, including land suitability, investment approaches, community participation, and tourism performance. Items on the questionnaire were drawn from established scales used in past studies on tourism and sustainability, but were reformulated to suit the Chinese regional and cultural setting. A five-point Likert scale from "strongly disagree" (1) to "strongly agree" (5) was used to measure the strength of respondents' views. A pilot test on 30 respondents was carried out before the main data collection in order to clarify, guarantee reliability, and cultural relevance of items. The last survey was conducted

on location in Huangma Township for four weeks with the help of enumerators who were trained and knowledgeable of Mandarin and the local language to allow for interaction with the residents. Ethical principles like informed consent, voluntary response, and anonymity were strictly upheld throughout the data gathering process.

Data Analysis

The gathered data were coded and analyzed through SmartPLS 4.0 to verify the proposed structural relationships. Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed since it accommodates exploratory and predictive models with mediation effects and high-order constructs. Analysis was carried out by employing a two-step method: the measurement model was initially examined to verify reliability and validity such as indicator loadings, composite reliability, Cronbach's alpha, and average variance extracted (AVE). Second, the structural model was used to test the hypothesized association, i.e., direct, indirect (mediated), and total effects. Bootstrapping with 5,000 resamples was used to test path coefficients' significance. The model fit was also tested by using standardized measures such as R^2 values, effect sizes (f^2), and predictive relevance (Q^2). This rigorous analytical procedure made it certain that the findings offered very insightful information on the mediating effect of investment practices and local involvement in land suitability and tourism performance.

Results

Table 1 represents measurement of reliability and validity of the variables in the study. Cronbach's alpha for all the constructs is far above the 0.70 benchmark, ranging from 0.712 for community participation to 0.912 for land suitability to confirm internal consistency. Composite reliability measures, rho_a and rho_c, exceeded the recommended cut-off point of 0.70 with a very high construct reliability. Further, average variance extracted (AVE) values for all the constructs were above 0.50 and were ranging from 0.538 to 0.696 and hence have good convergent validity. These results confirm that the measurement model is valid and reliable for structural analysis in the future.

Table 1: Variables Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Community Engagement	0.712	0.716	0.822	0.538
Investment Strategies	0.888	0.891	0.918	0.692
Land Suitability	0.912	0.914	0.932	0.696
Tourism Performance	0.903	0.905	0.924	0.636

Figure 2 shows the estimated model representing the hypothesized relationships between land suitability, investment strategy, community involvement, and tourism performance. The structural paths indicate the direct effects and mediating effects that were analyzed with SmartPLS. The diagram provides a visualization of the conceptual framework and displays significant paths from land suitability to the mediating variables, along with their indirect impact on tourism performance.

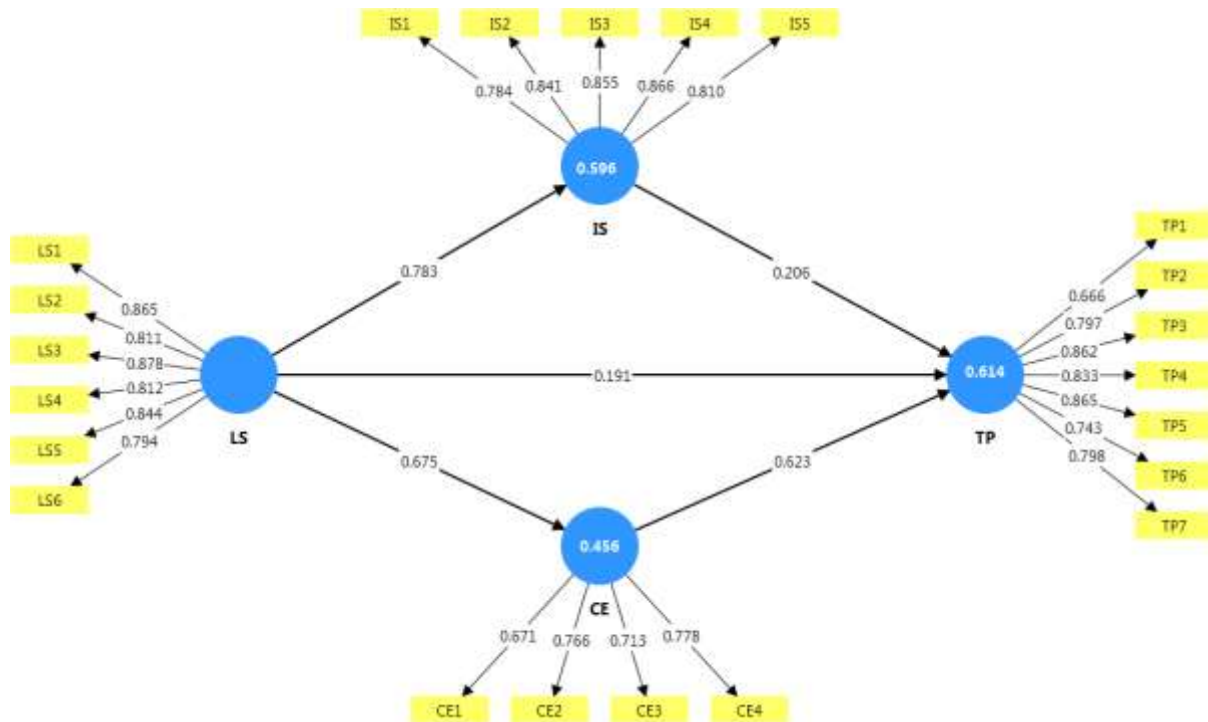


Figure 2: Estimated Model

Table 2 shows the confirmatory factor analysis results, which include outer loadings and variance inflation factor (VIF) levels for the items. Most of the outer loadings are above the recommended cut-off of 0.70, with high indicator reliability except for a few at somewhat lower but still acceptable levels such as CE1 (0.671) and TP1 (0.666). VIF levels are below the cut-off value of 5, meaning there is no multicollinearity among the items. These results establish that all the items operationalize their respective constructs well without compromising discriminant properties.

Table 2: Confirmatory Factor Analysis and VIF

	Items	Outer Loading	VIF
Community Engagement	CE1	0.671	1.318
	CE2	0.766	1.513
	CE3	0.713	1.521
	CE4	0.778	1.730
Investment Strategies	IS1	0.784	2.027
	IS2	0.841	2.567
	IS3	0.855	3.286
	IS4	0.866	3.069
	IS5	0.810	2.402
Land Suitability	LS1	0.865	2.918
	LS2	0.811	2.177
	LS3	0.878	3.338

Tourism Performance	LS4	0.812	2.292
	LS5	0.844	3.062
	LS6	0.794	2.593
	TP1	0.666	1.659
	TP2	0.797	2.347
	TP3	0.862	3.172
	TP4	0.833	2.822
	TP5	0.865	3.133
	TP6	0.743	1.979
	TP7	0.798	2.337

Table 3 displays the heterotrait-monotrait (HTMT) ratio of correlations to assess discriminant validity. All HTMTs are lower than the cut-off point of 0.90, with the highest being 0.863 between investment strategy and land suitability. It indicates that each construct is distinct from the others and that discriminant validity is adequately established.

Table 3: Discriminant Validity (HTMT)

	CE	IS	LS	TP
Community Engagement				
Investment Strategies	0.818			
Land Suitability	0.833	0.863		
Tourism Performance	0.844	0.652	0.678	

Table 4 provides the Fornell-Larcker criterion table for discriminant validity. The AVE square root for each construct on the diagonal is larger than the correlations with other constructs. For example, the square root of the AVE for land suitability is 0.834, which is higher than its correlations with community engagement (0.675), investment strategies (0.783), and tourism performance (0.619). These results once more affirm that each construct measures unique variance unexplained by other constructs in the model.

Table 4: Discriminant Validity (Fornell-Larcker criterion)

	CE	IS	LS	TP
Community Engagement	0.753			
Investment Strategies	0.684	0.832		
Land Suitability	0.675	0.783	0.834	
Tourism Performance	0.729	0.585	0.619	0.797

Table 5 represents the goodness of fit and the explanatory power of the structural model. R-square values indicate that 45.6 percent of community engagement's variance is explained by land suitability, while 59.6 percent of investment strategy's variance is explained by land suitability too. Tourism performance has an R-square of 61.4 percent, which shows land suitability, investment strategies, and people's participation together explain more than half of its variance. The adjusted measures of R-square are smaller but are similar to each other, which implies the model is not experiencing overfitting and still maintains stability. Q²predict values for all are positive and larger than zero, i.e., 0.450 for community engagement, 0.374 for

investment strategies, and 0.604 for tourism performance, confirming that the model is predictive valid for all endogenous constructs.

For model fit, both RMSE and MAE values are within permissible ranges, confirming that the predictions are stable and precise. Finally, the SRMR of 0.072 for community and 0.641 for tourism is reflective that the overall model fit is acceptable as anything below 0.08 is normally considered acceptable. Generally speaking, these results are reflective that the model enjoys high explanatory power, good predictive accuracy, and acceptable goodness of fit.

Table 5: R-square Statistics Model Goodness of Fit Statistics

	R- square	R- square adjusted	Q ² predict	RMSE	MAE	SRMR
Community Engagement	0.456	0.454	0.450	0.749	0.602	0.072
Investment Strategies	0.596	0.591	0.374	0.798	0.648	
Tourism Performance	0.614	0.612	0.604	0.641	0.452	

Table 6 displays the f-square effect sizes of the structural paths. Land suitability exerts very strong influence on investment strategies (1.589) and strong influence on community involvement (0.838). Community involvement exerts medium influence on tourism performance (0.464), whereas land suitability exerts weak direct influence on tourism performance (0.031). Investment strategies exert no strong direct influence on tourism performance (0.000). These results indicate that investment policy and local participation are the primary drivers of tourism performance, which is influenced by excellent support from land suitability.

Table 6: Effect Size

	f-square
CE -> TP	0.464
IS -> TP	0.000
LS -> CE	0.838
LS -> IS	1.589
LS -> TP	0.031

Figure 3 presents the structural model with the estimated path coefficients and significance levels. It depicts graphically the strong positive relationships between investment strategy and land suitability, tourist performance and community participation, and the mediating effects of the intervening variables. Figure 3 complements the path analysis table by providing a better visual representation of the validated hypotheses.

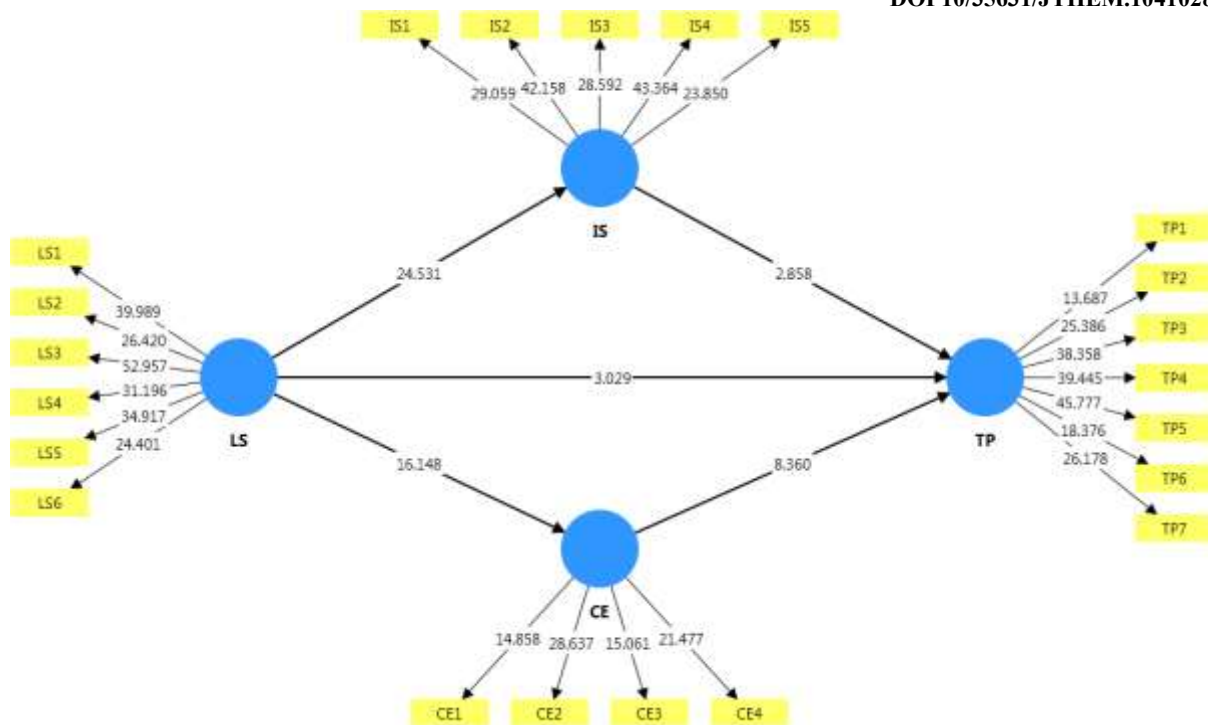


Figure 3: Structural Model for Path Analysis

Table 7 displays the results of structural path analysis, which reveal both direct and indirect linkages between land suitability, investment strategies, community involvement, and tourism performance. Land suitability has a direct effect on tourism performance ($\beta = 0.191$, $p = 0.001$), which suggests that good land conditions directly improve tourism performance in Huangma Township. Land suitability also exerts a highly significant positive influence on investment plans ($\beta = 0.783$, $p = 0.000$) and local participation ($\beta = 0.675$, $p = 0.000$), indicating that environmental and geographical suitability induces both monetary investments and active local participation in tourism. Investment policies also demonstrate a strong influence on tourist performance ($\beta = 0.206$, $p = 0.002$), whereas community participation has an even more significant influence ($\beta = 0.623$, $p = 0.000$), proving that social participation is a key driver of success in the destination. The mediating impacts are also established, with land suitability indirectly driving tourism performance through local community involvement ($\beta = 0.421$, $p = 0.000$) and investment measures ($\beta = 0.107$, $p = 0.036$). These findings unveil that although land suitability offers the basis for tourism expansion, its effect is significantly enhanced when supported by focused investment and intense community involvement, affirming the role of both economic and social mediators in sustainable tourist development.

Table 7: Path Analysis

Path	Beta Value	S.E	T values	P value
LS -> TP	0.191	0.063	3.029	0.001
LS -> IS	0.783	0.032	24.531	0.000
LS -> CE	0.675	0.042	16.148	0.000
IS -> TP	0.206	0.070	2.858	0.002
CE -> TP	0.623	0.075	8.360	0.000
LS -> CE -> TP	0.421	0.061	6.928	0.000

LS -> IS -> TP 0.107 0.053 1.984 0.036

Discussion

Tourism development is a complex process that is characterized by the convergence of environmental resources, financial systems, and social participation. This study discovers how these variables cross over in Huangma Township, where land suitability is the inherent factor to which investment strategies and social engagement respond in order to attain tourism performance. In confirming all the hypotheses developed, the study confirms that the conversion of land resources into competitive tourism products is not only dependent on a favorable geographic and environmental environment but also on the activation of capital and the engagement of local stakeholders. The outcome of the research testifies to the validity of land suitability's role in tourism performance, confirming the first hypothesis and the vital necessity of spatial and environmental planning in shaping tourism outcomes. This result aligns with the sustainable tourism development perspective, which emphasizes the need to harmonize tourism growth with ecological capacity and land use efficiency (Butler, 2004). In the case of Huangma Township, the unique natural landscapes, cultural heritage, and accessibility created by suitable land conditions appear to have directly enhanced tourism performance indicators such as visitor satisfaction, repeat visitation, and overall competitiveness. The positive and significant effect found in this study confirms that suitable land resources, when properly managed, generate measurable improvements in tourism performance, consistent with earlier research that identified terrain, climate, and heritage as critical determinants of destination attractiveness (Chen et al., 2025).

The second and third hypotheses were also true, suggesting that land suitability is essential in shaping both investment policy and community response. They illustrate how land conditions affect not only environmental capacity but direct economic and social impacts to tourism development. According to stakeholder theory (Freeman et al., 2010), communities and investors are positively receptive where land resources are complemented with development opportunity that is feasible and advantageous. Its deep influence on investment strategy upholds earlier research that shows lands with favorable conditions are allocated more concerted investment in tourism, infrastructure, and promotion (Wang et al., 2023). Similarly, the strong effect of land suitability on community engagement highlights that residents are more willing to participate in tourism activities when natural and cultural resources are preserved and respected (Rodríguez-Zurita et al., 2025). Confirmation of the fourth and fifth hypotheses also favors these findings by validating that investment and community participation programs have immense positive effects on tourism performance. Support planning influences perception in the field of development economics where infrastructure pressures, service pressures, and pressures in innovation investment make tourism productive and competitive (S. Li et al., 2024). In Huangma Township, increased accessibility, improved infrastructure, and investment in promotional measures have appeared to turn natural and cultural resources into quantifiable performance gains of tourism. At the same time, the strong performance impact from the role of local people participation validates social exchange theory assumptions that locals are positively disposed toward tourism if they experience equitable gains and low costs (Hu, 2025).

The results of the study also echoed the sixth and seventh hypotheses, which speculate that investment strategy and community acceptability act as mediating variables for the relationship between land suitability and tourism performance. Based on the resource-based view, land

suitability is the most generalized but most valuable resource that needs investment strategies so that it would be developed as marketable goods and services, thus turning environmental potential into competitiveness (Barney, 2001). Through this mechanism, stakeholder theory places considerable importance on local participation as an intervening mechanism since local participation will ensure that tourism development retains cultural identity, creates social capital, and enhances authenticity, all translating to improved visitor satisfaction and destination performance (Wang et al., 2023). Applicability of the two mediators also supports sustainable theory in tourism development, where interdependence of environmental, economic, and social systems towards achieving balanced development is supported (Li et al., 2025). For Huangma Township, experience indicates that favorable land conditions allowed investment to concentrate on attractions and infrastructures and allowed the residents to participate actively in tourism. All the hypotheses together well validate the coordinated roles of land suitability, investment plan, and participatory community in choosing tourism performance. The research not only confirms that the land suitability has a direct impact on the tourism performance but also indicates that its role is optimal when it is through planned investments and participatory community.

Conclusion

The findings of this study present an integrative view of how land suitability, investment planning, and people's participation all contribute to determining the performance of tourism in Huangma Township, Nanchang County, China. Through confirmation of the significance of all presumed relationships, the research confirms that natural and geographical resources form the foundation for tourism potential but are rendered effective by the ability of stakeholders to mobilize investments and achieve active involvement of the local community. Mediating effects also reveal the truth that land suitability per se is not capable of triggering sustainable development of tourism because utilization of environmental endowments as economic assets requires collective approaches and collective intervention. In addition to substantiating theoretical perspectives such as the resource-based view, stakeholder theory, and sustainable development, the research also highlights the utilitarian necessity for mutual harmonization of ecological, economic, and social aspects to achieve long-term competitiveness. Overall, the research is assisting in the promotion of tourism knowledge while giving hands-on advice to policymakers, planners, and community leaders who aim at achieving maximum economic and cultural benefit from tourism through sustainable and integrated development measures.

Implications

The practical implications of this research are highly relevant for policymakers, tourism planners, and community leaders in China who seek to enhance the performance of rural destinations such as Huangma Township. The findings emphasize that land suitability must be strategically leveraged through targeted investment strategies that prioritize infrastructure, accessibility, and sustainable resource use. By channeling resources into appropriate facilities and services, local governments and investors can ensure that the inherent ecological and cultural assets of a destination are translated into competitive advantages that attract tourists. Not to be underrated is the role of community participation, as the study identifies that not only is community participation complementary but also that it plays a central role in enhancing tourism performance. Resident participation in planning and decision-making raises ownership, improves cultural authenticity, and improves social acceptance of tourist activities, enhancing visitor satisfaction and long-term sustainability. Accordingly, the outcomes present practical

insights for integrated tourism development model design to balance environmental protection, economic viability, and community well-being.

Theoretical contributions of this study contribute to the literature on tourism development by linking land suitability and tourist performance through investment approaches and community engagement as mediating variables. The results corroborate the assumptions made in the resource-based view by showing that even though nature and geographic resources are the sources of competitive advantage, these must be mobilized optimally through investments in order to yield tangible outcomes. In addition, community engagement as a mediating variable reinforces stakeholder theory by suggesting that the involvement of inclusive local actors is a vital determinant of tourism success. Furthermore, the findings contribute to sustainable tourism development theory by illustrating how ecological conditions, economic resources, and social dynamics interact to create a balanced model of growth. By integrating these perspectives, the study not only enriches theoretical understanding but also offers a holistic conceptual framework for analyzing the interdependencies among land, investment, community, and tourism performance in developing regions.

Limitations and Future Directions

One limitation of this research lies in its geographical and contextual focus, as the study was conducted solely in Huangma Township, Nanchang County, which may limit the generalizability of the findings to other regions with different socio-economic or environmental conditions. Quantitative survey design reliance is also restrictive to the extent of the richness of knowledge on subtle community perceptions and cultural dynamics that could further impact tourism outcomes. In addition, the cross-sectional nature of the data collection only captures the snapshot of the relationships between land suitability, investment intentions, participation of the community, and tourism performance at a single point in time but not possibly evolving trends or long-term impacts over a time frame. These are issues which involve that while the findings are worth it, they are to be understood on the terms of the research situation in question. Follow-up streams of study should try to scale out the model to other geographical and cultural settings within and outside China to test its generalizability elsewhere. Longitudinal studies could shed more light on how land suitability, investment projects, and stakeholder involvement interrelate over time and how these impact tourism performance and sustainability outcomes. More investigation using the mixed-method methodology of triangulating quantitative data analysis with qualitative interviews or participatory observation would enhance knowledge regarding cultural elements and local values affecting tourist trends. The model may also be extended by adding government policy support, technological innovation, or ecologic sustainability measures as variables for a better capture of the explanation of success drivers in tourism. These suggestions would enhance the theory development and real-world applicability of this area of study.

Acknowledgment

The authors express their sincere gratitude to the reviewers for their constructive suggestions, which have greatly improved the quality of this work. The authors are also deeply grateful for the support and encouragement provided by Faculty of Built Environment, Universiti Teknologi MARA that contributed to the successful completion of this study.

References

- Abreu, L. A. d., Walkowski, M. d. C., Perinotto, A. R. C., & Fonseca, J. F. d. (2024). Community-based tourism and best practices with the sustainable development goals. *Administrative Sciences*, 14(2), 36.
- Akinsulire, A. A., Idemudia, C., Okwandu, A. C., & Iwuanyanwu, O. (2024). Strategic planning and investment analysis for affordable housing: Enhancing viability and growth. *Magna Scientia Advanced Research and Reviews*, 11(2), 119-131.
- Aslanova, D. (2025). APPLICATION OF INVESTMENT PROGRAMS IN TOURISM DEVELOPMENT. *International Journal of Artificial Intelligence*, 1(1), 874-878.
- Baig, S., Ali, A., & Khan, S. U. (2024). Exploring the interplay of tourism impacts, quality of life, and community engagement in developing sustainable nature-based tourism in Pakistan. *GeoJournal*, 89(1), 38.
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of management*, 27(6), 643-650.
- Butler, R. (2004). The tourism area life cycle in the twenty - first century. *A companion to tourism*, 159-170.
- Chen, Y., Fu, B., Xie, Y., Bai, S., & Cui, X. (2025). Integrating extreme temperature metrics into tea land suitability models: a GIS-based assessment in the ecological and cultural tourism circle in Western Hubei, China. *Theoretical and Applied Climatology*, 156(5), 276.
- Choudhary, K., Boori, M., Shi, W., Valiev, A., & Kupriyanov, A. (2023). Agricultural land suitability assessment for sustainable development using remote sensing techniques with analytic hierarchy process. *Remote Sensing Applications: Society and Environment*, 32, 101051.
- Freeman, R. E., Harrison, J. S., Wicks, A. C., Parmar, B. L., & De Colle, S. (2010). Stakeholder theory: The state of the art.
- Gössling, S., Scott, D., Hall, C. M., Ceron, J.-P., & Dubois, G. (2012). Consumer behaviour and demand response of tourists to climate change. *Annals of tourism research*, 39(1), 36-58.
- Hair, J., & Alamer, A. (2022). Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Research Methods in Applied Linguistics*, 1(3), 100027. <https://doi.org/https://doi.org/10.1016/j.rmal.2022.100027>
- Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., Ray, S., Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). Evaluation of reflective measurement models. *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook*, 75-90.
- Hu, G. (2025). An integration of random forest regression model in tourism suitability evaluation index system. *Intelligent Decision Technologies*, 19(3), 1477-1493.
- Hussain, T., Wang, D., & Li, B. (2024). Exploring the impact of social media on tourist behavior in rural mountain tourism during the COVID-19 pandemic: The role of perceived risk and community participation. *Acta Psychologica*, 242, 104113.
- Knollenberg, W., Brune, S., Harrison, J., & Savage, A. E. (2024). Identifying a community capital investment portfolio to sustain a tourism workforce. In *A sustainable tourism workforce* (pp. 190-206). Routledge.
- Li, J., Lai, K. K., & Li, Y. (2024). Remanufacturing and low-carbon investment strategies in a closed-loop supply chain under multiple carbon policies. *International Journal of Logistics Research and Applications*, 27(1), 170-192.

- Li, J., Liu, X., Wang, Y., Peng, X., Tang, H., & Li, M. (2025). Ecological tourism suitability evaluation and landscape ecological risk analysis of the Yangtze River Delta Region from 2000 to 2020 based on the MaxEnt model. *Journal of Asian Architecture and Building Engineering*, 1-18.
- Li, S., Xu, H., Lu, T., Cao, G., & Zhang, X. (2024). Emerging technologies in finance: Revolutionizing investment strategies and tax management in the digital era. *Spectrum of Research*, 4(2).
- Mohd Yusof, N., Azizan, I. S., Ahmad, N. A., Ismail, J., & Yusoff, S. N. (2025). Empowering youth for sustainable tourism: the mediating roles of social innovation in promoting local community development. *Borneo Akademika*, 9(1), 55-67.
- Nugraha, I., Parma, I., Agustina, M., & Hutnaleontina, P. (2024). The role of government and community participation in realizing sustainable tourism development in Tihingan Village, Bali, Indonesia. *Journal of Infrastructure, Policy and Development*, 8(8), 4621.
- Nyompa, S., Maru, R., Wahyuddin, W., & Dirawan, G. D. (2023). The Utilization of Geographic Information Systems (GIS) for the Suitability of Agro-tourism Land. *EnvironmentAsia*, 16(1), 37-48.
- Pramanik, S. A. K., & Rahman, M. Z. (2024). Influences of local community dimensions in enhancing support for sustainable tourism development. *International Journal of Hospitality & Tourism Administration*, 25(4), 817-841.
- Prasad, K. (2024). The Role of local community in enhancing sustainable community based tourism. *J. Electrical Systems*, 20(7s), 558-571.
- Qin, Y., Cao, L., Li, W., Darvishi Bolorani, A., Li, Y., Ke, X., Soleimani, M., Yu, Q., & Zhou, C. (2023). Suitability assessment method of red tourism development using geospatial and social humanity data: A case study of Ruijin City, East China. *Sustainability*, 15(11), 8582.
- Quan, Q., & Wu, Y. (2024). Integrating entropy weight and MaxEnt models for ecotourism suitability assessment in northeast China tiger and leopard national Park. *Land*, 13(8), 1269.
- Rachmad, Y. E. (2024). Danantara and the Global Investment Landscape: Strategies for Economic Resilience. *The United Nations Global Compact*.
- Ramaano, A. I. (2024). The potential significance of geographic information systems (GISs) and remote sensing (RS) in sustainable tourism and decent community involvement in African-rural neighborhoods. *Journal of Electronic Business & Digital Economics*, 3(3), 341-362.
- Rodríguez-Zurita, D., Jaya-Montalvo, M., Moreira-Arboleda, J., Raya-Diez, E., & Carrión-Mero, P. (2025). Sustainable development through service learning and community engagement in higher education: a systematic literature review. *International Journal of Sustainability in Higher Education*, 26(1), 158-201.
- Sadeghi, H., & Taghdisi, A. (2024). Assessment of Land Suitability for Nomadic Tourism.
- Salouw, E., Setiawan, B., Roychansyah, M. S., & Sarwadi, A. (2024). Bibliometric analysis of tourism and community participation research: a comparison of scopus and web of science databases. *International Journal of Sustainable Development and Planning*, 19(4), 1415-1422.
- Sarkar, A., Mondal, M., Sarma, U. S., Podder, S., & Gayen, S. K. (2024). Tourism Suitability Assessment in Malbazar Block using principal component analysis and analytical hierarchy process. *Environment, Development and Sustainability*, 1-42.
- Sathiyamurthi, S., Saravanan, S., Karuppannan, S., Balakumbahan, R., Sivasakthi, M., Praveen Kumar, S., Ramya, M., Hussain, S., & Tariq, A. (2024). Agricultural land suitability of

- Manimutha Nadhi watershed using AHP and GIS techniques. *Discover Sustainability*, 5(1), 270.
- Svitlichna, V., Tonkoshkur, M., Cirella, G. T., Radionova, L., Yatsiuk, M., & Uhodnikova, O. (2024). Sustainable ecotourism development: Integrating public marketing, community engagement, and environmental stewardship in Ukraine. In *Handbook on Post-War Reconstruction and Development Economics of Ukraine: Catalyzing Progress* (pp. 271-291). Springer.
- Tabatabaei, F., Oshriyeh, O., & Beldona, S. (2024). Towards sustainability: exploring community involvement in tourism development. *Tourism Planning & Development*, 1-31.
- Tiwari, S., Marahatta, D., & Devkota, H. (2024). Aspects of community participation in eco-tourism: a systematic review. *Journal of Multidisciplinary Research Advancements*, 2(1), 71-79.
- Tong, J., Li, Y., & Yang, Y. (2024). System construction, tourism empowerment, and community participation: The sustainable way of rural tourism development. *Sustainability*, 16(1), 422.
- Wang, H., Zhan, J., Wang, C., Blinov, O. A., Asiedu Kumi, M., Liu, W., Chu, X., Teng, Y., Liu, H., & Yang, Z. (2023). Integrating agricultural and ecotourism development: A crop cultivation suitability framework considering tourists' landscape preferences in qinghai province, china. *Remote Sensing*, 15(19), 4685.
- Wani, M. D., Dada, Z. A., & Shah, S. A. (2024). The impact of community empowerment on sustainable tourism development and the mediation effect of local support: a structural equation Modeling approach. *Community Development*, 55(1), 50-66.
- Wijburg, G., Aalbers, M. B., Conte, V., & Stoffelen, A. (2024). Tourism - led rentier capitalism: Extracting rent and value from tourism property investment. *Antipode*, 56(2), 715-737.
- Ying, L., Yiran, W., & Tongqian, Z. (2023). Study on the Evaluation and Optimization Strategy of Tourism Environmental Suitability in China based on the AHP-TOPSIS Algorithm. *Journal of Resources and Ecology*, 14(3), 631-643.
- Zhang, W., Ren, S., Zhang, Y., & Li, C. (2024). Government investment, level of marketization and high-quality tourism development. *International Review of Economics & Finance*, 96, 103536.
- Zhao, L., Li, Q., & Chen, J. M. (2025). How does infrastructure investment boost tourism development? Evidence from China. *Tourism Economics*, 13548166251315789.