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Assessing Tourist Satisfaction with Bac Ninh as a Tourism Destination

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Abstract
Tourist satisfaction is widely accepted as the most immediate behavioural outcome of destination performance and the strongest single predictor of revisit and recommendation intentions. Bac Ninh, a province in Vietnam's Northern midlands that was substantially enlarged by the administrative merger of July 2025, holds one of the densest concentrations of cultural heritage in the country, yet it continues to function largely as a low-yield, day-trip destination on the periphery of Hanoi. This study measures tourist satisfaction with Bac Ninh at the attribute level, identifies which destination attributes drive overall satisfaction, and translates the findings into a prioritised improvement agenda. Data were collected through on-site intercept surveys at eight major attractions between February and April 2026, producing 412 usable questionnaires. A 26-item, six-dimensional attribute battery was validated through exploratory factor analysis and reliability testing, and the relationships among attributes, overall satisfaction and behavioural intentions were estimated using multiple regression analysis. Overall satisfaction was moderate (M = 3.71 on a five-point scale), with a pronounced internal imbalance: cultural and heritage attractions were rated highly (M = 4.18) whereas tourism service quality (M = 3.40) and accommodation and food and beverage provision (M = 3.38) were the weakest. Five of the six attribute dimensions exerted statistically significant effects on satisfaction, jointly explaining 68.5% of its variance, with cultural and heritage attractions (beta = 0.330) and service quality (beta = 0.259) dominating; accessibility contributed least (beta = 0.066). Satisfaction in turn explained 54.1% of the variance in behavioural intentions. A derived importance-performance analysis identifies service quality and accommodation and catering as the priority intervention domains. The study contributes attribute-level evidence on an understudied class of heritage-based, near-metropolitan destinations and offers destination managers a defensible sequence for allocating limited resources.

Keywords: Tourist Satisfaction, Destination Attributes, Behavioural Intentions, Heritage Tourism, Importance-Performance Analysis, Bac Ninh, Vietnam

JEL Classification: L83, M31, Z32, O18

1. Introduction

Destination competitiveness is ultimately adjudicated by visitors rather than by planners. Whatever a destination's stock of attractions, the commercial and developmental value of that stock is realised only insofar as visitors leave satisfied, return, and recommend the place to others. This is why tourist satisfaction has occupied a central position in tourism research for more than four decades, from the early attribute-based measurement of destination satisfaction to contemporary models that treat satisfaction as the pivotal mediator between destination performance and loyalty behaviour (Pizam *et al*., 1978; Oliver, 1980; Yoon & Uysal, 2005; Chi & Qu, 2008) [26, 22, 40, 9]. For destination management organisations operating under binding budget constraints, satisfaction research has a further, more practical function: it converts a long and undifferentiated list of possible improvements into a ranked agenda, because it reveals not only how each attribute performs but also how much each attribute actually matters to the overall evaluation.

Bac Ninh presents an unusually instructive case for this kind of enquiry. The province occupies the historic core of the Northern Delta and holds a concentration of cultural heritage that few Vietnamese localities can match. Bac Ninh Quan Ho folk songs were inscribed on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity in 2009 (UNESCO, 2009) [37]; the Dong Ho folk woodblock painting craft was inscribed on the List of Intangible Cultural Heritage in

Need of Urgent Safeguarding in December 2025 (UNESCO, 2025b) [39]; and Do Temple, But Thap Pagoda, Dau Pagoda, Phat Tich Pagoda and the Bac Ninh Temple of Literature constitute a dense circuit of nationally ranked monuments together with a large number of national treasures. The administrative reorganisation that took effect on 1 July 2025 merged the former provinces of Bac Ninh and Bac Giang into a single, substantially larger province retaining the name Bac Ninh, with an area of 4,718.6 square kilometres and a population of approximately 3.62 million (National Assembly of Vietnam, 2025) [19]. That reorganisation also brought into the province two components of the Yen Tu - Vinh Nghiem - Con Son, Kiep Bac Complex of Monuments and Landscapes, namely Vinh Nghiem Pagoda and Bo Da Pagoda, which was inscribed as Vietnam's ninth World Heritage property in July 2025 (UNESCO, 2025a) [38].

The destination's market performance, however, has not kept pace with its resource endowment. In 2024 the former Bac Ninh province received approximately 2.3 million visitors and generated about VND 1,900 billion in tourism revenue (Bac Ninh Provincial Portal, 2025) [4]. Following the merger, the enlarged province recorded roughly 6.3 million arrivals in 2025, an increase of about 26% year on year, of which only some 355,000 were international visitors, with total tourism receipts of approximately VND 5,500 billion (Bac Ninh Department of Culture, Sports and Tourism, 2026) [3]. Two structural features of these figures are worth emphasising. First, average expenditure per arrival remains low by national standards, which is symptomatic of a very short average length of stay and a narrow range of chargeable experiences. Second, the international share of arrivals is below 6%, despite the province lying within an hour's drive of Hanoi and its international gateway. Both features point to a destination whose visitation is driven by heritage and festival attraction but constrained by the commercial and service layer that surrounds that attraction.

This diagnosis, however, remains largely conjectural in the absence of systematic visitor-side evidence. Empirical research on tourist satisfaction in Vietnam has concentrated on established coastal and urban destinations, including Hanoi, Hue, Da Nang, Nha Trang and Binh Thuan (Truong & Foster, 2006; Truong & King, 2009; Nguyen Viet *et al*., 2020) [35, 36, 20], while heritage-based provinces in the immediate hinterland of the capital have received comparatively little attention. Such destinations constitute a distinct category. Their visitors arrive predominantly as day-trippers, frequently with devotional or festival motivations, and are therefore exposed to a partial and seasonally compressed slice of the destination's service system. It cannot be assumed that findings derived from multi-night coastal resort settings transfer to this context, and it is precisely this transferability that carries the managerial implications: if attribute importance differs, then so must the ordering of investment priorities.

The present study accordingly pursues four objectives. The first is to measure tourist satisfaction with Bac Ninh at the level of individual destination attributes rather than as a single global rating. The second is to establish and validate the dimensional structure underlying those attributes in this specific context. The third is to estimate the relative contribution of each attribute dimension to overall satisfaction and the contribution of satisfaction to behavioural intentions. The fourth is to combine measured performance with estimated importance in order to derive an explicit intervention hierarchy for destination management. Three research questions follow: (i) How satisfied are tourists with Bac Ninh overall and with each attribute dimension? (ii) Which attribute dimensions significantly influence overall satisfaction, and with what relative magnitude? (iii) Which dimensions should receive priority in resource allocation, given their joint importance and performance profile?

The study makes three contributions. Empirically, it supplies the first attribute-level satisfaction assessment of Bac Ninh conducted after the 2025 administrative merger, at a moment when the destination's product portfolio and brand architecture are being reconstituted. Theoretically, it provides evidence from a heritage-based, near-metropolitan, day-trip-dominated destination, a setting under-represented in a literature built largely on resort and city destinations, and shows that attribute importance in such a setting departs in identifiable ways from the resort pattern. Practically, it moves beyond the generic prescription to improve service quality by quantifying the marginal payoff of improvement in each domain, thereby offering destination managers a defensible basis for sequencing interventions.

2. Literature review and hypothesis development

2.1 Conceptualising tourist satisfaction

Satisfaction is most commonly theorised through the expectancy-disconfirmation paradigm, in which consumers form pre-purchase expectations, observe post-purchase performance, and derive satisfaction from the direction and magnitude of the discrepancy between the two (Oliver, 1980, 1997) [22, 23]. Applied to tourism, the paradigm was operationalised in instruments such as HOLSAT, which compares expectations and perceived performance across holiday attributes (Tribe & Snaith, 1998) [34]. Its transfer to destination settings, however, encounters well-documented difficulties. Expectations must be recalled retrospectively at the point of survey, which invites reconstruction bias; the difference score is psychometrically unstable; and for first-time visitors to unfamiliar destinations, prior expectations may be too vague to serve as a meaningful benchmark (Cronin & Taylor, 1992; Baker & Crompton, 2000) [11, 5].

These difficulties motivated the performance-only tradition, which measures perceived performance directly and treats satisfaction as an evaluative judgement formed on the basis of experienced attribute performance (Cronin & Taylor, 1992) [11]. Comparative studies have repeatedly found performance-only specifications to predict satisfaction and behavioural intentions at least as well as, and often better than, difference-score specifications, while being considerably more parsimonious (Crompton & Love, 1995; Baker & Crompton, 2000) [10, 5]. A performance-only approach is adopted here, both for these psychometric reasons and because a large share of respondents in the study context are first-time, short-duration visitors for whom articulated prior expectations cannot be assumed.

A second conceptual distinction concerns the level of aggregation. Satisfaction may be treated as a global, transaction-specific judgement about the trip as a whole, or as a set of attribute-level judgements about individual components of the destination experience (Pizam *et al*., 1978; Kozak & Rimmington, 2000) [26, 16]. The two are complementary rather than competing: global satisfaction is the construct that carries predictive weight for loyalty, whereas attribute-level satisfaction is the construct that

carries diagnostic weight for management. Studies that measure only the global construct can establish that satisfaction matters but cannot indicate where to intervene; studies that measure only attributes cannot establish which attributes matter most. This study therefore measures both, and models the relationship between them, following the structure adopted by Chi and Qu (2008) [9] and Zabkar *et al.* (2010) [41].

It should be acknowledged that satisfaction is not purely cognitive. Del Bosque and San Martín (2008) [12] demonstrate that affective responses such as pleasure and arousal contribute to satisfaction independently of cognitive appraisal, and Alegre and Garau (2010) [1] show that satisfaction and dissatisfaction are not simply opposite ends of a single continuum, since particular attributes generate dissatisfaction when they underperform without generating equivalent satisfaction when they overperform. These findings qualify rather than displace the attribute-based approach, and their implications for interpretation are considered in Section 5.

2.2 Destination attributes as determinants of satisfaction

A destination is a composite product, and the attribute sets used to represent it in satisfaction research have converged on a recognisable core. Buhalis (2000) [6] organises destination offerings into attractions, accessibility, amenities, available packages, activities and ancillary services. Ritchie and Crouch (2003) [30] distinguish core resources and attractors from supporting factors and resources. Empirical satisfaction studies typically operationalise five to seven dimensions drawn from this pool: attractions and the physical environment; accessibility and transport; accommodation; food and beverage; service quality and staff; price and value; and safety, cleanliness and hygiene (Kozak & Rimmington, 2000; Chi & Qu, 2008; Zabkar *et al*., 2010; Nguyen Viet *et al*., 2020) [16, 9, 41, 20].

The relative importance of these dimensions is not stable across settings, and the pattern of variation is itself informative. In beach and resort destinations, accommodation quality and the physical environment tend to dominate (Kozak & Rimmington, 2000; Alegre & Garau, 2010) [16, 1]. In cultural and heritage destinations, the authenticity and interpretive quality of the heritage resource, together with the quality of guiding and on-site interpretation, assume greater weight (Poria *et al*., 2011; Chen & Chen, 2010) [28, 7]. In destinations where visitation is short and largely undertaken by independent domestic travellers, accessibility is often found to have a weak marginal effect, because it operates as a threshold condition that is either satisfied for essentially all visitors or prevents the visit altogether (Kozak, 2001) [15]. These regularities inform both the dimensional structure adopted below and the expectations attached to individual hypotheses.

Six attribute dimensions are specified for the present context. Cultural and heritage attractions represent the destination's core resource and the principal reason for visitation. Accessibility and infrastructure capture the ease of reaching and moving around the destination and the adequacy of supporting physical facilities. Tourism service quality covers the competence, responsiveness and courtesy of staff at attractions and service outlets, together with the availability of interpretation and information. Accommodation and food and beverage provision represent the two components of the commercial hospitality layer through which the destination captures expenditure. Perceived value for money captures the evaluation of benefits received relative to monetary and non-monetary costs. Safety, environment and cleanliness capture the conditions under which the experience is consumed.

2.3 Hypotheses on attribute effects

Cultural and heritage attractions constitute the pull factor that generates visitation in heritage destinations, and the perceived authenticity, condition and interpretive richness of heritage assets have been shown to raise visitor satisfaction directly (Timothy & Boyd, 2003; Chen & Chen, 2010; Poria *et al*., 2011) [33, 7, 25]. Since heritage is the primary object of consumption in Bac Ninh, this dimension is expected to exert the strongest single effect.

Accessibility and supporting infrastructure influence satisfaction through the transaction costs they impose on the visit, including travel time, wayfinding difficulty, parking and the adequacy of on-site facilities (Buhalis, 2000; Kozak & Rimmington, 2000) [6, 16]. Because Bac Ninh lies immediately adjacent to Hanoi and is served by dense road connections, accessibility is expected to function largely as a satisfied threshold condition, and its marginal effect is therefore expected to be positive but comparatively modest.

Service quality has been established as an antecedent of satisfaction across service contexts (Parasuraman *et al*., 1988; Cronin & Taylor, 1992) [24, 11] and specifically in destination settings, where the behaviour of front-line staff, guides and vendors is the most visible and most controllable component of the delivered experience (Baker & Crompton, 2000; Zabkar *et al*., 2010) [5, 41]. Given that Bac Ninh's heritage sites are consumed largely through mediated encounters at temples, workshops and performance venues, this dimension is expected to exert a substantial effect.

Accommodation and food and beverage provision determine the comfort and the gastronomic dimension of the visit and have been found to affect satisfaction in Vietnamese destination studies (Truong & Foster, 2006; Nguyen Viet *et al*., 2020) [35, 20]. Perceived value for money reflects the benefit-cost appraisal that consumers perform alongside their quality appraisal, and its independent effect on satisfaction is well documented (Sweeney & Soutar, 2001; Petrick, 2004; Chen & Chen, 2010) [32, 25, 7]. Finally, safety, cleanliness and environmental quality operate primarily as hygiene conditions whose deterioration produces dissatisfaction; perceived risk and environmental degradation have been shown to depress satisfaction in Vietnamese and comparable settings (Zabkar *et al*., 2010; Nguyen Viet *et al*., 2020) [41, 20]. The following hypotheses are therefore proposed:

H1. Cultural and heritage attractions have a positive effect on tourists' overall satisfaction with Bac Ninh.

H2. Accessibility and infrastructure have a positive effect on tourists' overall satisfaction with Bac Ninh.

H3. Tourism service quality has a positive effect on tourists' overall satisfaction with Bac Ninh.

H4. Accommodation and food and beverage provision have a positive effect on tourists' overall satisfaction with Bac Ninh.

H5. Perceived value for money has a positive effect on tourists' overall satisfaction with Bac Ninh.

H6. Safety, environment and cleanliness have a positive

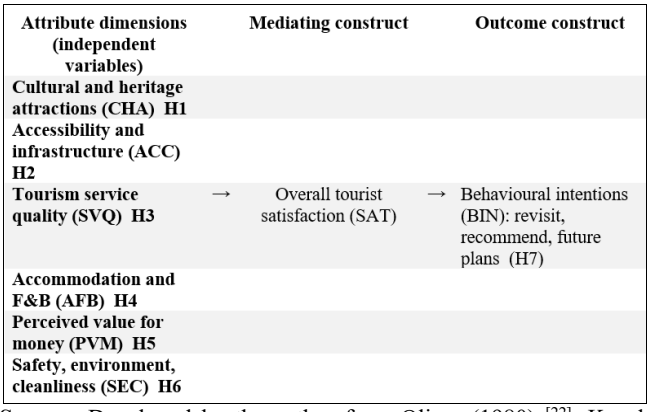
effect on tourists' overall satisfaction with Bac Ninh.

2.4 Satisfaction and behavioural intentions

The managerial significance of satisfaction rests on its consequences. Satisfied customers are more likely to repurchase and to generate favourable word of mouth, and these behaviours translate into revenue stability and reduced promotional cost (Anderson & Sullivan, 1993; Zeithaml *et al*., 1996) [2, 42]. In tourism, satisfaction has been shown to predict revisit intention and willingness to recommend across a wide range of destinations and market segments (Yoon & Uysal, 2005; Chen & Tsai, 2007; Chi & Qu, 2008; Prayag & Ryan, 2012; Nguyen Viet *et al*., 2020) [40, 8, 9, 29, 20]. The relationship is particularly consequential for destinations that depend on domestic and short-haul markets, where repeat visitation is feasible and word of mouth circulates rapidly through personal and social media networks. Accordingly:

H7. Overall satisfaction has a positive effect on tourists' behavioural intentions towards Bac Ninh.

Fig 1 summarises the resulting conceptual framework. Six attribute dimensions are modelled as antecedents of overall satisfaction, which is in turn modelled as an antecedent of behavioural intentions comprising revisit intention, recommendation intention and willingness to include the destination in future travel plans.



Source: Developed by the author from Oliver (1980) [22], Kozak and Rimmington (2000) [16], Chi and Qu (2008) [9] and Zabkar *et al*. (2010) [41].

Fig 1: Conceptual framework of the study

3. Research Methodology

3.1 Study context and design

The study adopts a cross-sectional, quantitative design based on on-site intercept surveys of tourists at the point of departure from major attractions. Data collection was carried out in the province of Bac Ninh in its post-merger boundaries, at eight sites selected to span the destination's principal product types and its two historical sub-regions. The sites comprise Do Temple, But Thap Pagoda, Dau Pagoda together with the Kinh Duong Vuong mausoleum, Phat Tich Pagoda, the Bac Ninh Temple of Literature, the Dong Ho folk painting village, Vinh Nghiem Pagoda, and Bo Da Pagoda. This distribution was intended to capture devotional, festival, craft-village and World Heritage components of the destination product, and to avoid the bias that would arise from surveying at a single dominant site.

Fieldwork was conducted between February and April 2026. This window covers the spring festival season, which accounts for the bulk of annual visitation to the province, including the Lim Festival and the temple festivals of the first lunar months, and it therefore reflects the conditions under which the majority of visitors actually experience the destination. The seasonal concentration of fieldwork is a deliberate design choice with an associated limitation, which is discussed in Section 7.

An intercept survey administered at the end of the on-site experience was preferred to a post-trip online survey because it minimises recall decay for attribute-level judgements while still allowing respondents to evaluate the visit as a completed episode. Interviewers approached every fifth departing visitor at each site's exit point during pre-specified time blocks distributed across weekdays, weekends and festival days, in order to reduce the systematic bias associated with pure convenience sampling.

3.2 Instrument development and measurement

The questionnaire comprised three parts. The first recorded travel behaviour and demographic characteristics. The second measured perceived performance on 26 destination attributes organised into six a priori dimensions. The third measured overall satisfaction with four items and behavioural intentions with three items. All perceptual items were measured on five-point Likert scales anchored at 1 (strongly disagree) and 5 (strongly agree), a format widely used in Vietnamese destination research and familiar to domestic respondents.

Items were adapted rather than newly written, in order to preserve construct validity and comparability with prior work. Table 1 reports the dimensional structure, item counts and source literature. Adaptation consisted of substituting destination-specific referents, for example replacing generic references to attractions with references to temples, festivals and craft villages, and of removing items describing facilities absent from the destination, such as beach and marine amenities.

The instrument was drafted in English, translated into Vietnamese, and independently back-translated by a second bilingual researcher, with discrepancies resolved by discussion. The Vietnamese version was reviewed by a panel of eight experts comprising four tourism academics, two officials of the provincial Department of Culture, Sports and Tourism, and two managers of inbound tour operators serving the province. The panel assessed item relevance and clarity, which led to the rewording of five items and the deletion of two redundant items. A pilot survey of 35 visitors was then conducted at Do Temple and Phat Tich Pagoda; all dimensions returned Cronbach's alpha values above 0.70 in the pilot, and no further modification was required.

Table 1: Constructs, item counts and sources of measurement items

Construct	Items	Illustrative item	Adapted from
Cultural and heritage attractions (CHA)	5	The heritage sites in Bac Ninh are attractive and well preserved	Kozak & Rimmington (2000) [16]; Chi & Qu (2008) [9]; Chen & Chen (2010) [7]; Poria *et al*. (2011) [28]
Accessibility and infrastructure (ACC)	4	Travelling to and around Bac Ninh is convenient	Buhalis (2000) [6]; Kozak & Rimmington (2000) [16]; Zabkar *et al*. (2010) [41]
Tourism service quality (SVQ)	5	Staff at attractions are courteous and helpful	Parasuraman *et al*. (1988) [24]; Cronin & Taylor (1992) [11]; Baker & Crompton (2000) [5]
Accommodation and food and beverage (AFB)	4	Local food and beverage outlets meet my expectations	Truong & Foster (2006) [35]; Nguyen Viet *et al*. (2020) [20]
Perceived value for money (PVM)	4	The experience I received was worth the money I spent	Sweeney & Soutar (2001) [32]; Petrick (2004) [25]; Chen & Chen (2010) [7]
Safety, environment and cleanliness (SEC)	4	I felt safe and secure throughout my visit	Zabkar *et al*. (2010) [41]; Nguyen Viet *et al*. (2020) [20]
Overall satisfaction (SAT)	4	Overall, I am satisfied with my trip to Bac Ninh	Oliver (1980) [22]; Chi & Qu (2008) [9]; Prayag & Ryan (2012) [29]
Behavioural intentions (BIN)	3	I intend to revisit Bac Ninh in the future	Zeithaml *et al*. (1996) [42]; Yoon & Uysal (2005) [40]; Chen & Tsai (2007) [8]

Note: The full item wording is reported in Appendix A.

3.3 Sampling and data collection

The target population comprised domestic and international tourists aged 18 or over who had completed at least one attraction visit in the province. Following the conventional rule that the sample should contain at least five and preferably ten observations per measured item (Hair *et al*., 2010) [14], the 33 perceptual items implied a minimum of 165 and a preferred minimum of 330 valid responses. A total of 450 questionnaires were distributed. Thirty-eight were discarded because of substantial missing data, uniform response patterns across all items, or respondent ineligibility, leaving 412 usable questionnaires and an effective response rate of 91.6%. The realised sample exceeds the preferred minimum and is comparable in size to that of related destination studies in Vietnam, such as the 405 respondents analysed by Nguyen Viet *et al*. (2020) [20].

Questionnaires were self-administered under interviewer supervision, with an English version available for international respondents. Participation was voluntary and anonymous, no personally identifying information was recorded, and respondents were informed of the academic purpose of the survey and of their right to withdraw at any point.

3.4 Data Analysis

Data were analysed in four stages. First, descriptive statistics were computed for respondent characteristics and for perceived performance on each item and dimension. Second, the measurement properties of the instrument were assessed through Cronbach's alpha, corrected item-total correlations, and exploratory factor analysis using principal component extraction with varimax rotation. The conventional decision criteria were applied: alpha of at least 0.70 and corrected item-total correlation of at least 0.30 for reliability (Nunnally & Bernstein, 1994; Hair *et al*., 2010) [21, 14]; a Kaiser-Meyer-Olkin measure of at least 0.60 and a significant Bartlett test of sphericity for factorability; eigenvalues greater than unity for factor retention; cumulative extracted variance of at least 50%; and primary loadings of at least 0.50 with cross-loadings below 0.40 for item retention.

Third, Pearson correlations were computed among the construct scores, and two multiple regression models were estimated: the six attribute dimensions on overall satisfaction, and overall satisfaction on behavioural intentions. Construct scores were computed as unweighted means of their constituent items. Regression assumptions were examined through variance inflation factors for multicollinearity, the Durbin-Watson statistic for residual independence, the Breusch-Pagan test for heteroscedasticity, and inspection of residual normality. Fourth, independent-samples t-tests and one-way analysis of variance were used to test for differences in perceptions across respondent groups.

Because all data were self-reported and collected at a single point in time, common method bias was assessed using Harman's single-factor test (Podsakoff *et al*., 2003) [27]. Unrotated principal component analysis of all 33 perceptual items yielded a first factor accounting for 33.5% of total variance, well below the 50% threshold, indicating that common method bias is unlikely to distort the estimated relationships. Analyses were performed in IBM SPSS Statistics version 26.

4. Results

4.1 Profile of respondents

Table 2 reports the composition of the sample. Domestic tourists account for 81.3% of respondents, a proportion that deliberately over-represents international visitors relative to their share of total arrivals in order to permit meaningful group comparison. The sample is slightly weighted towards women (54.9%) and towards the 26 to 45 age band, which together accounts for 53.2% of respondents. Educational attainment is high, with 79.4% holding a college degree or above.

Three behavioural characteristics are central to the interpretation of the results. First, festival attendance and pilgrimage constitute the single largest trip purpose (36.2%), confirming that visitation is driven predominantly by devotional and ceremonial motivations rather than by general leisure. Second, 59.0% of respondents were making a day trip without an overnight stay, and only 16.3% stayed two nights or more; the destination therefore captures a very limited share of each visitor's expenditure potential. Third, informal and digital channels dominate information search, with social media and the internet (43.7%) and word of mouth (29.4%) together accounting for 73.1% of respondents, while the official destination website reached only 7.5%. The last figure indicates that the destination's own communication assets currently exercise marginal influence on visitor decision-making.

Table 2: Profile of respondents (n = 412)

Characteristic	Category	Frequency	Percentage (%)
Origin	Domestic	335	81.3
	International	77	18.7
Gender	Male	186	45.1
	Female	226	54.9
Age group	18-25	95	23.1
	26-35	116	28.2
	36-45	103	25.0
	46-55	55	13.3
	Over 55	43	10.4
Education	High school or lower	85	20.6
	College or university	253	61.4
	Postgraduate	74	18.0
Main trip purpose	Festival attendance / pilgrimage	149	36.2
	Leisure and sightseeing	113	27.4
	Business combined with leisure	66	16.0
	Visiting friends and relatives	55	13.3
	Other	29	7.0
Visit experience	First-time visitor	252	61.2
	Repeat visitor	160	38.8
Length of stay	Day trip (no overnight stay)	243	59.0
	One night	102	24.8
	Two nights or more	67	16.3
Main information source	Social media and internet	180	43.7
	Word of mouth	121	29.4
	Travel agency	38	9.2
	Official destination website	31	7.5
	Other	42	10.2

Source: Survey data.

4.2 Reliability and validity of the measurement instrument

Reliability results are reported in Table 3. Cronbach's alpha ranges from 0.825 for cultural and heritage attractions to 0.895 for overall satisfaction, and every dimension exceeds the 0.80 level conventionally regarded as good rather than merely acceptable. Corrected item-total correlations range from 0.588 to 0.792, comfortably above the 0.30 threshold, and no item deletion would have increased the alpha of its dimension. All 33 items were therefore retained.

The 26 attribute items were then subjected to exploratory factor analysis. The Kaiser-Meyer-Olkin measure of sampling adequacy was 0.899, with no individual item value below 0.857, and Bartlett's test of sphericity was significant (chi-square = 4,644.6; df = 325; $p < 0.001$), confirming that the correlation matrix was suitable for factor analysis. Principal component extraction retained six components with eigenvalues exceeding unity (7.474, 2.113, 2.079, 2.049, 1.894 and 1.550), and the seventh eigenvalue fell sharply to 0.639, providing unambiguous support for the six-factor solution. The retained components jointly account for 66.00% of total variance, above the 50% minimum applied in destination research.

Table 4 presents the rotated component matrix. The recovered structure corresponds exactly to the a priori dimensional specification: each item loads on its intended component, primary loadings range from 0.724 to 0.830, and the largest cross-loading observed anywhere in the matrix is 0.190, far below the 0.40 threshold at which discriminant validity would be questioned. Separate single-factor analyses of the dependent constructs were also satisfactory: overall satisfaction returned a KMO of 0.843 with one component explaining 76.14% of variance and loadings between 0.865 and 0.888, and behavioural intentions returned a KMO of 0.724 with one component explaining 74.82% of variance and loadings between 0.860 and 0.873. The instrument therefore exhibits adequate convergent and discriminant validity for the subsequent analysis.

Table 3: Descriptive statistics and reliability of measurement items (n = 412)

Construct	Item	Mean	Std. deviation	Corrected item-total correlation
CHA (a = 0.825)	CHA1	4.199	0.676	0.643
	CHA2	4.180	0.648	0.588
	CHA3	4.231	0.685	0.643
	CHA4	4.109	0.655	0.624
	CHA5	4.180	0.656	0.603
ACC (a = 0.839)	ACC1	3.811	0.727	0.692
	ACC2	3.701	0.722	0.668
	ACC3	3.641	0.749	0.670
	ACC4	3.600	0.726	0.655
SVQ (a = 0.864)	SVQ1	3.354	0.705	0.669
	SVQ2	3.291	0.753	0.677
	SVQ3	3.396	0.716	0.695
	SVQ4	3.561	0.750	0.669
	SVQ5	3.413	0.728	0.712
AFB (a = 0.863)	AFB1	3.364	0.791	0.733
	AFB2	3.376	0.778	0.710
	AFB3	3.403	0.788	0.689
	AFB4	3.388	0.798	0.711
PVM (a = 0.839)	PVM1	3.932	0.751	0.688
	PVM2	3.808	0.731	0.646
	PVM3	3.794	0.744	0.709
	PVM4	3.859	0.748	0.642
SEC (a = 0.826)	SEC1	3.624	0.729	0.667
	SEC2	3.670	0.727	0.625
	SEC3	3.655	0.743	0.665
	SEC4	3.512	0.723	0.650
SAT (a = 0.895)	SAT1	3.633	0.779	0.764
	SAT2	3.767	0.773	0.792
	SAT3	3.786	0.794	0.760
	SAT4	3.643	0.790	0.757
BIN (a = 0.832)	BIN1	3.743	0.793	0.704
	BIN2	3.733	0.778	0.687
	BIN3	3.602	0.781	0.682

Note: A denotes Cronbach's alpha. All items measured on a five-point Likert scale.

Table 4: Rotated component matrix for destination attribute items

Item	F1 CHA	F2 ACC	F3 SVQ	F4 AFB	F5 PVM	F6 SEC
CHA1	**0.740**	0.065	0.128	0.126	0.072	0.181
CHA2	**0.731**	0.115	0.093	0.098	0.020	0.047
CHA3	**0.740**	0.075	0.115	0.099	0.156	0.115
CHA4	**0.724**	0.113	0.148	0.076	0.119	0.115
CHA5	**0.725**	0.066	0.109	0.086	0.176	0.016
ACC1	0.061	**0.817**	0.056	0.111	0.108	0.083
ACC2	0.097	**0.794**	0.109	0.105	0.062	0.071
ACC3	0.076	**0.788**	0.116	0.115	0.083	0.096
ACC4	0.094	**0.782**	0.125	0.076	0.085	0.079
SVQ1	0.104	0.147	**0.740**	0.186	0.075	0.098
SVQ2	0.115	0.083	**0.759**	0.086	0.169	0.115
SVQ3	0.110	0.058	**0.789**	0.136	0.102	0.054
SVQ4	0.103	0.102	**0.753**	0.139	0.094	0.116
SVQ5	0.111	0.104	**0.785**	0.141	0.081	0.125
AFB1	-0.004	0.140	0.141	**0.830**	0.101	0.118
AFB2	0.108	0.100	0.173	**0.803**	0.109	0.077
AFB3	0.135	0.067	0.150	**0.775**	0.190	0.052
AFB4	0.148	0.092	0.098	**0.793**	0.172	0.110
PVM1	0.147	0.109	0.154	0.152	**0.773**	0.124
PVM2	0.131	0.112	0.149	0.162	**0.740**	0.131
PVM3	0.065	0.096	0.064	0.145	**0.825**	0.114
PVM4	0.103	0.047	0.109	0.148	**0.749**	0.175
SEC1	0.107	0.120	0.115	0.074	0.113	**0.787**
SEC2	0.139	0.019	0.181	0.103	0.130	**0.740**
SEC3	0.106	0.088	0.162	0.085	0.143	**0.774**
SEC4	0.039	0.113	0.009	0.125	0.143	**0.794**
Variance (%)	**11.21**	**10.52**	**12.54**	**11.10**	**10.42**	**10.19**

Note: Principal component extraction with varimax rotation. KMO = 0.899; Bartlett's test chi-square = 4,644.6, df = 325, $p < 0.001$; cumulative variance explained = 66.00%. Primary loadings are shown in bold. Components are presented in the order of the a priori constructs, not in order of extracted variance.

4.3 Perceived performance of destination attributes

Table 5 reports mean perceived performance for each dimension, ranked from highest to lowest. Overall satisfaction stands at 3.708 on the five-point scale, corresponding to a moderate rather than a strong evaluation. The distribution behind this mean is informative: 43.4% of respondents recorded a mean satisfaction score of 4.0 or above, while 11.7% fell below the scale midpoint of 3.0. The destination therefore generates a substantial body of clearly satisfied visitors alongside a non-trivial minority whose experience was unsatisfactory.

The more consequential finding is the dispersion across dimensions, which spans 0.797 of a scale point. Cultural and heritage attractions rank first by a wide margin (M = 4.180), and every one of its five items exceeds 4.10; the perceived attractiveness and authenticity of the province's heritage assets is thus close to a settled strength. Perceived value for money ranks second (M = 3.848), which is consistent with a destination whose entrance fees are low or absent and whose day-trip format keeps total trip cost modest. Accessibility and infrastructure (M = 3.688) and safety, environment and cleanliness (M = 3.615) occupy the middle of the distribution.

The two lowest-ranked dimensions are tourism service quality (M = 3.403) and accommodation and food and beverage provision (M = 3.383). Within these dimensions, the weakest individual items are the professionalism of guides and interpretation services (M = 3.291), the courtesy and helpfulness of site staff (M = 3.354) and the quality of accommodation establishments (M = 3.364). The pattern that emerges is one of a destination whose core heritage resource is perceived as strong but whose service and hospitality layer is perceived as weak. Given that the heritage resource is largely fixed while the service layer is largely manageable, this asymmetry is precisely where management attention is likely to yield returns.

Table 5: Perceived performance of destination attributes and outcome constructs, ranked

Rank	Construct	Mean	Std. dev.	Minimum item mean	Maximum item mean
1	Cultural and heritage attractions (CHA)	4.180	0.510	4.109	4.231
2	Perceived value for money (PVM)	3.848	0.611	3.794	3.932
3	Accessibility and infrastructure (ACC)	3.688	0.600	3.600	3.811
4	Safety, environment and cleanliness (SEC)	3.615	0.592	3.512	3.670
5	Tourism service quality (SVQ)	3.403	0.588	3.291	3.561
6	Accommodation and food and beverage (AFB)	3.383	0.664	3.364	3.403
-	Overall satisfaction (SAT)	3.708	0.684	3.633	3.786
-	Behavioural intentions (BIN)	3.693	0.678	3.602	3.743

Source: Survey data. Grand mean of the six attribute dimensions = 3.686.

4.4 Correlation and regression analysis

Pearson correlations among the construct scores are reported in Table 6. All correlations are positive and significant at the 0.001 level. Each of the six attribute dimensions correlates significantly with overall satisfaction, with coefficients

ranging from 0.385 for accessibility to 0.616 for cultural and heritage attractions. Inter-attribute correlations lie between 0.259 and 0.405, which is high enough to confirm that the dimensions belong to a common evaluative domain but low enough to preclude serious multicollinearity.

The first regression model estimates the effect of the six attribute dimensions on overall satisfaction. The model is significant ($F(6, 405) = 146.9$; $p < 0.001$) and explains 68.5% of the variance in satisfaction, with an adjusted R-squared of 0.681. Diagnostic checks are satisfactory: variance inflation factors range from 1.195 to 1.398, well below the threshold of 5; the Durbin-Watson statistic of 2.020 indicates no residual autocorrelation; the Breusch-Pagan test is non-significant ($p = 0.517$), indicating homoscedastic errors; and residuals are approximately normal (skewness = -0.146; kurtosis = 2.772).

Results are reported in Table 7. All six coefficients are positive and statistically significant, so hypotheses H1 to H6 are supported, although the magnitudes differ substantially. Cultural and heritage attractions exert the strongest effect (beta = 0.330; $p < 0.001$), followed by tourism service quality (beta = 0.259; $p < 0.001$), perceived value for money (beta = 0.200; $p < 0.001$), accommodation and food and beverage provision (beta = 0.196; $p < 0.001$) and safety, environment and cleanliness (beta = 0.167; $p < 0.001$). Accessibility and infrastructure is significant only at the 0.05 level and its effect is an order of magnitude smaller than that of the leading predictor (beta = 0.066; $p = 0.032$). The five leading dimensions together account for the overwhelming share of explained variance.

The second regression model estimates the effect of overall satisfaction on behavioural intentions. The model is significant ($F(1, 410) = 483.4$; $p < 0.001$), the standardised coefficient is 0.736 ($p < 0.001$) and satisfaction alone explains 54.1% of the variance in behavioural intentions, supporting H7 (Table 8). The unstandardised coefficient of 0.729 indicates that a one-point gain in mean satisfaction is associated with a gain of approximately 0.73 of a point in mean behavioural intention, which quantifies the loyalty return on satisfaction improvement in this destination.

Table 6: Pearson correlation matrix

	CHA	ACC	SVQ	AFB	PVM	SEC	SAT	BIN
CHA	1	0.265	0.346	0.306	0.342	0.306	0.616	0.509
ACC	0.265	1	0.295	0.293	0.274	0.259	0.385	0.309
SVQ	0.346	0.295	1	0.386	0.343	0.328	0.591	0.480
AFB	0.306	0.293	0.386	1	0.405	0.293	0.546	0.483
PVM	0.342	0.274	0.343	0.405	1	0.381	0.563	0.519
SEC	0.306	0.259	0.328	0.293	0.381	1	0.504	0.401
SAT	0.616	0.385	0.591	0.546	0.563	0.504	1	0.736
BIN	0.509	0.309	0.480	0.483	0.519	0.401	0.736	1

Note: All reported correlations are significant at $p < 0.001$ (two-tailed).

Table 7: Multiple regression: Effects of destination attributes on overall satisfaction

Predictor	B	Std. error	Beta	t	p	VIF
(Constant)	-1.687	0.192	-	-8.795	< 0.001	-
Cultural and heritage attractions	0.443	0.042	0.330	10.482	< 0.001	1.274
Tourism service quality	0.301	0.038	0.259	7.979	< 0.001	1.352
Perceived value for money	0.224	0.037	0.200	6.062	< 0.001	1.398
Accommodation and food and beverage	0.202	0.033	0.196	6.031	< 0.001	1.359
Safety, environment and cleanliness	0.193	0.037	0.167	5.293	< 0.001	1.285
Accessibility and infrastructure	0.075	0.035	0.066	2.155	0.032	1.195

Note: Dependent variable = overall satisfaction (SAT). R-squared = 0.685; adjusted R-squared = 0.681; $F(6, 405) = 146.9$, $p < 0.001$; Durbin-Watson = 2.020; Breusch-Pagan p = 0.517. Predictors are ordered by the magnitude of the standardised coefficient.

Table 8: Simple regression: Effect of overall satisfaction on behavioural intentions

Predictor	B	Std. error	Beta	t	p
(Constant)	0.989	0.125	-	7.910	< 0.001
Overall satisfaction	0.729	0.033	0.736	21.987	< 0.001

Note: Dependent variable = behavioural intentions (BIN). R-squared = 0.541; adjusted R-squared = 0.540; $F(1, 410) = 483.4$, $p < 0.001$.

Table 9: Summary of hypothesis testing

Hypothesis	Proposed relationship	Beta	p	Result
H1	Cultural and heritage attractions → satisfaction	0.330	< 0.001	Supported
H2	Accessibility and infrastructure → satisfaction	0.066	0.032	Supported
H3	Tourism service quality → satisfaction	0.259	< 0.001	Supported
H4	Accommodation and food and beverage → satisfaction	0.196	< 0.001	Supported
H5	Perceived value for money → satisfaction	0.200	< 0.001	Supported
H6	Safety, environment and cleanliness → satisfaction	0.167	< 0.001	Supported
H7	Overall satisfaction → behavioural intentions	0.736	< 0.001	Supported

4.5 Differences across visitor segments

Independent-samples t-tests were used to compare domestic and international respondents and first-time and repeat visitors; results are reported in Table 10. Levene's test was non-significant for all comparisons, so equal-variance assumptions were tenable, although Welch-corrected statistics are reported for robustness.

Overall satisfaction does not differ significantly between domestic and international tourists (3.705 versus 3.718; $t = -0.147$; $p = 0.883$), but this aggregate similarity conceals two significant attribute-level divergences. International respondents rate tourism service quality significantly lower than domestic respondents (3.273 versus 3.433; $t = 2.208$; $p = 0.029$) and likewise rate accommodation and food and beverage provision lower (3.234 versus 3.417; $t = 2.147$; $p = 0.034$). Both dimensions are the ones most dependent on language mediation and on service standards benchmarked internationally, and the direction of the difference is consistent with the interpretation that the destination's interpretive and hospitality infrastructure is calibrated to the domestic market. Perceived value for money is rated marginally higher by international respondents (3.951 versus 3.825), although the difference is not significant at conventional levels ($p = 0.105$).

Comparing first-time and repeat visitors, repeat visitors report significantly stronger behavioural intentions (3.775 versus 3.640; t = -2.010; p = 0.045), which is the expected reinforcement effect of accumulated positive experience. First-time visitors rate accessibility more favourably (3.736 versus 3.612; t = 2.056; p = 0.041), plausibly because repeat visitors have encountered a wider range of internal movement and wayfinding situations. Overall satisfaction does not differ significantly between the two groups (p = 0.245).

One-way analyses of variance found no significant differences in overall satisfaction across age groups (F(4, 407) = 1.938; p = 0.103), trip purposes (F(4, 407) = 0.677; p = 0.608) or lengths of stay (F(2, 409) = 1.665; p = 0.190). The absence of a length-of-stay effect deserves comment. If longer stays neither raise nor lower satisfaction, then the destination's very short average stay is not the consequence of experiences that deteriorate with duration; it is more plausibly the consequence of an insufficient supply of chargeable evening and second-day activities. This reading is reinforced by the fact that satisfaction is invariant across trip purposes, indicating that the festival-driven segment is not systematically better or worse served than other segments.

Table 10: Group comparisons of mean construct scores (independent-samples t-tests)

Construct	Domestic (n = 335)	International (n = 77)	t	p	First-time (n = 252)	Repeat (n = 160)	t / p
Cultural and heritage attractions	4.179	4.184	-0.090	0.928	4.169	4.196	-0.528 / 0.598
Accessibility and infrastructure	3.700	3.636	0.884	0.378	3.736	3.612	2.056 / 0.041*
Tourism service quality	3.433	3.273	2.208	0.029*	3.375	3.446	-1.169 / 0.243
Accommodation and food and beverage	3.417	3.234	2.147	0.034*	3.352	3.431	-1.171 / 0.242
Perceived value for money	3.825	3.951	-1.633	0.105	3.860	3.830	0.487 / 0.626
Safety, environment and cleanliness	3.614	3.620	-0.088	0.930	3.607	3.628	-0.356 / 0.722
Overall satisfaction	3.705	3.718	-0.147	0.883	3.677	3.756	-1.164 / 0.245
Behavioural intentions	3.696	3.680	0.194	0.847	3.640	3.775	-2.010 / 0.045*

Note: * significant at p < 0.05. Welch-corrected t statistics reported; Levene's test was non-significant for all comparisons.

4.6 Derived importance-performance analysis

Measured performance answers the question of where the destination stands; estimated importance answers the question of how much a given movement in performance is worth. Combining the two yields a management priority ranking. Following the derived-importance variant of importance-performance analysis, in which statistically estimated effects replace self-reported importance ratings (Martilla & James, 1977; Matzler *et al*., 2004; Deng, 2007) [17, 18, 13], the standardised regression coefficients from Table 7 are used as importance estimates and the dimension means from Table 5 as performance estimates. Derived importance is preferred to stated importance because respondents are poor at introspecting on the weights they apply and because stated-importance batteries typically compress towards the upper end of the scale.

The crosshairs are placed at the grand mean of the six dimension means (3.686) and at the mean of the six standardised coefficients (0.203). Table 11 reports the resulting classification together with a priority index computed as the product of standardised importance and the residual improvement headroom, that is, the distance between current performance and the scale maximum. This index expresses the expected satisfaction gain from closing the remaining performance gap in each domain, and it therefore ranks domains by the return on improvement rather than by performance deficit alone.

Three conclusions follow. First, tourism service quality is unambiguously located in the concentrate-here quadrant: it combines the second-highest importance with the second-lowest performance and it records the highest priority index of any dimension (0.414). Second, accommodation and food and beverage provision ranks second on the priority index (0.317) despite falling marginally below the importance crosshair, since its importance coefficient (0.196) is only 0.007 below the mean while its performance deficit is the largest in the set; treating it as low priority on the strength of that margin would be an artefact of the crosshair convention rather than a substantive finding. Third, cultural and heritage attractions sit firmly in the keep-up-the-good-work quadrant, and perceived value for money lies essentially on the importance crosshair (0.200 against a mean of 0.203) with above-average performance, so both are best interpreted as strengths to be defended rather than as candidates for further investment. Accessibility, with the lowest importance and above-average performance, is the one dimension for which additional visitor-facing investment appears least justified on satisfaction grounds, notwithstanding its evident importance for other policy objectives.

Table 11: Derived importance-performance classification and priority ranking

Dimension	Importance (beta)	Performance (mean)	Priority index	IPA quadrant	Priority rank
Tourism service quality	0.259	3.403	0.414	Concentrate here	1
Accommodation and food and beverage	0.196	3.383	0.317	Concentrate here (borderline)	2
Cultural and heritage attractions	0.330	4.180	0.271	Keep up the good work	3
Safety, environment and cleanliness	0.167	3.615	0.231	Low priority	4
Perceived value for money	0.200	3.848	0.230	Keep up the good work (borderline)	5
Accessibility and infrastructure	0.066	3.688	0.087	Possible overkill	6

Note: Crosshairs at the grand mean of performance (3.686) and the mean standardised coefficient (0.203). Priority index = beta x (5 - performance mean). Borderline classifications denote dimensions lying within 0.01 of the importance crosshair.

5. Discussion

5.1 The heritage-service asymmetry

The central empirical finding of this study is not the level of overall satisfaction but its internal composition. A mean of 3.708 on a five-point scale would ordinarily be summarised as moderately positive and would invite few conclusions. Disaggregated, however, the same figure resolves into a strong core resource and a weak service envelope, with a spread of nearly 0.80 of a scale point between the highest and lowest dimensions. Cultural and heritage attractions perform at 4.180 while service quality and hospitality provision perform at 3.403 and 3.383 respectively. The destination is thus succeeding at the component it did not create and can only conserve, and underperforming at the components it directly controls.

This configuration has a clear economic reading. Heritage assets generate visitation; service and hospitality assets generate expenditure and duration. A destination that is strong in the former and weak in the latter will exhibit exactly the profile that Bac Ninh's secondary statistics display: rapid growth in arrival volumes accompanied by low receipts per visitor and a stay length that rarely extends beyond a single day. The finding that 59.0% of respondents made no overnight stay, together with the absence of any significant satisfaction difference across lengths of stay, indicates that the constraint is located on the supply side rather than in experience quality decay. Visitors are not leaving because the experience deteriorates; they are leaving because there is little left to purchase.

The result is consistent with the asymmetry literature on satisfaction formation. Alegre and Garau (2010) [1] show that certain attributes function primarily as dissatisfiers, generating penalties when they underperform without generating equivalent rewards when they exceed expectations. Service and hospitality attributes in a heritage day-trip context plausibly belong to this class. If so, the current performance levels are imposing a drag on overall evaluation that would be removed, rather than converted into enthusiasm, by improvement. The managerial implication is not diminished by this reading, since removing a drag on satisfaction has the same effect on behavioural intentions as adding an enhancement; but it does caution against expecting service investment to produce delight.

5.2 Determinants of satisfaction in comparative perspective

All six attribute dimensions significantly influenced satisfaction, and the model's explanatory power (R-squared = 0.685) is at the upper end of the range typically reported in attribute-based destination satisfaction research, where values between 0.45 and 0.65 are common (Chi & Qu, 2008; Zabkar *et al*., 2010; Nguyen Viet *et al*., 2020) [9, 41, 20]. The relative magnitudes, however, are more informative than the aggregate fit.

The dominance of cultural and heritage attractions (beta = 0.330) aligns with heritage tourism research that identifies the perceived authenticity and quality of the heritage resource as the principal driver of satisfaction where heritage is the primary object of consumption (Chen & Chen, 2010; Poria *et al*., 2011) [7, 28]. It contrasts with resort-destination findings in which accommodation and the natural environment dominate (Kozak & Rimmington, 2000; Alegre & Garau, 2010) [16, 1]. The comparison supports the proposition that attribute importance is contingent on destination type, and it cautions against transferring priority rankings across destination categories.

The second-ranked position of service quality (beta = 0.259) is consistent with the broad service marketing literature (Parasuraman *et al*., 1988; Cronin & Taylor, 1992) [24, 11] and with destination applications that identify staff performance as the most controllable determinant of visitor evaluation (Baker & Crompton, 2000) [5]. Its combination of high importance and low performance is the single most actionable result in this study.

The finding that warrants closest attention is the weakness of accessibility (beta = 0.066), which is significant only at the 0.05 level despite a bivariate correlation with satisfaction of 0.385. This divergence between the bivariate and multivariate results indicates that accessibility's apparent association with satisfaction operates largely through its correlation with other dimensions rather than through an independent effect. The interpretation advanced here is a threshold or hygiene mechanism: because Bac Ninh is within an hour of Hanoi and served by dense road connections, accessibility is adequate for effectively all visitors who actually arrive, so variation in the measured construct captures only minor differences in wayfinding and on-site facilities and carries correspondingly little weight. The same mechanism has been proposed to explain weak accessibility effects at short-haul destinations elsewhere (Kozak, 2001) [15]. The finding has a direct policy consequence: transport and access investment in this destination should be justified on grounds of capacity, regional development or logistics rather than on the expectation of raising visitor satisfaction.

Perceived value for money (beta = 0.200) exerted a moderate effect on a relatively high performance base, indicating that the destination is currently perceived as inexpensive rather than as good value in the fuller sense of substantial benefit relative to cost. This distinction matters for pricing strategy. A destination whose value perception rests on low cost has limited room to increase yield without first increasing perceived benefit; a destination whose value perception rests on high delivered benefit can price accordingly. The results place Bac Ninh in the former position and imply that yield improvement must be preceded, not accompanied, by experience enrichment.

5.3 Satisfaction, loyalty and market segments

Satisfaction explained 54.1% of the variance in behavioural intentions (beta = 0.736), which is consistent with the substantial body of evidence linking the two constructs in destination settings (Yoon & Uysal, 2005; Chen & Tsai, 2007; Chi & Qu, 2008; Prayag & Ryan, 2012) [40, 8, 9, 29]. For a destination whose market is overwhelmingly domestic and short-haul, this relationship is of particular practical value, because both revisitation and word of mouth are realistic behavioural outcomes rather than distant possibilities. The observation that 73.1% of respondents relied on social media or word of mouth for information, while only 7.5% used the official destination website, means that satisfaction is currently the destination's principal marketing instrument, operating through peer transmission rather than through managed channels.

The segment comparisons refine this picture in two respects. First, the absence of any significant difference in overall satisfaction between domestic and international respondents,

combined with significant deficits for international respondents on service quality and on accommodation and catering, indicates a specifically international service gap rather than general international dissatisfaction. International visitors evidently value the heritage resource as highly as domestic visitors do, and their lower evaluations are concentrated in the language-mediated and standards-benchmarked components of the experience. Given that the international share of arrivals remains below 6%, addressing this gap is a prerequisite for market diversification rather than a response to an existing complaint volume.

Second, the stronger behavioural intentions of repeat visitors, in the absence of a corresponding satisfaction difference, suggests that familiarity contributes to loyalty through channels other than satisfaction, such as place attachment and habit (Prayag & Ryan, 2012) [29]. This is consistent with the devotional and festival character of much of the visitation, in which annual return is itself part of the practice rather than a consequence of consumer evaluation.

6. Managerial and policy implications

The results support a sequenced rather than a simultaneous improvement agenda, in which resources are allocated in the order established by the priority index in Table 11. Six sets of implications follow.

First, professionalise interpretation and guiding: Service quality carries the highest priority index, and its weakest items are the professionalism of guides and interpretation services (M = 3.291) and the courtesy and helpfulness of site staff (M = 3.354). The implied intervention is institutional rather than promotional: a certified site-interpreter scheme covering the principal monuments, with a standard training curriculum in heritage content, visitor handling and basic foreign-language capability; contractual service standards for the personnel who receive visitors at temple and pagoda sites, negotiated with the site management boards; and multilingual interpretive materials, including audio guides, at the eight to ten highest-traffic sites. Because interpretation quality is also the mechanism through which heritage significance becomes legible to visitors, investment here raises perceived performance on the destination's strongest dimension as well as on its weakest.

Second, build the hospitality layer around reasons to stay: Accommodation and catering rank second on the priority index, and 59.0% of visitors currently make no overnight stay. Since satisfaction does not decline with length of stay, the binding constraint is the absence of chargeable evening and second-day content rather than a deterioration in experience. A coherent response would pair a graded upgrade programme for existing small and medium accommodation establishments, including classification support, hygiene certification and price transparency requirements, with the deliberate construction of evening product: scheduled Quan Ho performances at fixed times and venues rather than by prior arrangement, evening opening at selected monuments during the festival season, and a night-time food and craft market in the provincial centre. The measurable objective should be the share of visitors staying at least one night, since this single indicator mediates most of the province's yield deficit.

Third, close the international service gap: International respondents rated service quality and hospitality provision significantly below domestic respondents while rating the heritage resource equally highly. The gap is therefore remediable through the language and standards layer rather than through product redevelopment. Priority measures are bilingual signage and interpretive panels at all World Heritage and nationally ranked sites, an English-language destination information service, foreign-language training for front-line personnel at the highest-traffic attractions, and the inclusion of the province's sites in the itineraries and distribution systems of Hanoi-based inbound operators. The presence within provincial boundaries of two components of the Yen Tu - Vinh Nghiem - Con Son, Kiep Bac World Heritage property provides an internationally legible entry point for this effort, since World Heritage status functions as a recognised quality signal in international markets (Poria *et al*., 2011) [28].

Fourth, convert heritage strength into chargeable experience: Perceived value for money rests on low cost rather than on high delivered benefit, which caps the destination's capacity to raise yield. The route to a stronger value position is experiential rather than promotional: participatory Quan Ho singing sessions and workshops rather than passive performance; hands-on woodblock printing at Dong Ho, whose inscription on the UNESCO list of intangible heritage in need of urgent safeguarding in December 2025 (UNESCO, 2025b) [39] simultaneously creates a safeguarding obligation and a differentiated product; craft-village production experiences with take-home outputs; and curated multi-site itineraries linking the World Heritage components with the province's temple and pagoda circuit. Each of these converts an existing conservation asset into a priced product without additional physical infrastructure.

Fifth, rebuild destination communication after the merger: The July 2025 merger created a single province containing two previously separate destination identities, product portfolios and promotional systems. The finding that only 7.5% of visitors used the official destination website indicates that the province's managed communication channels currently exert minimal influence. Consolidating the two former systems into one destination brand architecture, with a single digital platform, an integrated interactive map, unified event and festival calendars, and coordinated presence on the social media channels through which 43.7% of visitors obtain information, is both a post-merger administrative necessity and the lowest-cost intervention available in the entire set.

Sixth, institutionalise satisfaction measurement: The attribute battery validated in this study provides an instrument that can be administered periodically at low cost. A standing quarterly or seasonal visitor survey administered at the principal sites, reporting dimension-level means and a recalculated priority index, would allow the provincial Department of Culture, Sports and Tourism to monitor whether interventions move the indicators they were intended to move. Given the very rapid growth in arrivals recorded since the merger, the alternative of relying on volume statistics alone would leave the destination unable to detect deterioration in experience quality until it appeared in arrival figures, by which point remediation would be considerably more costly.

7. Limitations and directions for further research

Five limitations qualify the findings. First, the sampling was purposive and site-based rather than probabilistic, so the sample cannot be claimed to represent the visitor population

with quantified precision, although the systematic interception protocol and the distribution of fieldwork across eight sites and multiple day types mitigate the most obvious sources of bias. Second, data collection was concentrated in the spring festival season. This captures the period in which most visitation occurs, but it may over-represent devotional and festival motivations and under-represent the summer and autumn visitor mix; seasonal replication would establish whether the attribute importance structure is stable across the year. Third, the cross-sectional design permits the estimation of associations but not the demonstration of causal direction, and reverse or reciprocal influence between satisfaction and attribute evaluation cannot be excluded on these data. Fourth, the study models satisfaction as a cognitive function of attribute performance and does not incorporate affective responses, destination image, motivation or place attachment, all of which have been shown to contribute to satisfaction and loyalty (del Bosque & San Martín, 2008; Prayag & Ryan, 2012) [12, 29]. Fifth, the international subsample (n = 77), while adequate for the two-group comparisons reported, is too small to support disaggregation by country or region of origin.

Four directions for further research follow. A structural equation modelling approach incorporating destination image, motivation and affective evaluation would permit the estimation of indirect and mediated pathways that the present regression framework cannot capture. A longitudinal design spanning the years immediately before and after the administrative merger would allow the effect of destination reorganisation on visitor evaluation to be identified. An asymmetric analysis using penalty-reward contrast or three-factor methods would establish which attributes in this context operate as basic, performance or excitement factors, thereby refining the priority ranking derived here (Matzler *et al*., 2004; Alegre & Garau, 2010) [18, 1]. Finally, comparative work across the several heritage provinces in the immediate hinterland of Hanoi would establish whether the heritage-service asymmetry documented here is specific to Bac Ninh or characteristic of near-metropolitan heritage destinations as a class.

8. Conclusion

This study assessed tourist satisfaction with Bac Ninh as a tourism destination on the basis of 412 on-site intercept surveys conducted at eight major attractions. Overall satisfaction was moderate (M = 3.708), and the six-dimensional attribute structure specified a priori was confirmed by exploratory factor analysis with strong reliability and clean discriminant properties. All six attribute dimensions significantly influenced overall satisfaction and jointly explained 68.5% of its variance, with cultural and heritage attractions and tourism service quality exerting the strongest effects and accessibility the weakest. Satisfaction in turn explained 54.1% of the variance in revisit and recommendation intentions.

The substantive contribution of the study lies in the asymmetry it documents. Bac Ninh performs strongly on the heritage resource that generates its visitation and weakly on the service and hospitality provision that would convert that visitation into expenditure, duration and loyalty. Because the heritage resource is largely fixed and the service layer is largely manageable, the destination's growth constraint is located precisely where policy instruments are most effective. The derived importance-performance analysis translates this diagnosis into an explicit sequence, placing interpretation and service quality first, hospitality provision second, and access investment last among satisfaction-motivated priorities.

For a destination whose arrival volumes have grown rapidly following administrative reorganisation, the finding that satisfaction is only moderate should be read as a warning rather than as a reassurance. Volume growth driven by heritage attraction and geographic proximity can be sustained for some time on an inadequate service base, but the yield, length of stay and international market share that convert volume into economic contribution cannot. Attending to the service envelope is therefore not an incremental refinement of the destination's current trajectory but the condition of changing it.

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