Journal of Economic Education and Entrepreneurship Studies
Vol. 7, No. 5, Oktober 2026, pp. 370-382
ISSN: 2722-3744 (Print) 2776-0278 (Online)
https://doi.org/10.62794/je3s.v7i5.510

Managerial Perceptions of Macroeconomic Signals and International Guest Performance in Lake Toba Hotels: Implications for Tourism Destination Development

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Received: July 22, 2026; **Revised:** September 21, 2026; **Accepted:** Oktober 20, 2026

Abstract: This study examines how Lake Toba hotel managers interpret macroeconomic signals and how these perceptions relate to perceived international guest performance. A cross-sectional survey produced 67 usable hotel-level questionnaires, each completed by a manager or supervisor. Partial least squares structural equation modeling with 5,000 bootstrap subsamples was used to assess six direct paths and two specific indirect paths. Favorable exchange-rate conditions (β = 0.317), price competitiveness (β = 0.354), and destination delivery and attractiveness (β = 0.296) were positively associated with perceived international guest performance. Perceived inflationary pressure (β = −0.294), exchange-rate volatility (β = −0.183), and economic pressure (β = −0.268) showed negative associations. The indirect effects through economic pressure (β = −0.109) and price competitiveness (β = 0.128) were significant; the model explained 68.3% of outcome variance. The findings distinguish an internal operating-pressure pathway from a market-facing price-competitiveness pathway. All measures reflect managerial assessments rather than independently verified hotel or macroeconomic records. Destination-development implications are interpretive, not directly tested effects.

Keywords: Destination Development; Exchange-Rate Conditions; International Guest Performance; Lake Toba; Managerial Perceptions

How to Cite: Rosari, D., Mulyadi, B., Ngatemin, Julianto, Yanti, D., Liyushiana, & Emrizal. (2026). Managerial Perceptions of Macroeconomic Signals and International Guest Performance in Lake Toba Hotels: Implications for Tourism Destination Development. Journal of Economic Education and Entrepreneurship Studies, 7(5), 370–382. https://doi.org/10.62794/je3s.v7i5.510
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INTRODUCTION

Tourism contributes to employment, regional income, and business development in Indonesia, while Lake Toba is recognized for its volcanic landscape, Batak cultural heritage, and destination-development initiatives (Ministry of Tourism and Creative Economy of the Republic of Indonesia, 2022). Hotels connect international accommodation demand to transport providers, food services, guides, attractions, and local suppliers. Consequently, the managerial response to economic pressure has potential relevance beyond room sales: changes in procurement, pricing,

and visitor packages can affect how tourism expenditure reaches surrounding businesses. Existing Indonesian research identifies inter-industry and inter-regional tourism linkages, although the magnitude and distribution of spillovers depend on local value-chain participation (Adeleye et al., 2022; Handayani, 2022; Nugroho et al., 2025). This study examines such destination implications as applications of hotel-level evidence, not as measured regional economic effects.

Inflation and exchange-rate movements create different but interconnected signals for tourism firms. Inflation raises operating costs and can force hotels to absorb margin pressure or adjust room rates, whereas favorable currency conditions may improve international visitors' purchasing power. Exchange-rate volatility creates a separate uncertainty channel because it complicates advance booking, pricing, procurement, and revenue-management decisions. Recent evidence shows that hotel pricing and performance responses vary across exchange-rate regimes and market settings, while broader economic and policy uncertainty can weaken or destabilize tourism demand (Blengini & Heo, 2024; Kuok et al., 2023; Lee & Choi, 2023; Menicucci & Paolucci, 2025; Mitra, 2024; Payne et al., 2023; Sharma & Khanna, 2023). Tourism-demand studies also show that exchange-rate effects can be asymmetric and that volatility may reduce demand even when currency levels appear favorable (Demir et al., 2019; Imamboccus et al., 2024; Helhel & Helhel, 2026).

Despite the growth of tourism-demand research, a specific hotel-level gap remains. Most prior studies emphasize aggregate outcomes such as arrivals, expenditure, receipts, and macroeconomic elasticities, while regional and cross-country analyses do not directly show how hotel managers interpret economic cues before those cues are reflected in official performance statistics (Kuok et al., 2023; Mohd Salleh et al., 2026; Payne et al., 2023; Sharma & Khanna, 2023). In addition, inflation and exchange-rate conditions are commonly treated as parallel macroeconomic predictors even though they create different managerial problems and opportunities. This study addresses that gap through a sensemaking-informed signal-translation framework that separates two mechanisms: an internal operating-pressure pathway, in which perceived inflationary pressure is translated into economic pressure, and a market-facing pathway, in which favorable exchange-rate conditions are translated into price competitiveness. Perceived exchange-rate volatility and destination delivery and attractiveness are included as direct contextual predictors of perceived international guest performance. The novelty therefore lies in testing distinct managerial translation mechanisms at the hotel level rather than treating macroeconomic signals as undifferentiated external predictors.

Lake Toba provides a setting in which these managerial pathways are closely connected to destination conditions. Research on Lake Toba highlights accessibility, roads, tourism facilities, and integrated planning (Barus, 2024; Lazuardina et al., 2024; Mulyadi et al., 2022; Sihombing et al., 2024; Tanjung et al., 2024). Such conditions may influence operating costs and logistical pressures relevant to the perceived inflationary pressure → economic pressure pathway; they may also shape whether hotels can turn favorable exchange-rate conditions into competitively priced, credible visitor packages. More broadly, destination-competitiveness studies emphasize the interaction of affordability, attractions, service delivery, and accessibility (Arici & Koseoglu, 2025; Chen et al., 2025; González-Rodríguez et al., 2023; Zhao et al., 2024). The present model captures destination delivery and attractiveness as a managerial assessment, but does not estimate destination development as an outcome.

Managerial sensemaking provides the interpretive lens for the proposed framework: organizations notice external cues, interpret their relevance, and translate them into operational responses (Daft & Weick, 1984). For Lake Toba hotels, changes in supplier prices may be perceived

as pressure on budgets and margins, whereas currency conditions may be interpreted through visitors' purchasing power and relative package value. Evidence that hotel pricing and performance responses vary with exchange-rate regimes supports this interpretation (Blengini & Heo, 2024; Mitra, 2024). Sensemaking itself is not measured as a latent variable; the model instead tests the two proposed statistical translation pathways. Exchange-rate volatility is treated as a distinct uncertainty signal, and destination delivery and attractiveness as a contextual predictor.

The study therefore addresses two empirical questions and one applied interpretive objective: (1) how perceived inflationary pressure, favorable exchange-rate conditions, perceived exchange-rate volatility, and destination delivery are associated with perceived international guest performance; (2) whether the proposed indirect associations through economic pressure and price competitiveness are statistically consistent with the signal-translation framework; and (3) how the hotel-level findings can inform efforts to strengthen tourism destination development in Lake Toba through affordability, destination delivery, connectivity, local business linkages, and visitor value. The first two objectives are tested statistically, whereas the third is developed through interpretation of the model results in relation to destination and regional evidence. The hypotheses predict negative associations for perceived inflationary pressure (H1), exchange-rate volatility (H3), and economic pressure (H4); positive associations for favorable exchange-rate conditions (H2), price competitiveness (H5), and destination delivery and attractiveness (H6); a negative specific indirect effect through economic pressure (H7); and a positive specific indirect effect through price competitiveness (H8).

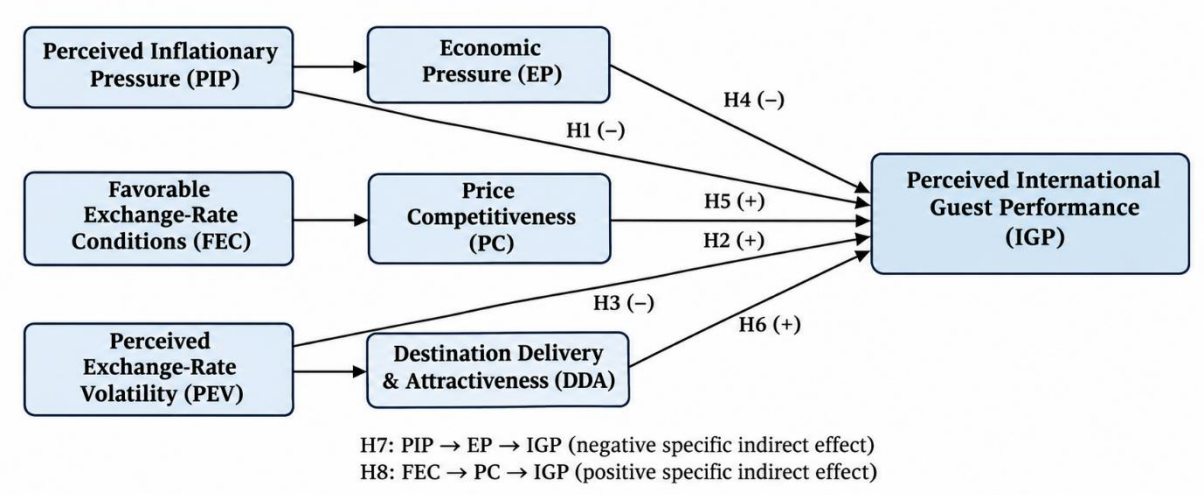


Figure 1. Conceptual framework

METHOD

The study employed a quantitative, explanatory, cross-sectional field-survey design. The research team developed the initial working hotel frame with reference to published regional accommodation and tourism statistics for the Lake Toba study areas, including Toba Regency, Samosir Regency, and Girsang Sipangan Bolon/Parapat (BPS-Statistics of Toba Regency, 2025; BPS-Statistics of Samosir Regency, 2025; BPS-Statistics of Simalungun Regency, 2023). The 80-hotel eligible pool described below represents the research team's screening result, not a total directly reported in the cited BPS publications. The research team then screened the establishments using three study-specific eligibility criteria: the hotel had to be operational during the study period, be located within the selected Lake Toba tourism areas, and have recent experience serving international guests. Application of these criteria produced an initial pool of

80 potentially eligible hotels. During pre-field verification, eight hotels were not included in the final recruitment frame because access to an eligible managerial respondent could not be secured within the data-collection period, either because the research team could not establish contact through the available communication channels or because the hotel could not designate a manager or supervisor for participation. The finalized field-recruitment frame therefore comprised 72 hotels distributed across Samosir, Parapat/Girsang Sipangan Bolon, Ajibata, Balige, and other Lake Toba areas, and all 72 were invited to participate. One manager or supervisor represented each participating hotel, with the hotel as the unit of analysis. Of the 72 invitations, 69 questionnaires were returned. Two questionnaires were excluded because missing responses prevented complete construct-level analysis, resulting in 67 usable hotel-level observations. With six predictors of the principal outcome, $n = 67$, $\alpha = 0.05$, and power = 0.80, the approximate minimum detectable effect was $f^2 = 0.225$; smaller effects are therefore interpreted cautiously.

The questionnaire used a five-point agreement scale, with items referring to the January–March 2026 operating period. Perceived inflationary pressure (PIP) captured accommodation-related cost increases, food and beverage inputs, and other expenses. Favorable exchange-rate conditions (FEC) concerned exchange-rate favorability, perceived destination affordability, and foreign visitors' purchasing power; perceived exchange-rate volatility (PEV) was a single observed item addressing rupiah unpredictability. Economic pressure (EP) covered cost escalation, margin pressure, pricing difficulty, and budget uncertainty. Price competitiveness (PC) measured relative affordability, value for money, package competitiveness, and price–quality balance. Destination delivery and attractiveness (DDA) combined service quality, accessibility, infrastructure, natural and cultural appeal, and overall visitor experience. Perceived international guest performance (IGP) comprised managers' ratings of occupancy growth, international guest share, and repeat visitation. No audited occupancy, arrivals, room-revenue, or hotel accounting records were linked to responses; thus, these constructs must not be interpreted as objectively verified macroeconomic or operating outcomes.

Measurement-item development followed a construct-to-domain operationalization approach. The conceptual domains for perceived inflationary pressure, favorable exchange-rate conditions, perceived exchange-rate volatility, economic pressure, price competitiveness, destination delivery and attractiveness, and perceived international guest performance were derived from the theoretical and empirical literature reviewed in the Introduction and then contextualized as hotel-manager assessments for the January–March 2026 reference period. PIP, FEC, EP, and PC were specified as reflective constructs; PEV was represented by a single observed indicator; and DDA and IGP were specified as broad multi-facet composites because their indicators represented distinct components of destination delivery and guest performance. The available study materials do not document a separate pilot test, expert-panel content-validity index, or pre-field psychometric validation, and the manuscript therefore does not claim that such procedures were conducted. The available summary output permits reporting of Cronbach's alpha, composite reliability, AVE, and HTMT for the reflective constructs, as well as outer weights, bootstrap significance, and outer VIFs for the composite constructs (Hair et al., 2022). The individual reflective-indicator outer-loading matrix was not included in the source results available for this revision; consequently, item-level loading thresholds cannot be independently verified or reported here.

Field data were collected from January to March 2026, matching the reference period used in the questionnaire. During this period, official year-on-year headline inflation was 3.55% in January, 4.76% in February, and 3.48% in March (BPS-Statistics Indonesia, 2026a, 2026b, 2026c). Bank Indonesia also reported contemporaneous measures aimed at maintaining rupiah stability

(Bank Indonesia, 2026). These official indicators are presented only to describe the macroeconomic context in which the survey was conducted; they were not matched to individual hotel observations and were not entered directly into the structural model.

Data were analyzed in SmartPLS 4 using partial least squares structural equation modeling (PLS-SEM) (Ringle et al., 2024). For reflective blocks PIP, FEC, EP, and PC, the reported measurement diagnostics were Cronbach's alpha, composite reliability, average variance extracted (AVE), and the heterotrait–monotrait ratio (HTMT). The item-level outer-loading matrix is not available in the supplied output, so no loading-based indicator retention claim is made. HTMT values below 0.90 were used as the criterion for adequate discriminant validity (Hair et al., 2022). PEV was modeled as a single-indicator construct. DDA and IGP were specified as broad multi-facet composites and assessed using indicator outer weights, bootstrap t-values and p-values, and outer variance inflation factors (VIFs). The structural model was evaluated using standardized path coefficients, inner VIFs, R^2, f^2 effect sizes, 5,000-subsample bootstrapping, 95% bootstrap confidence intervals, specific indirect effects, and blindfolding Q^2 as an in-sample predictive-relevance diagnostic (Hair et al., 2022). Because all variables were measured within the same cross-sectional period, direct and indirect effects are interpreted as conditional statistical associations rather than definitive causal relationships. Tourism destination development was not specified as an endogenous construct; therefore, destination-development claims are derived from the tested hotel-level relationships and are presented as applied implications rather than direct structural effects.

RESULTS AND DISCUSSION

Research Results

Of 67 respondents (one per hotel), 39 were men (58.2%) and 28 women (41.8%); 24 were managers, 18 assistant managers, 15 marketing managers, and 10 front-office supervisors. Forty-six (68.7%) had at least five years of hotel experience. Table 1 describes seven manager-rated constructs on a five-point scale: DDA had the highest mean (4.15) and PEV the lowest (3.62). These are perceptions, not independently verified occupancy, arrival, or revenue figures.

Table 1. Construct descriptive statistics

Construct	Mean	SD
Perceived inflationary pressure	4.12	0.67
Favorable exchange-rate conditions	3.85	0.72
Perceived exchange-rate volatility	3.62	0.84
Economic pressure	4.01	0.65
Price competitiveness	3.97	0.69
Destination delivery and attractiveness	4.15	0.58
Perceived international guest performance	3.89	0.71

Note. n = 67 hotels; one respondent per hotel. Means and standard deviations (SD) are based on five-point managerial ratings, not on independently audited hotel or tourism statistics.

Measurement and Structural Assessment

The reflective measurement blocks met the reported summary internal-consistency and AVE criteria. Cronbach's alpha ranged from 0.815 to 0.881, composite reliability from 0.889 to 0.918, and average variance extracted (AVE) from 0.668 to 0.737 (Table 2, Panel A). The six reported heterotrait–monotrait ratio (HTMT) values ranged from 0.456 to 0.712 (Table 3), all

below the prespecified 0.90 threshold. These summary diagnostics support discriminant validity among PIP, FEC, EP, and PC within the observed sample. As individual reflective-indicator outer loadings are not available in the supplied output, item-level convergence and loading thresholds cannot be checked independently; measurement equivalence outside this setting is also not established.

For the broad composite constructs, the item-level diagnostics showed positive and statistically significant outer-weight contributions from all indicators (Table 2, Panel B). Within DDA, natural and cultural appeal showed the strongest contribution (outer weight = 0.312, t = 4.875, $p < 0.001$), followed by service quality (outer weight = 0.284, t = 4.216, $p < 0.001$) and overall visitor experience (outer weight = 0.267, t = 4.102, $p < 0.001$). Within IGP, occupancy growth showed the strongest contribution (outer weight = 0.386, t = 5.284, $p < 0.001$), followed by international guest share (outer weight = 0.351, t = 4.763, $p < 0.001$) and repeat visitation (outer weight = 0.337, t = 4.418, $p < 0.001$). All outer VIF values were below 3.3, indicating no critical collinearity concerns among the composite indicators. Together, these results support statistically significant indicator contributions and acceptable collinearity for DDA and IGP.

Table 2. Measurement model assessment

Panel A. Reflective constructs

Construct	Cronbach's α	Composite Reliability (CR)	AVE
PIP	0.842	0.904	0.702
FEC	0.815	0.889	0.668
EP	0.881	0.918	0.737
PC	0.856	0.901	0.694

Note. The available summary results include reliability estimates and AVE, but not item-level outer loadings for PIP, FEC, EP, or PC. Individual loading thresholds cannot be verified without the original SmartPLS indicator-output table.

Panel B. Composite constructs

Construct	Indicator	Outer Weight	t-value	p-value	Outer VIF
Destination delivery and attractiveness (DDA)	DDA1 – Service quality	0.284	4.216	< 0.001	1.842
	DDA2 – Accessibility	0.231	3.487	0.001	1.756
	DDA3 – Infrastructure	0.198	2.986	0.003	1.693
	DDA4 – Natural and cultural appeal	0.312	4.875	< 0.001	1.924
	DDA5 – Overall visitor experience	0.267	4.102	< 0.001	2.013
Perceived international guest performance (IGP)	IGP1 – Occupancy growth	0.386	5.284	< 0.001	1.624
	IGP2 – International guest share	0.351	4.763	< 0.001	1.587
	IGP3 – Repeat visitation	0.337	4.418	< 0.001	1.462

Note. DDA and IGP are multi-facet composites; the reported values are outer weights (not reflective outer loadings), with bootstrap t statistics, p values, and outer VIFs. PIP, FEC, EP, and PC are reflective constructs.

Table 3. Heterotrait–Monotrait Ratio (HTMT) assessment

Construct	PIP	FEC	EP	PC
PIP	—			
FEC	0.521	—		
EP	0.643	0.456	—	
PC	0.487	0.712	0.538	—

Note. PIP = perceived inflationary pressure; FEC = favorable exchange-rate conditions; EP = economic pressure; PC = price competitiveness. All reported HTMT values are below the prespecified 0.90 cutoff.

The model explained 68.3% of the variation in manager-reported IGP (R^2 = 0.683). Blindfolding yielded Q^2 = 0.472, an in-sample predictive-relevance statistic rather than an out-of-sample forecast test. The maximum inner VIF was 2.46 and the maximum full-collinearity VIF was 2.89. All six reported 95% bootstrap confidence intervals for the direct paths excluded zero (Table 4). The first-stage paths PIP → EP (β = 0.407, t = 5.570, p < 0.001, f^2 = 0.199, 95% CI [0.264, 0.550]) and FEC → PC (β = 0.362, t = 4.200, p < 0.001, f^2 = 0.151, 95% CI [0.193, 0.530]) were significant (Table 5). Both specific indirect effects were also significant (Table 6). Because outcome and predictors were self-reported during one cross-sectional period, the coefficients describe conditional associations and are not verified changes in occupancy, international arrivals, or hotel revenue.

Table 4. Direct effects with 95% bootstrap confidence intervals

H	Path	β	t	p	f^2	95% bootstrap CI	Decision
H1	PIP → IGP	−0.294	3.851	< 0.001	0.168	[−0.444, −0.144]	Supported
H2	FEC → IGP	0.317	4.204	< 0.001	0.213	[0.169, 0.465]	Supported
H3	PEV → IGP	−0.183	2.471	0.014	0.084	[−0.328, −0.038]	Supported
H4	EP → IGP	−0.268	3.295	0.001	0.152	[−0.427, −0.109]	Supported
H5	PC → IGP	0.354	4.918	< 0.001	0.241	[0.213, 0.495]	Supported
H6	DDA → IGP	0.296	3.842	< 0.001	0.174	[0.145, 0.447]	Supported

Note. Standardized coefficients (β) and 95% confidence intervals are based on 5,000 bootstrap subsamples. f^2 denotes the reported local effect size; IGP is manager-perceived international guest performance.

Table 5. Mediation-component paths and effect sizes

Component	Path	β	t	p	f^2	95% CI
H7 component	PIP → EP	0.407	5.570	< 0.001	0.199	[0.264, 0.550]
H8 component	FEC → PC	0.362	4.200	< 0.001	0.151	[0.193, 0.530]

Note. PIP = perceived inflationary pressure; EP = economic pressure; FEC = favorable exchange-rate conditions; PC = price competitiveness. Confidence intervals are based on 5,000 bootstrap subsamples.

Table 6. Specific indirect effects

H	Indirect path	β	t	p	95% bootstrap CI	Decision
H7	PIP → EP → IGP	−0.109	2.836	0.005	[−0.184, −0.047]	Supported
H8	FEC → PC → IGP	0.128	3.194	0.001	[0.063, 0.207]	Supported

Note. Specific indirect effects were estimated with 5,000 bootstrap subsamples. Confidence intervals excluding zero support the reported statistical associations; they do not establish causal mediation in this cross-sectional survey.

Discussion

Interpretation of the Inflation and Operating-Pressure Pathway

PIP and EP were negatively associated with manager-reported IGP after adjustment for the other modeled constructs. The direct associations were PIP → IGP (β = −0.294, 95% bootstrap CI [−0.444, −0.144], p < 0.001) and EP → IGP (β = −0.268, 95% bootstrap CI [−0.427, −0.109], p = 0.001). The positive PIP → EP path (β = 0.407, p < 0.001) and the negative EP → IGP path yielded a significant negative specific indirect association (β = −0.109, 95% CI [−0.184, −0.047]). Thus, managers perceiving greater inflation-related costs also tended to report stronger operating pressure and less favorable international guest performance. This pattern accords with

hospitality research on economic uncertainty and firm performance (Menicucci & Paolucci, 2025; Ozdemir et al., 2023) and tourism-demand research on market uncertainty (Kuok et al., 2023; Lee & Choi, 2023; Payne et al., 2023; Sharma & Khanna, 2023). However, the study did not use independent occupancy, arrivals, or revenue series to test the proposed transmission channel.

The theoretical relevance of this pathway is not that inflation mechanically determines hotel performance, but that an external macroeconomic cue may acquire organizational significance through the pressures it creates inside the hotel. Managers can respond to cost escalation by revising procurement, room rates, package inclusions, staffing, or maintenance timing, and each response can alter perceived visitor value. This logic is consistent with evidence that hotels adjust pricing and operating strategies differently under changing macroeconomic and exchange-rate conditions (Blengini & Heo, 2024; Mitra, 2024). In this sense, the finding extends aggregate tourism-demand research by identifying a potential hotel-level translation mechanism between an external economic signal and perceived market performance. Because the design is cross-sectional and perception-based, however, the result should be read as a conditional association rather than as evidence that a one-point increase in national inflation causes a specific decline in Lake Toba hotel occupancy.

Exchange-Rate Favorability and Price Competitiveness

FEC and PC showed positive associations with perceived IGP. The direct estimates were FEC → IGP ($\beta = 0.317$, 95% bootstrap CI [0.169, 0.465], $p < 0.001$) and PC → IGP ($\beta = 0.354$, 95% bootstrap CI [0.213, 0.495], $p < 0.001$). FEC was also positively associated with PC ($\beta = 0.362$, $p < 0.001$), and the specific indirect association through PC was significant ($\beta = 0.128$, 95% CI [0.063, 0.207]). The results are consistent with a managerial interpretation in which currency favorability is linked to an attractive perceived price–quality proposition. Prior research has documented context-dependent relationships among exchange rates, hospitality pricing, and tourism demand (Adeleye et al., 2022; Alola et al., 2023; Blengini & Heo, 2024; Franjić et al., 2026; Mitra, 2024). Neither hotel room-rate records nor visitor-expenditure data were independently examined here, so this mechanism should not be read as a verified response of actual bookings or spending to currency movements.

The indirect pathway is theoretically more informative than a simple positive exchange-rate association because it identifies price competitiveness as an actionable mechanism. Hotels cannot control the rupiah, but they can decide how a temporary purchasing-power advantage is reflected in room bundles, direct-booking benefits, package content, and the balance between price and service quality. PC also had the largest f^2 among the modeled IGP predictors (0.241), although the modest sample means that the effect-size ranking should be treated descriptively rather than as a definitive hierarchy. Strategically, this result argues against positioning Lake Toba merely as a low-cost destination. Contemporary destination-competitiveness research shows that competitiveness is dynamic and spatially heterogeneous, requiring destination managers to align price, experience, attractions, and market conditions rather than depend on a single cost advantage (Chen et al., 2025; Zhao et al., 2024). A stronger approach is therefore to convert currency advantages into experiential value, such as longer stays, cultural activities, local food experiences, transport integration, or upgraded services (Angelini et al., 2025).

Exchange-Rate Volatility and Destination Delivery

PEV had a negative but comparatively small association with IGP ($\beta = -0.183$, $f^2 = 0.084$, 95% bootstrap CI [−0.328, −0.038], $p = 0.014$). Because the confidence interval remained below zero, the bootstrap inference was consistent with the negative direction of H3. This distinction matters because a favorable currency level and currency uncertainty are not mirror images.

International visitors may perceive the rupiah as favorable while remaining uncertain about the final cost of a trip booked in advance, and hotels may simultaneously face uncertainty in imported-input costs or future pricing decisions. The result is consistent with disaggregated tourism evidence showing that exchange-rate volatility can weaken demand and with research demonstrating that uncertainty shocks can affect tourism unevenly across countries, regions, and traveler segments (Imamboccus et al., 2024; Kuok et al., 2023; Lee & Choi, 2023; Payne et al., 2023; Sharma & Khanna, 2023). Recent evidence also suggests that global uncertainty can reduce the potential tourism benefits associated with currency depreciation (Helhel & Helhel, 2026). Future research may extend the measurement of exchange-rate volatility by incorporating multiple dimensions of booking confidence, price predictability, and travel-cost uncertainty (Ongan et al., 2026).

DDA was positively associated with manager-reported IGP ($\beta = 0.296$, 95% bootstrap CI [0.145, 0.447], $p < 0.001$). In other words, respondents who assessed accessibility, infrastructure, service quality, natural and cultural appeal, and visitor experience more favorably also tended to assess international guest performance more favorably. This relationship concerns two reported constructs within the same survey, not independently observed visitor arrivals or destination-level outcomes. The interpretation is compatible with destination-competitiveness research emphasizing the integration of attractions, accessibility, and service quality (Chen et al., 2025; González-Rodríguez et al., 2023; Jiao et al., 2025; Zhao et al., 2024) and with Lake Toba studies highlighting practical infrastructure and visitor-facility needs (Barus, 2024; Lazuardina et al., 2024; Mulyadi et al., 2022; Sihombing et al., 2024; Tanjung et al., 2024). These studies inform the policy interpretation but do not validate the present outcome measure against administrative tourism statistics.

Implications for Strengthening Tourism Destination Development

The positive association between DDA and perceived IGP ($\beta = 0.296$) suggests that hotel-level perceptions of international guest performance are linked to assessments of the wider visitor experience. In Lake Toba, accommodation interacts with restaurants, local food producers, guides, transport operators, attractions, handicrafts, and cultural enterprises. Previous research identifies tourism-related business opportunities and regional spillovers (Handayani, 2022; Nugroho et al., 2025; Primayesa et al., 2023; Tryphone & Mkenda, 2023). These sources support considering local linkages in destination policy, but the present survey did not measure actual local procurement, visitor expenditure, business income, or multiplier effects. Any expectation that stronger hotel price competitiveness would broaden these linkages is therefore a policy proposition requiring separate evaluation.

Connectivity is especially relevant in Lake Toba because the participating hotels were distributed across Samosir, Parapat/Ajibata, Balige, and other areas, while visitor journeys connect accommodation, transport gateways, roads, attractions, cultural sites, food services, and surrounding settlements. Existing Lake Toba research consistently emphasizes integrated planning, accessibility, infrastructure, and tourism-facility development (Barus, 2024; Lazuardina et al., 2024; Mulyadi et al., 2022; Sihombing et al., 2024; Tanjung et al., 2024). In applied terms, the hotel-level evidence therefore supports attention to transport integration, service coordination, visitor information, local business participation, and the packaging of experiences across destination nodes. These measures may help distribute visitor expenditure more widely and strengthen linkages within the local tourism value chain.

The practical implication is to coordinate hotel responses to perceived inflation and currency conditions with the destination's transport, visitor information, service delivery, and

local supplier networks. These actions are proposed on the basis of reported hotel-level associations and supporting literature; the analysis does not estimate their causal impact on destination development.

Theoretical Contribution and Novelty

The principal theoretical contribution is a sensemaking-informed signal-translation framework that separates two mechanisms linking external economic conditions with perceived hotel performance. The inflation pathway is primarily internal: perceived inflationary pressure is translated into economic pressure through cost escalation, margin pressure, pricing difficulty, and budget uncertainty. The exchange-rate pathway is primarily market-facing: favorable currency conditions are translated into price competitiveness through affordability, value for money, package competitiveness, and the price–quality balance. This distinction matters because inflation and exchange rates are often treated as parallel macroeconomic predictors even though they create different managerial problems and opportunities. The framework therefore complements aggregate tourism-demand and uncertainty research by locating interpretation and operational response at the hotel level (Daft & Weick, 1984; Kuok et al., 2023; Payne et al., 2023).

The framework also connects managerial adaptation conceptually to the wider destination system. Accessibility, service coordination, visitor mobility, local suppliers, and cultural resources may influence the feasibility of perceived hotel value propositions. Destination-resilience studies likewise emphasize interactions among actors, capacities, risks, and spatial conditions (Posch et al., 2024). This contribution remains interpretive: neither sensemaking capability nor destination development was directly measured as an endogenous model outcome.

Managerial and Policy Implications

For hotel managers, the operational implication is to translate favorable currency conditions into visible value rather than indiscriminate discounting. Direct-booking benefits, longer-stay packages, bundled transport, local food, cultural activities, guide services, and attraction access can strengthen the price–quality proposition. Under inflationary pressure, procurement efficiency, energy use, menu engineering, supplier-contract review, and package redesign can help protect margins while preserving service quality. Where reliability can be maintained, stronger local sourcing may also expand opportunities for tourism-related MSMEs (Tryphone & Mkenda, 2023).

For destination organizations and regional policymakers, a reasonable application is to coordinate hotel initiatives with reliable visitor information, transport integration, service standards, cultural interpretation, workforce capability, environmental stewardship, and MSME participation. Independent monitoring should combine occupancy and room-revenue records with visitor arrivals, length of stay, expenditure, local procurement, employment, MSME participation, and visitor mobility. These measures would make it possible to test whether the perception-based patterns observed here correspond to verified destination outcomes (Nugroho et al., 2025; Posch et al., 2024; Primayesa et al., 2023; Zhao et al., 2024).

CONCLUSIONS

The survey of 67 Lake Toba hotels indicates that managers who perceived more favorable exchange-rate conditions, stronger price competitiveness, and better destination delivery also reported stronger international guest performance; perceived inflationary pressure, economic pressure, and exchange-rate volatility showed negative associations. The significant specific indirect associations through economic pressure and price competitiveness are consistent with two proposed signal-translation pathways, one internal and the other market-facing. These

results suggest that hotels can consider cost efficiency and visitor value alongside destination connectivity, service quality, and local supplier participation. However, the cross-sectional design, modest sample of 67 hotel-level observations, reliance on a single manager's perceptions per hotel, and lack of independently verified occupancy, arrivals, or revenue data limit causal and external-validity claims. Tourism destination development was not measured directly. Future multi-period research should triangulate managerial assessments with hotel records and administrative destination indicators to test the broader implications.

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