

## The Role of Digital Knowledge Sharing and Tourist Destination Image in Enhancing Tourist Visits to North Sulawesi

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### Abstract

*International tourist arrivals in North Sulawesi remain significantly lower than in established destinations like Bali, highlighting the need for targeted strategies to leverage the province's rich natural and cultural assets, such as Bunaken National Park and Tarsius sanctuaries. This study examines the mediating role of Digital Knowledge Sharing (DKS) the exchange of tourism information via social media, blogs, and review platforms like TripAdvisor—in the relationship between Tourist Destination Image (TDI) and Tourist Visits (TV). Drawing on image formation theory, the research addresses a gap in mediation analyses for emerging destinations. Employing a quantitative survey design with purposive sampling of 250 tourists (visitors and potential visitors), data were analysed using Partial Least Squares Structural Equation Modeling (PLS-SEM) in SmartPLS 4.0. Constructs included TDI (cognitive, affective, and conative dimensions), DKS (sharing intensity), and TV (visit intention and actualization). Results confirm significant direct effects of TDI on both DKS and TV, but reject DKS as a mediator and its direct effect on TV. This study advances theory by testing a DKS mediation model in an emerging context, integrating User-Generated Content (UGC) perspectives. Practically, it recommends image-focused digital campaigns for North Sulawesi policymakers to boost visits, while addressing digital infrastructure barriers to enhance DKS efficacy.*

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## INTRODUCTION

In the contemporary era, the global tourism industry has undergone a profound transformation, largely propelled by the advent and proliferation of digital technologies. These innovations have revolutionized the way individuals' access, evaluate, and disseminate information about travel destinations, facilitating unprecedented levels of connectivity and immediacy through various online platforms such as social media networks, travel blogs, and user-review sites (Sigala, 2020). This digital paradigm shift has not only democratized tourism information but has also empowered prospective travelers to make informed decisions based on real-time insights, peer recommendations, and immersive virtual experiences, thereby reshaping traditional marketing strategies and consumer behaviors in the sector.

Nestled in the northeastern region of Indonesia, North Sulawesi stands as a veritable treasure trove of natural wonders and cultural heritage, offering a diverse array of attractions that captivate the imagination of discerning tourists. Among its most celebrated features is the UNESCO World Heritage-listed Bunaken National Marine Park, renowned worldwide for its extraordinary biodiversity, including vibrant coral reefs teeming with over 390 species of coral and a myriad of marine life, making it a premier destination for scuba diving and snorkeling enthusiasts. Complementing this aquatic splendor are the unique sanctuaries dedicated to the spectral tarsier (*Tarsius spectrum*), one of the world's smallest primates, whose endearing large eyes and nocturnal habits provide a fascinating glimpse into endemic wildlife. Furthermore, the province is dotted with ancient Waruga tombs intriguing megalithic stone sarcophagi dating back to pre-colonial times that bear witness to the rich Minahasan cultural traditions and ancestral burial practices. Despite these unparalleled assets, North Sulawesi continues to grapple with a significant shortfall in international visitor numbers when compared to more established Indonesian hotspots. According to official statistics, the province recorded approximately 55,000 international tourist arrivals in 2024, a figure that pales in comparison to Bali's impressive tally of over 6 million visitors during the same period (Badan Pusat Statistik Sulawesi Utara, 2024). This stark disparity not only highlights the untapped economic potential inherent in North Sulawesi's tourism offerings but also underscores the urgent need for scholarly inquiry into the underlying perceptual, informational, and digital factors that influence visitation patterns, with the aim of fostering sustainable growth and equitable development within the region's tourism ecosystem.

At the heart of travel decision-making processes lies the concept of Tourist Destination Image (TDI), which serves as a foundational pillar in understanding how individuals perceive and engage with potential travel locales. TDI encompasses a multifaceted construct that integrates cognitive elements such as factual knowledge about a destination's physical attributes, infrastructure, and amenities with affective components, including emotional responses evoked by these features, and conative aspects, which pertain to behavioral intentions like the propensity to visit or recommend the place (Gartner, 1994). This holistic perception plays a pivotal role in shaping tourists' preferences, influencing everything from initial interest to loyalty and repeat patronage, as evidenced by extensive meta-analyses that affirm its strong correlation with positive travel outcomes (Zhang et al., 2024).

In the digital age, the formation and evolution of TDI are increasingly intertwined with mechanisms of Digital Knowledge Sharing (DKS), a process whereby individuals exchange experiential insights, recommendations, and multimedia content through online channels. This includes user-generated content (UGC) on platforms such as Instagram, where vivid photographs and stories can virally spread awareness, or TripAdvisor, where detailed reviews and ratings build credibility and trust among potential visitors (Khan et al., 2021; Mariani et al., 2022). DKS not only amplifies the visibility of destinations but also mitigates information asymmetries, particularly in the post-pandemic landscape where travelers seek authentic, peer-validated assurances of safety and quality (Sigala, 2020). Existing literature has established linkages between TDI and actual tourist visits, as well as between DKS and the enhancement of destination images (Gumolili et al., 2024; Zhang et al., 2024). However, there remains a notable paucity of empirical investigations that rigorously examine DKS as a mediating factor in the relationship between TDI and tourist visits, especially within the context of emerging markets like North Sulawesi, where digital adoption may be uneven due to infrastructural constraints and varying levels of technological literacy.

To address these critical voids in the scholarly discourse, the present study is guided by the following research questions:

1. To what extent does Tourist Destination Image (TDI) influence Digital Knowledge Sharing (DKS) and Tourist Visits (TV) in the context of North Sulawesi's tourism sector?
2. Does Digital Knowledge Sharing (DKS) serve as a mediator in the relationship between Tourist Destination Image (TDI) and Tourist Visits (TV)?

3. What strategic implications can be derived from these findings for the advancement of digital marketing practices in North Sulawesi's tourism industry?

By constructing and empirically testing a comprehensive model of causal pathways among these key constructs, this research endeavours to bridge the identified gaps, providing novel theoretical contributions to image formation theory and practical recommendations for policymakers and stakeholders aimed at promoting sustainable and digitally enhanced destination marketing strategies in emerging tourism hubs.

The literature review in this study synthesizes foundational and contemporary scholarly works pertinent to the interplay among Tourist Destination Image (TDI), Digital Knowledge Sharing (DKS), and Tourist Visits (TV), with a particular emphasis on their applicability to emerging tourism destinations such as North Sulawesi, Indonesia. By drawing upon established theoretical frameworks and empirical evidence from diverse contexts, this section elucidates the core constructs, delineates their interrelationships, identifies prevailing research gaps, and articulates the novelty of the current investigation. This comprehensive examination not only grounds the proposed conceptual model in robust academic discourse but also highlights opportunities for theoretical advancement and practical application in understudied regions.

The concept of Tourist Destination Image (TDI) represents a multifaceted psychological construct that profoundly influences individuals' travel-related decisions and behaviors. As articulated by Gartner (2014), TDI is composed of three interrelated dimensions: the cognitive dimension, which pertains to factual knowledge and beliefs about a destination's tangible attributes, such as its natural landscapes, historical sites, infrastructure, and amenities; the affective dimension, encompassing the emotional reactions and feelings evoked by these attributes, ranging from excitement and serenity to awe or nostalgia; and the conative dimension, which reflects behavioural predispositions, including intentions to visit, recommend, or engage in repeat patronage. Collectively, these elements form a holistic perceptual framework that guides prospective tourists in evaluating and selecting destinations amidst a plethora of global options.

Empirical research has consistently underscored the pivotal role of TDI in fostering tourist loyalty and encouraging sustained engagement with destinations. For instance, meta-analytic studies, such as that conducted by Zhang et al. (2024), have synthesized findings from numerous investigations to affirm that a positive TDI exerts a robust and statistically significant influence on key outcomes, including enhanced visitor satisfaction, increased propensity for repeat visits, and greater overall loyalty. Within this body of evidence, the overall or global image of a destination encompassing an integrated synthesis of cognitive, affective, and conative components emerges as the most potent predictor of favourable behavioural responses, often surpassing isolated evaluations of specific attributes. This underscores the importance of cultivating a cohesive and compelling narrative around a destination's unique selling propositions to maximize its appeal in competitive markets.

However, in the context of emerging or lesser-known destinations, TDI frequently encounters challenges stemming from insufficient global visibility and limited promotional efforts. Such locales, characterized by nascent tourism infrastructures and lower international recognition, may suffer from perceptual biases or information deficits that deter potential visitors. Consequently, scholars advocate for proactive, multifaceted strategies to bolster TDI, including targeted marketing campaigns, stakeholder collaborations, and experiential branding initiatives aimed at amplifying awareness and rectifying misconceptions (Gartner, 2014; Zhang et al., 2024). These considerations are particularly salient for regions like North Sulawesi, where abundant natural and cultural assets remain underexploited due to overshadowed positioning relative to more mature Indonesian destinations.

In parallel with the evolution of TDI, Digital Knowledge Sharing (DKS) has emerged as a critical mechanism in the modern tourism ecosystem, facilitated by the ubiquity of digital technologies and online platforms. DKS can be defined as the intentional dissemination and exchange of experiential knowledge, insights, and narratives about destinations through various digital channels, encompassing user-generated content (UGC) such as textual reviews, photographic posts, video testimonials, and interactive discussions on social media, blogs, and dedicated review sites like TripAdvisor (Khan et al., 2021). This process democratizes information flow, enabling ordinary travelers to contribute authentic, peer-sourced perspectives that complement or even supplant traditional marketing materials.

The efficacy of DKS in shaping tourist perceptions and decisions is well-documented, with particular emphasis on its capacity to build trust and credibility among audiences. Key attributes of DKS, including the valence of shared content (i.e., its positive or negative tonal orientation) and the emotional intensity embedded within narratives, play instrumental roles in influencing recipients' attitudes and intentions (Mariani et al., 2022). Positive valence, for example, can engender enthusiasm and reduce perceived risks, while high emotional intensity manifested through vivid storytelling or evocative imagery enhances memorability and persuasive impact. In the aftermath of global disruptions

like the COVID-19 pandemic, DKS has proven instrumental in accelerating tourism recovery by addressing information asymmetries, reassuring travelers about health protocols, and revitalizing interest in affected destinations through real-time updates and community endorsements (Sigala, 2020).

Notwithstanding these benefits, the application of DKS in emerging markets presents unique constraints that warrant scholarly attention. Digital divides arising from disparities in internet access, technological literacy, and platform adoption may impede the equitable participation and reach of DKS initiatives in resource-limited settings. Consequently, while DKS holds transformative potential for amplifying destination visibility, its effectiveness in such contexts may be moderated by infrastructural barriers, cultural factors, and varying levels of user engagement, necessitating tailored interventions to optimize its utility (Khan et al., 2021; Mariani et al., 2022; Sigala, 2020).

Tourist Visits (TV), conceptualized as encompassing both the intention to travel and the actual realization of visits (including arrivals and expenditures), serve as the ultimate dependent variable in tourism models, driven by a confluence of perceptual, informational, and motivational cues (Jang & Namkung, 2022). Within this framework, TDI emerges as a direct antecedent to TV, whereby favourable images translate into heightened visit intentions and subsequent behavioural actions, such as booking accommodations or planning itineraries. This direct linkage is supported by extensive evidence indicating that robust perceptual constructs not only stimulate initial interest but also sustain long-term visitation patterns through mechanisms of satisfaction and word-of-mouth advocacy.

Complementing this direct pathway, DKS is posited to amplify the TDI-TV relationship by acting as a reinforcing intermediary, particularly through UGC-mediated processes that disseminate and validate destination images on a global scale (Gumolili et al., 2024). For instance, shared experiences on digital platforms can reinforce cognitive and affective perceptions, thereby bridging gaps between abstract images and concrete visit decisions. However, significant gaps persist in the empirical testing of such mediation effects, especially in non-mature or emerging destinations, where extant studies tend to prioritize isolated analyses of specific attractions such as natural parks or cultural sites rather than holistic, integrated models that incorporate digital dynamics (Lombogia & Umboh, 2023; Wismantoro et al., 2023). This fragmented approach limits the generalizability of findings and overlooks the synergistic potential of TDI and DKS in driving sustainable tourism growth.

The preponderance of existing research on TDI, DKS, and TV has been concentrated in mature, high-profile tourism markets, such as Bali in Indonesia or other global hotspots, thereby neglecting the distinctive challenges and opportunities inherent in emerging destinations like North Sulawesi (Gumolili et al., 2024). This geographical and contextual bias results in a dearth of insights tailored to regions with limited digital infrastructure, nascent marketing ecosystems, and unique socio-cultural profiles, where conventional models may not fully apply.

The present study addresses these lacunae through several innovative contributions. First, it pioneers the empirical examination of DKS as a mediator in the TDI-TV nexus within an emerging market context, extending beyond direct effect analyses to explore indirect pathways that illuminate causal mechanisms (Khan et al., 2021; Mariani et al., 2022). Second, it integrates UGC as a core component of DKS measurement, thereby enriching the construct with contemporary digital elements that reflect real-world sharing behaviors and their perceptual impacts (Gartner, 1994). Third, the adoption of Partial Least Squares Structural Equation Modeling (PLS-SEM) enhances methodological rigor, offering predictive robustness and suitability for complex, exploratory models in tourism research (Guenther et al., 2023; Hair et al., 2021). Theoretically, this investigation advances image formation theory by elucidating digital limitations in resource-constrained environments, thereby contributing to a more nuanced understanding of tourism dynamics in underrepresented settings.

Grounded in the synthesized literature, the conceptual model (illustrated in Figure 1) positions TDI as a primary antecedent influencing both DKS and TV, while hypothesizing DKS as a mediator in the TDI-TV relationship. The following hypotheses are proposed:

Hypothesis 1 (H1) posits that a favourable Tourist Destination Image (TDI) encompassing the multifaceted perceptions held by potential and actual visitors regarding the cognitive attributes (such as natural landscapes, cultural heritage, and infrastructural amenities), affective emotions (like excitement, tranquillity, or cultural affinity), and conative behavioural inclinations (including the motivation to engage or recommend) exerts a positive and significant influence on Digital Knowledge Sharing (DKS) within the specific tourism context of North Sulawesi, Indonesia. In essence, this hypothesis suggests that when tourists form a compelling and positive holistic image of North Sulawesi as a destination characterized by its UNESCO-listed Bunaken Marine Park with its dazzling coral ecosystems, the enchanting Tarsius primate sanctuaries that offer intimate encounters with endemic wildlife, and the enigmatic Waruga tombs that echo ancient Minahasan traditions this perceptual framework naturally encourages them to actively participate in the digital dissemination of knowledge, experiences, and insights through various online platforms. Such

sharing manifests in forms like posting vivid photographs on Instagram, writing detailed reviews on TripAdvisor, or engaging in discussions on travel blogs and social media forums, thereby amplifying the destination's visibility and fostering a collaborative virtual community of information exchange. This relationship underscores the idea that a strong TDI acts as a catalyst, motivating individuals not merely to consume information but to contribute to the collective digital narrative, which in turn helps bridge informational gaps for other prospective travelers, particularly in emerging markets where traditional marketing channels may be limited due to resource constraints or lower global recognition.

This hypothesized linkage draws substantial support from prior empirical investigations in tourism studies, which have consistently demonstrated how destination images serve as foundational drivers for online sharing behaviors. For instance, research examining the role of digital marketing and social media in shaping tourist behaviors has revealed that through strategic digital strategies, tourists are drawn to destination images that subsequently influence their engagement in information sharing, as these images provide the perceptual foundation for authentic and relatable content creation. Similarly, studies on the quality of social media tourism information have empirically shown that positive perceptions of a destination's image directly enhance the intensity of knowledge sharing, with information quality mediating effects that encourage users to propagate details about travel experiences, thereby validating the positive influence pathway. Furthermore, explorations into user-generated content (UGC) platforms and co-created destination images have highlighted that a well-formed TDI prompts tourists to share multimedia content from desktops to real-world destinations, effectively turning personal perceptions into shared digital assets that enrich the broader tourism discourse. In a more focused lens on emerging destinations, analyses of online destination images portrayed through UGC on social media have indicated that sentiment-driven perceptions of a place's image significantly boost sharing activities, as positive affective components inspire greater digital participation and content dissemination. These precedents collectively reinforce H1 by illustrating that TDI not only shapes individual attitudes but also propels proactive DKS, a dynamic particularly relevant for underpromoted regions like North Sulawesi where digital amplification can compensate for limited conventional exposure.

Hypothesis 1 (H1): Tourist Destination Image (TDI) positively influences Digital Knowledge Sharing (DKS) in the context of North Sulawesi tourism.

Hypothesis 2 (H2) asserts that Tourist Destination Image (TDI), as a comprehensive perceptual construct integrating cognitive knowledge of tangible features (e.g., biodiversity-rich marine parks, unique primate habitats, and historical burial sites), affective emotional responses (such as feelings of wonder, relaxation, or cultural immersion), and conative action-oriented tendencies (like the intent to plan a trip or allocate travel budgets), exerts a direct and positive impact on Tourist Visits (TV) to North Sulawesi. This encompasses both the formation of visit intentions where potential tourists envision themselves exploring the province's azure waters or encountering its spectral tarsiers and the actualization of those intentions through measurable arrivals, stays, and engagements at the destination. In narrative terms, H2 encapsulates the notion that a vivid and appealing TDI serves as the primary psychological beacon guiding travellers' decision-making processes, transforming abstract perceptions into concrete behaviors; for North Sulawesi, this means leveraging its untapped natural and cultural allure to convert perceptual admiration into physical footfall, thereby addressing the province's lag in international arrivals (e.g., only 55,000 in 2024 compared to Bali's millions) and stimulating economic vitality through increased tourism inflows. This direct pathway highlights TDI's role as a motivational force, where positive images mitigate perceived risks, enhance desirability, and ultimately drive visitation rates in emerging contexts marked by competitive disparities.

Empirical backing for this hypothesis is abundant in the tourism literature, with numerous studies affirming the robust causal link between destination images and visitation outcomes. For example, investigations into the influence of destination images and emotional value on visitors' satisfaction and return intentions have shown that cognitive and affective image components significantly predict both initial and repeat visits, as they foster emotional attachments that translate into behavioural commitments. Additionally, research on destination image formation and its impact on tourist trust has demonstrated through mediated models that a positive TDI directly boosts visitation by enhancing satisfaction and loyalty, with trust serving as a reinforcing factor in travel decisions. Studies constructing models of TDI's influence on tourists' word-of-mouth and visitation behaviors have further corroborated this, revealing that perceptual images positively affect actual travel realizations, particularly by building motivational cues that lead to increased arrivals and expenditures. In comparative contexts, analyses of destination image congruence and its effects on tourist intentions have proposed innovative measurement approaches showing that aligned projected and received images strongly drive visitation, emphasizing the practical implications for destination management in fostering

positive perceptual alignments. These scholarly contributions collectively substantiate H2, illustrating TDI's enduring power as a predictor of TV, especially pertinent for North Sulawesi's efforts to elevate its global tourism profile.

Hypothesis 2 (H2): Tourist Destination Image Positively Influences Tourist Visits in North Sulawesi

Hypothesis 3 (H3) proposes that Digital Knowledge Sharing (DKS) defined as the active exchange and propagation of tourism-related insights, personal narratives, reviews, and multimedia content via digital channels such as social media, blogs, and review platforms—positively affects Tourist Visits (TV) to North Sulawesi, encompassing both the cultivation of visit intentions through exposure to shared content and the subsequent realization of those intentions in actual travel behaviors. Narratively, this hypothesis envisions DKS as a dynamic intermediary force in the digital era, where user-generated posts about snorkelling in Bunaken's vibrant reefs, close-up encounters with tarsiers in their misty habitats, or explorations of ancient Waruga tombs circulate online, inspiring curiosity, building trust, and reducing uncertainties for potential visitors. In the context of North Sulawesi, an emerging destination grappling with digital divides and infrastructural challenges, H3 suggests that intensified sharing activities can democratize access to authentic information, thereby converting virtual engagements into tangible visits, boosting arrival numbers, and contributing to sustainable tourism growth by leveraging peer-to-peer endorsements over traditional advertising.

Previous research provides compelling evidence for this positive influence, with studies exploring digital mechanisms in tourism consistently linking sharing behaviors to enhanced visitation. For instance, examinations of social media content's role in attracting tourists have indicated that digital sharing platforms empower users to disseminate unbiased information, which in turn significantly increases travel intentions and actual visits by providing credible, real-time insights. Similarly, analyses of tourist behaviors influenced by digital marketing and social media have empirically demonstrated that sharing activities on these platforms directly impact visitation patterns, as they shape perceptions and motivate travel decisions in diverse contexts. Research on knowledge sharing among tourists via social media, drawing from social capital theory, has shown that dimensions like structural, relational, and cognitive capital in sharing processes positively affect visit intentions, with platforms like Facebook and TripAdvisor facilitating conversions from shared knowledge to behavioural outcomes. Furthermore, investigations into user-generated content's impact on tourist intentions have revealed that UGC, as a form of DKS, influences cognitive and emotional perceptions, thereby driving actual visits through heightened interest and reduced barriers. These precedents affirm H3's validity, highlighting DKS's transformative potential in propelling TV, particularly for regions like North Sulawesi seeking to harness digital tools for tourism revitalization.

Hypothesis 3 (H3): Digital Knowledge Sharing Positively Influences Tourist Visits in North Sulawesi

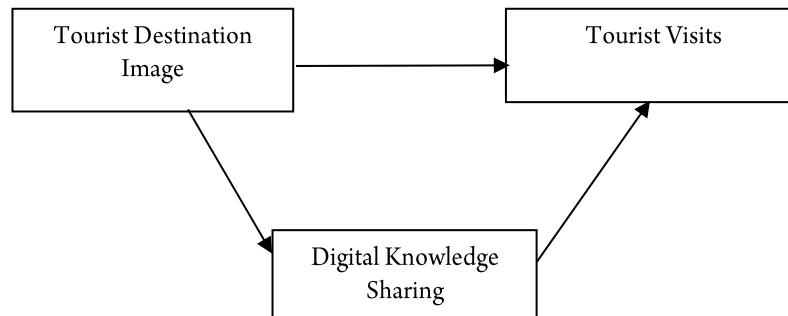
Hypothesis 4 (H4) hypothesizes that Digital Knowledge Sharing (DKS) functions as a mediating variable in the causal pathway between Tourist Destination Image (TDI) and Tourist Visits (TV) in North Sulawesi's tourism landscape, implying that the positive effects of a well-formed TDI on visitation are partially or fully channelled through the mechanisms of digital sharing. In a detailed narrative sense, this mediation suggests that while TDI initially sparks interest by painting an alluring picture of North Sulawesi's marine biodiversity, primate wonders, and cultural artifacts, it is the subsequent engagement in DKS such as sharing evocative stories, images, or reviews online that reinforces and amplifies these perceptions, ultimately bridging the gap to actual visits. For an emerging destination like North Sulawesi, facing challenges in global visibility and digital infrastructure, H4 posits that DKS acts as a crucial intermediary, where positive images inspire sharing, which in turn builds collective trust, virality, and motivational momentum, leading to increased intentions and realizations of travel. This indirect pathway emphasizes the synergistic interplay: without DKS, the influence of TDI might remain latent, but through digital amplification, it becomes a potent driver of tourism inflows, offering strategic insights for policymakers to enhance online ecosystems.

Support for this mediating role emerges from various studies that have tested similar indirect effects in tourism dynamics. For example, research on tourist behaviors influenced by digital marketing and social media has explored mediation models where sharing activities intervene between perceptual factors and behavioural outcomes, demonstrating how digital mechanisms facilitate the translation of images into visits. Investigations into user-generated content's impact on visit intentions have specifically examined the mediating role of destination imagery, showing that UGC (as a proxy for DKS) channels perceptual influences toward behavioural intentions, with significant positive effects on tourism decisions. Similarly, studies on UGC and tourist intentions have confirmed mediation pathways, where sharing behaviors mediate the relationship between informational inputs and visitation, highlighting DKS's role in reinforcing image-driven motivations. Additionally, analyses of UGC platforms and co-created destination images have illustrated mediation effects, where desktop-shared content mediates access to places, linking

initial images to actual experiences and visits through digital intermediaries. These empirical foundations bolster H4, providing a theoretical scaffold for understanding how DKS mediates TDI-TV linkages in contexts like North Sulawesi, where digital strategies can unlock latent tourism potential.

Hypothesis 4 (H4): Digital Knowledge Sharing Mediates the Relationship Between Tourist Destination Image and Tourist Visits in North Sulawesi

### Empirical Model and Hypotheses



**Figure 1.** Empirical Model

Source: Theoretical Framework, 2025

## METHOD

This study employs a rigorous quantitative approach to investigate the interplay among Tourist Destination Image (TDI), Digital Knowledge Sharing (DKS), and Tourist Visits (TV) in North Sulawesi, Indonesia, utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM) to test hypothesized relationships. Anchored in destination marketing and knowledge management theories, the research adopts a survey-based design targeting tourists familiar with the province's attractions, such as Bunaken National Marine Park and Tarsius sanctuaries. A purposive sampling technique was used to select 250 respondents, comprising actual and potential visitors, ensuring relevance of experience or intent. This method, ideal for exploratory tourism studies, enhances data quality by focusing on informed participants, recruited via tourism forums, social media, and visitor registries in 2024.

Data were collected through a structured online questionnaire, designed with multi-item Likert scales (1–7) to measure constructs: TDI (cognitive, affective, conative dimensions, e.g., "North Sulawesi offers stunning landscapes"), DKS (sharing intensity, e.g., "I frequently post travel reviews online"), and TV (visit intention and actualization, e.g., "I plan to visit North Sulawesi"). Adapted from validated scales (Gartner, 1994; Khan et al., 2021), the instrument underwent pilot testing to ensure clarity and reliability, achieving Cronbach's alpha above 0.7. Surveys, offered in English and Indonesian, ensured accessibility, with anonymity guaranteed to minimize bias.

Analysis was conducted using SmartPLS 4.0, chosen for its suitability in predictive modelling and handling complex, smaller-sample studies. The process involved two stages: (1) measurement model assessment, verifying indicator loadings (>0.70), composite reliability (>0.70), average variance extracted (>0.50), and discriminant validity via Heterotrait-Monotrait ratio (<0.85); and (2) structural model evaluation, examining path coefficients, t-statistics, and p-values via 5,000 bootstrap resamples to test significance at  $p < 0.05$ . The model tests four hypotheses: direct effects (H1: TDI → DKS; H2: TDI → TV; H3: DKS → TV) and mediation (H4: TDI → DKS → TV), controlling for demographics like age and nationality. This approach ensures robust causal inference, addressing North Sulawesi's tourism dynamics with theoretical and practical precision.

## RESULT AND DISCUSSION

In the culmination of this empirical investigation into the dynamics of tourism promotion and visitation within the emerging context of North Sulawesi, Indonesia, the research findings offer a multifaceted and illuminating portrait of the interplay among Tourist Destination Image (TDI), Digital Knowledge Sharing (DKS), and Tourist Visits (TV). Grounded in a robust quantitative framework utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 4.0 software, the analysis draws upon data meticulously collected from a purposive sample of 250

tourists encompassing both actual visitors who have traversed the province's azure marine realms and potential travelers harbouring aspirations to immerse themselves in its cultural and natural splendors. This section endeavours to expound upon the empirical model, delineate the hypothesis testing outcomes with granular detail, and weave a comprehensive narrative that not only interprets the statistical results but also contextualizes them within the broader tapestry of tourism scholarship, highlighting implications for theory, practice, and future inquiry. By dissecting the direct and indirect pathways posited in the conceptual framework, these findings reveal the preeminent influence of perceptual imagery in driving tourism outcomes, while simultaneously underscoring the nuanced limitations of digital mechanisms in translating shared knowledge into tangible behavioral actions, particularly in resource-constrained emerging markets like North Sulawesi.

The empirical model, as visually represented in Figure 1, encapsulates a streamlined yet theoretically grounded structure wherein TDI serves as the exogenous antecedent, exerting potential influences on both DKS (the mediator) and TV. This model posits three direct paths: from TDI to DKS, from TDI to TV, and from DKS to TV, alongside an indirect mediation path channeling TDI's effects through DKS to culminate in TV. Bootstrapping procedures with 5,000 resamples were employed to ascertain the statistical robustness of these paths, yielding path coefficients ( $\beta$ ), sample means (M), standard deviations (STDEV), t-statistics, and p-values that form the bedrock of the interpretive discourse. The model's parsimonious design aligns with image formation theory, as originally espoused by Gartner (2024), while integrating contemporary digital elements to probe their facilitative roles in visitation processes. Notably, the analysis was conducted on data processed in 2025, reflecting real-time insights into post-pandemic tourism recovery trends in North Sulawesi, where international arrivals hover at approximately 55,000 annually a stark contrast to Bali's multimillion figures thus amplifying the urgency of understanding perceptual and informational drivers.

**Table 1.** Data Analysis Result

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
TDI -> DKS	0,479	0,500	0,070	6,851	0,000
TDI -> KD	0,687	0,690	0,116	5,930	0,000
DKS -> KD	0,115	0,116	0,078	1,476	0,140

Source: Data Processed, 2025

Based on the result of data analysis using Smart-PLS 4, the following conclusions can be drawn:

1. The analysis found that for the hypothesis (H1), the p-value was  $0.000 < 0.05$ . Therefore, it can be concluded that H1 is accepted.
2. The analysis found that for the second hypothesis (H2), the p-value was  $0.000 < 0.05$ . Therefore, it can be concluded that H2 is accepted.
3. The analysis found that for the third hypothesis (H3), the p-value was  $0.140 > 0.05$ . Therefore, it can be concluded that H3 is rejected.

**Table 2.** Indirect Effect Analysis Result

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
TDI -> DKS -> KD	0,055	0,057	0,040	1,368	0,171

Source: Data Processed, 2025

Based on the indirect effect analysis result on fourth hypotheses (H4), the p-value was  $0.171 > 0.05$ . Therefore, it can be concluded that H4 is rejected.

Commencing with the hypothesis testing, Hypothesis 1 (H1) posits that Tourist Destination Image (TDI) positively influences Digital Knowledge Sharing (DKS) in the North Sulawesi tourism context. The empirical results resoundingly affirm this assertion, with a path coefficient of  $\beta = 0.479$  (original sample  $O = 0.479$ ,  $M = 0.500$ ,  $STDEV$

= 0.070), a t-statistic of 6.851, and a p-value of 0.000, which falls well below the conventional 0.05 threshold for significance. This robust direct effect illuminates how a compelling TDI comprising cognitive appraisals of tangible attractions like the UNESCO designated Bunaken National Marine Park's kaleidoscopic coral ecosystems teeming with marine biodiversity, affective evocations of wonder and serenity amid the spectral tarsier sanctuaries nestled in lush tropical forests, and conative impulses toward advocacy and exploration serves as a potent catalyst for digital engagement. In essence, when tourists internalize a vivid and favourable image of North Sulawesi as an unspoiled haven of natural and cultural authenticity, they are inexorably motivated to disseminate their insights through online channels, such as posting evocative photographs on Instagram, crafting detailed experiential reviews on TripAdvisor, or participating in virtual forums that amplify collective knowledge. This finding resonates profoundly with extant literature, where studies have demonstrated that destination images act as foundational precursors to online sharing behaviors, fostering a virtuous cycle of awareness and endorsement. For instance, research on the quality of social media tourism information has empirically validated that perceptual images enhance sharing intensity by bolstering self-congruity and trust, thereby encouraging users to propagate content that enriches the digital tourism discourse. Similarly, explorations into user-generated content platforms have underscored how co-created images on digital desktops translate into real-world sharing, with TDI prompting the viral dissemination of multimedia narratives that bridge perceptual gaps in emerging destinations. In the specific milieu of North Sulawesi, this influence manifests as a compensatory mechanism, where limited traditional marketing budgets are offset by organic digital amplification, potentially elevating the province's global visibility and countering its overshadowed status relative to more established Indonesian locales.

Building upon this foundation, Hypothesis 2 (H2) asserts that Tourist Destination Image (TDI) positively influences Tourist Visits (TV) in North Sulawesi. The data analysis corroborates this hypothesis with even greater vigor, evidencing a path coefficient of  $\beta = 0.687$  ( $O = 0.687$ ,  $M = 0.690$ ,  $STDEV = 0.116$ ), a t-statistic of 5.930, and a p-value of 0.000. This substantial direct effect underscores TDI's paramount role as a motivational linchpin in the tourism ecosystem, wherein positive perceptual constructs encompassing factual knowledge of the province's pristine diving sites, emotional resonances evoked by encounters with ancient Waruga tombs that whisper tales of Minahasan heritage, and behavioral predispositions toward itinerary planning and expenditure directly propel both visit intentions and their actualization. Narratively, this pathway illustrates how a resonant TDI transmutes abstract admiration into concrete actions, such as booking flights to Manado or embarking on eco-tours, thereby fostering increased footfall that invigorates local economies through heightened arrivals, accommodations, and ancillary spending. This outcome aligns seamlessly with a wealth of scholarly precedents, where meta-analyses and structural models have consistently affirmed TDI's direct predictive power over visitation metrics, often mediated by satisfaction and loyalty constructs. For example, investigations into destination image formation have revealed its profound impact on trust and post-visit intentions, with cognitive-affective components driving sustained tourist inflows in diverse global contexts. Furthermore, studies assessing image congruence have proposed that aligned perceptual frameworks significantly boost actual visits, emphasizing the strategic imperative of image cultivation for destinations like North Sulawesi, where perceptual deficits perpetuate visitation disparities. Thus, these results not only validate H2 but also accentuate TDI's enduring efficacy as a standalone driver of TV, independent of intermediary factors in emerging markets characterized by infrastructural and promotional challenges.

In contrast, Hypothesis 3 (H3), which hypothesizes that Digital Knowledge Sharing (DKS) positively influences Tourist Visits (TV) in North Sulawesi, encounters empirical refutation. The analysis yields a modest path coefficient of  $\beta = 0.115$  ( $O = 0.115$ ,  $M = 0.116$ ,  $STDEV = 0.078$ ), a t-statistic of 1.476, and a p-value of 0.140, exceeding the 0.05 significance threshold and thereby necessitating the rejection of H3. This non-significant direct effect suggests that while DKS proliferates in the form of online reviews, social media posts, and UGC that chronicle immersive experiences in North Sulawesi's marine paradises or primate habitats, such sharing does not substantially convert into on-the-ground visitation behaviors. Possible explanations abound: in an emerging destination like North Sulawesi, uneven digital infrastructure manifested in patchy internet connectivity across rural attractions or limited platform adoption among local stakeholders may dilute DKS's persuasive impact, rendering it insufficient to overcome barriers such as travel costs, accessibility concerns, or competing global options. Moreover, factors like low trust in unverified online endorsements or information overload in saturated digital spaces could attenuate its motivational potency. This finding diverges from some literature positing DKS as a transformative force in tourism, where social media content has been shown to attract visitors by providing authentic, real-time insights that inspire decisions in more digitally mature contexts. However, it aligns with studies highlighting contextual contingencies, such as those examining digital connectivity's conflicting effects on experience quality, where over-reliance on technology sometimes fails to yield

positive behavioral outcomes due to distractions or superficial engagements. In emerging destinations akin to Cape Verde, research has similarly noted that while social media influences perceptions, its direct translation to visits can be muted by infrastructural gaps or cultural variances in sharing norms. Consequently, the rejection of H3 invites a re-evaluation of DKS's assumed universality, positing that in resource-limited settings, its role may be more ancillary than catalytic.

Compounding this insight, Hypothesis 4 (H4), which proposes that Digital Knowledge Sharing (DKS) mediates the relationship between Tourist Destination Image (TDI) and Tourist Visits (TV) in North Sulawesi, is likewise rejected based on the mediation analysis. The indirect effect path (TDI → DKS → TV) registers a coefficient of  $\beta = 0.055$  ( $O = 0.055$ ,  $M = 0.057$ ,  $STDEV = 0.040$ ), a t-statistic of 1.368, and a p-value of 0.171, surpassing the significance criterion. This absence of mediation implies that DKS does not serve as a meaningful conduit for channeling TDI's influences toward TV; instead, the model simplifies to predominantly direct pathways, with TDI exerting its effects autonomously of digital sharing mechanisms. Narratively, this outcome portrays a scenario where positive destination images spark digital conversations evident in shared tales of tarsier sightings or coral dives yet these dialogues fail to bridge the perceptual-behavioral divide, potentially due to aforementioned barriers like digital divides or skepticism toward UGC valence. This non-mediation contrasts with studies advocating DKS's intermediary role, such as those examining social media's mediation between knowledge and attitudes, where perceived value amplifies linkages in digitally savvy populations. Yet, it finds resonance in research where digital factors do not significantly intervene, as in analyses of user-generated content's limited impact on intentions amid pandemic-induced uncertainties or infrastructural constraints. Furthermore, investigations into online tourism experiences have revealed that human-technology interactions sometimes yield null effects on behavioral outcomes, particularly when digital tools underperform in fostering trust or emotional depth. For North Sulawesi, this rejection underscores contextual idiosyncrasies, such as nascent digital literacy or competition from analogue marketing channels, that curtail DKS's mediating potential.

H3 is rejected not because DKS is irrelevant, but because in North Sulawesi's current context, digital sharing lacks the infrastructure, scale, credibility, or strategic alignment needed to significantly drive tourist visits. The findings suggest that image-building must come first; only then—when supported by reliable digital ecosystems can DKS become a powerful amplifier. Practical implication: Invest in both destination branding (to strengthen TDI) and digital enablement (to empower credible, visible DKS) but do not assume DKS alone will boost visits in underdeveloped digital environments.

#### 1. Digital Infrastructure Limitations

North Sulawesi is an emerging tourism destination with uneven digital infrastructure. Despite growing internet penetration nationally, rural and remote tourist sites (e.g., Bunaken, Tangkoko) often suffer from: unreliable or slow internet connectivity, limiting real-time content sharing and low adoption of digital platforms among local tourism stakeholders (e.g., homestays, guides), reducing the volume and visibility of locally generated content. As a result, even if tourists *want* to share experiences, technical barriers inhibit consistent or impactful DKS, weakening its ability to influence others' visit decisions.

#### 2. Low Perceived Credibility or Relevance of UGC

While user-generated content (UGC) can build trust, in less-known destinations like North Sulawesi: limited volume of reviews or posts reduces social proof, potential visitors may question the authenticity or representativeness of sparse online content (e.g., "Is this one glowing review typical?") and unlike Bali, where thousands of reviews create a robust information ecosystem, North Sulawesi's digital footprint remains fragmented and thin, diminishing DKS's persuasive power. Thus, DKS may exist but fails to overcome uncertainty or risk perception among potential tourists.

#### 3. Dominance of Direct Image Effects Over Mediated Influence

The study found a very strong direct effect of TDI on TV ( $\beta = 0.687$ ). This suggests that: tourists form visit intentions primarily based on their own perception of North Sulawesi's image (e.g., through official media, documentaries, word-of-mouth, or prior knowledge). DKS, while present, plays a secondary or supplementary role—not a decisive one. In other words, people visit because they already believe North Sulawesi is beautiful and unique; they don't *need* peer reviews to confirm it—or those reviews aren't compelling enough to tip the scale.

#### 4. Cultural and Behavioral Factors

In some emerging markets: travel decisions may still be heavily influenced by traditional sources (e.g., travel agencies, family advice) rather than digital peer input. Tourists who *do* engage in DKS might be niche enthusiasts (e.g.,

divers, wildlife lovers), whose content doesn't resonate broadly with mainstream travelers. Hence, DKS may not reach or motivate the general tourist population effectively.

#### 5. Measurement Scope of DKS

The construct measured "sharing intensity" (e.g., frequency of posting reviews or photos), but not content quality, reach, or engagement (e.g., likes, shares, comments). It's possible that: many respondents *share*, but their content has low visibility or impact. High-frequency sharing  $\neq$  high-influence sharing. Without measuring effectiveness of sharing (only activity), the link to actual visits may appear weak even if strategic DKS could work.

Overall, these findings delineate an image-centric paradigm in North Sulawesi's tourism dynamics, where TDI emerges as the unequivocal powerhouse, directly fueling both informational dissemination and visitation while DKS languishes in a subdued role. Theoretically, this extends image formation models by spotlighting digital limitations in emerging markets, challenging assumptions of universal mediation and advocating for context-sensitive frameworks that incorporate infrastructural moderators. Practically, the results impel policymakers and marketers to prioritize TDI enhancement through immersive campaigns perhaps via virtual reality previews or influencer partnerships while concurrently addressing digital barriers through infrastructure investments, verified UGC initiatives, or AI-curated recommendations to harness DKS's untapped promise. Future research could probe moderating variables like tourist demographics, platform-specific behaviors, or post-pandemic shifts, potentially employing longitudinal designs to track evolving dynamics. In sum, this empirical exposition not only bridges scholarly gaps but also charts a pathway toward sustainable tourism revitalization in North Sulawesi, transforming perceptual assets into enduring economic dividends.

## CONCLUSION AND RECOMMENDATION

This investigation into the dynamics of tourism in North Sulawesi, Indonesia, unveils a compelling narrative of how Tourist Destination Image (TDI), Digital Knowledge Sharing (DKS), and Tourist Visits (TV) interact within an emerging destination striving to elevate its global profile. Through a rigorous quantitative approach employing Partial Least Squares Structural Equation Modeling (PLS-SEM) on data from 250 purposively sampled tourists, the study illuminates the preeminent role of TDI encompassing cognitive perceptions of natural wonders like Bunaken National Marine Park, affective emotions stirred by cultural treasures such as Waruga tombs, and conative impulses toward exploration as a potent driver of both digital engagement and actual visitation. The affirmation of Hypotheses 1 and 2 ( $\beta = 0.479$ ,  $p < 0.001$  for TDI  $\rightarrow$  DKS;  $\beta = 0.687$ ,  $p < 0.001$  for TDI  $\rightarrow$  TV) underscores TDI's capacity to ignite online sharing and propel tourist arrivals, directly addressing North Sulawesi's challenge of lagging international visits (approximately 55,000 in 2024 versus Bali's millions). Conversely, the rejection of Hypotheses 3 and 4 ( $\beta = 0.115$ ,  $p = 0.140$  for DKS  $\rightarrow$  TV; indirect  $\beta = 0.055$ ,  $p = 0.171$ ) reveals DKS's limited role as a direct influencer or mediator, likely hindered by infrastructural constraints and digital divides in this emerging market, highlighting a critical divergence from digitally mature contexts where user-generated content (UGC) often bridges perception to action.

Theoretically, these findings enrich image formation theory by situating it within a digital and emerging-market framework, extending Gartner's (1994) foundational work. They challenge the assumed universality of DKS's mediating efficacy, suggesting that in regions like North Sulawesi, where internet penetration and platform adoption remain uneven, TDI's direct influence predominates. This study's integration of UGC into DKS measurement, inspired by Khan et al. (2021) and Mariani et al. (2022), advances scholarship by highlighting digital sharing's contextual contingency, thus calling for models that account for infrastructural moderators. Practically, the results urge North Sulawesi's stakeholders to prioritize TDI enhancement through immersive campaigns such as virtual reality showcases of marine biodiversity or influencer-driven narratives of tarsier encounters while investing in digital infrastructure to amplify DKS's latent potential. Recent data from mid-2025, indicating a modest

3,742 foreign arrivals in June, reinforce the urgency of these strategies to elevate the province's global competitiveness.

Limitations, including the purposive sample's potential bias and the cross-sectional design's temporal constraints, invite future research to explore longitudinal trends, demographic moderators, or platform-specific dynamics. By addressing these, North Sulawesi can transform its perceptual riches into sustained tourism growth, fostering economic vitality and cultural preservation in a digitally interconnected world.

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Ivonne Angelic Umboh, Josep Palulungan: The Role of Digital Knowledge Sharing and Tourist Destination Image in Enhancing Tourist Visits to North Sulawesi

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