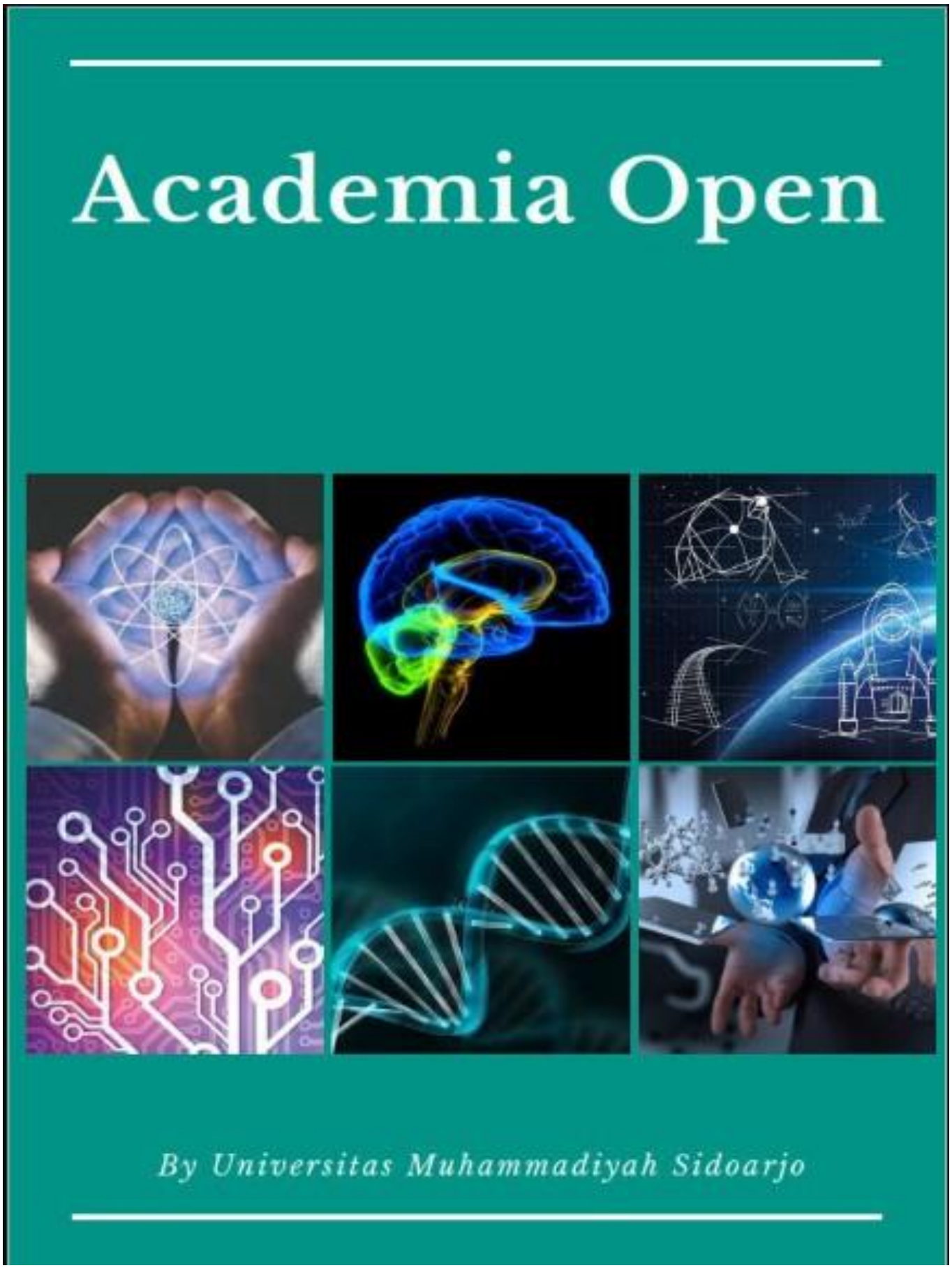
Academia Open

Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.14786



ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

Academia Open

Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.14786

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Academia Open

Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.14786

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Academia Open

Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.14786

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Academia Open

Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.14786

Survey-Based Hotel Competitiveness Assessment Using an Integral Index in Uzbekistan

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Abstract

General Background: Hotel competitiveness is a critical component of tourism destination performance, particularly in rapidly expanding accommodation sectors. **Specific Background:** Uzbekistan has experienced substantial growth in accommodation capacity, creating a need for practical approaches to evaluate competitiveness among individual hotels. **Knowledge Gap:** Existing macro-level tourism competitiveness indicators do not adequately capture firm-level performance differences across hotels. **Aims:** This study aims to develop and demonstrate a survey-based competitivenessassessmentframeworkbyintegratinghotelperformanceindicatorsintoabenchmark-normalized integral index. **Results:** A structured questionnaire covering financial performance, service quality, market position, innovation, and human resources was mapped into four competitiveness criteria: market share, occupancy rate, customer satisfaction, and human-capital share. Using data from an illustrative sample of eight hotels across Samarkand, Bukhara, Tashkent, and Khiva, theintegral-index approach revealed that competitiveness is more strongly associated with balanced performance across multiple dimensions than with dominance in a single indicator. Hotels with strong occupancy and customer satisfaction scores achieved higher rankings even when operating in lower-demand regions or possessing smaller market shares. **Novelty:** The study introduces a survey-based benchmarking framework that combines normalized performance indicators with a weighted integral-index methodology for hotel competitiveness assessment. **Implications:** The proposed approach provides regional tourism boards and hotel managers with a transparent and replicable tool for competitiveness benchmarking while supporting more informed managerial and policy decision-making through structured performance evaluation.

Highlights:

- Competitiveness rankings were generated using benchmark-normalized market, occupancy, satisfaction, and human-capital indicators.
- Balanced performance across multiple dimensions produced stronger scores than superiority in a single criterion.
- Hotels operating in lower-demand destinations achieved high rankings through strong occupancy and customer satisfaction outcomes.

Keywords: Hotel Competitiveness, Survey Method, Benchmarking, Integral Index, Uzbekistan

Published date: 2026-06-19

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1. Introduction

The accommodation sector occupies a pivotal position in tourism destination competitiveness, since the hotel is typically the single largest expenditure item in a visitor's trip budget and the primary point of sustained service contact during a stay. Uzbekistan's accommodation base has expanded rapidly over the past decade — from 609 registered accommodation facilities in 2016 to 4,015 by 2021, and to 6,642 facilities offering 174,268 beds nationwide as of September 2025 [1] yet rapid quantitative growth does not by itself establish whether individual hotels, or the sector as a whole, are becoming more competitive relative to one another and to regional benchmarks.

Assessing hotel-level competitiveness requires both a measurement instrument capable of capturing the multiple dimensions of hotel performance and an aggregation method capable of converting those dimensions into a single comparable score. This article addresses both requirements. It first presents a structured survey instrument designed to elicit hotel managers' self-assessment of financial performance, service quality, market position, innovation, and human-resource competitiveness, and then applies the benchmark-normalization and weighted integral-index method developed for the “Calculator” algorithm [2] to convert survey responses into a single integral competitiveness index per hotel.

The purpose of this article is fourfold: (1) to present a survey instrument tailored to the accommodation sector; (2) to map survey-derived indicators onto four operational criteria of an integral competitiveness index market share, occupancy rate, customer satisfaction, and human-capital share; (3) to illustrate the method using an eight-hotel sample drawn from four cities; and (4) to discuss the policy and managerial implications of survey-based, benchmark-normalized hotel competitiveness assessment.

2. Literature Review

2.1. Hotel Competitiveness Theory

Porter's generic competitive-strategy framework [3,4] — cost leadership versus differentiation — has been widely applied to hotel strategy, while Crouch and Ritchie [5,6] situate the individual hotel as one of several “supporting factors and resources” within the broader destination competitiveness system, implying that hotel-level competitiveness, while analytically distinct, is not independent of destination-level conditions such as infrastructure, marketing, and visitor demand.

2.2. Survey-Based Measurement

Parasuraman, Zeithaml and Berry's SERVQUAL instrument [7] remains the dominant template for survey-based service-quality measurement in hospitality, decomposing perceived quality into tangibles, reliability, responsiveness, assurance, and empathy. The present instrument adapts this logic to a manager-facing self-assessment format rather than a guest-facing perception survey, trading some measurement objectivity for breadth of coverage across financial, operational, and human-resource dimensions that guest surveys do not capture.

2.3. Benchmarking and Composite Indicators

Camp's benchmarking principle [8] comparing a firm's performance against the best-observed performer in a relevant peer group underlies the normalization step used in this study. The composite-indicator construction literature [9,10] formalizes the subsequent aggregation step, while Saisana and Tarantola [11] caution that weighting and aggregation choices can materially affect rankings and should be reported transparently. Man, Lau and Chan [12] and Ambastha and Momaya [13] provide the firm-competitiveness rationale for combining multiple indicator types — financial, operational, and capability-based — into a single index rather than relying on any one dimension alone.

Table 1. Selected literature informing the survey instrument and aggregation method.

Source	Focus	Method	Relevance to This Study
[3,4]	Generic competitive strategy	Conceptual	Cost vs. differentiation framing
[5,6]	Destination competitiveness	Conceptual model	Hotel as supporting factor
[7]	Service-quality measurement	SERVQUAL survey	Survey-instrument template
[8]	Benchmarking principle	Best-in-class comparison	Normalization logic
[9,10]	Composite indicators	Aggregation methodology	Index-construction steps
[11]	Indicator robustness	Sensitivity analysis	Weighting caution
[12]	SME competitiveness	Conceptual	Multi-indicator rationale
[13]	Firm competitiveness review	Literature review	Framework synthesis

3. Methods

3.1. Questionnaire Design

Academia Open
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The survey instrument comprises seven sections administered to hotel general managers or owners: (1) establishment profile — location, star category, room count, year of establishment; (2) financial performance — self-reported revenue band, profit margin band, and year-on-year change; (3) occupancy and market position — average occupancy rate, estimated local market share, and primary competitor set; (4) service quality — guest-satisfaction proxy (average rating or internal survey score) and complaint-resolution practices; (5) innovation — adoption of booking-channel technology, revenue-management systems, and service innovations introduced in the past two years; (6) human resources — staff count, share of staff with tourism/hospitality-specific training or certification, and staff turnover; and (7) open-ended commentary on perceived competitive advantages and constraints.

3.2. Mapping to the Integral-Index Method

Four survey-derived indicators were selected to populate the hotel module of the integral-index method: market share (MS), occupancy rate (OR), customer satisfaction (SAT), and human-capital share (HR, the share of staff holding tourism/hospitality-specific training or certification). Each raw indicator for hotel i is normalized against the maximum value observed in the comparison sample:

$$I_{i,norm} = I_{i,raw} / \max_j(I_{j,raw}) \quad (1)$$

and the integral competitiveness index for hotel i is the weighted sum of the four normalized criteria:

$$Integral(H)i = w1 \cdot MSi + w2 \cdot ORi + w3 \cdot SATi + w4 \cdot HRi \quad (2)$$

with illustrative weights w = (0.3, 0.3, 0.2, 0.2), reflecting a judgment that market share and occupancy carry somewhat greater weight than satisfaction and human-capital share in this illustrative application; the weighting scheme is adjustable to local policy priorities and is revisited in the Discussion. This formulation follows the general normalization-and-aggregation logic developed for the BoburCalculator algorithm [2].

Table 2. Mapping of survey items to integral-index criteria.

Survey Item	Indicator	Symbol	Source Section	Weight
Local market share (%)	Market share	MS	Sec. 3	0.3
Average occupancy (%)	Occupancy rate	OR	Sec. 3	0.3
Guest-satisfaction proxy	Satisfaction	SAT	Sec. 4	0.2
Share of trained staff	Human capital	HR	Sec. 6	0.2

3.3. Illustrative Sample

To illustrate the method, the instrument was administered to eight hotels (H1–H8) across Samarkand, Bukhara, Tashkent, and Khiva, spanning three-, four-, and five-star categories. The sample is illustrative rather than representative and is disclosed here as such; it demonstrates the computational mechanics of the method rather than supporting population-level inference about Uzbekistan's hotel sector. A representative, randomized, larger-sample application is left to future research, as discussed in Section 4.

4. Results and Discussion

4.1. Raw and Normalized Indicators

Table 3 reports raw survey-derived indicators for the eight-hotel illustrative sample

Table 3. Raw indicator values, illustrative eight-hotel sample.

Hotel	City / Stars	MS raw (%)	OR raw (%)	SAT raw (1-5)	HR raw (%)
H1	Samarkand, 4*	18	64	4.3	55
H2	Samarkand, 3*	9	48	3.8	35
H3	Bukhara, 4*	22	71	4.6	60
H4	Bukhara, 3*	7	39	3.5	28
H5	Tashkent, 5*	15	58	4.2	62
H6	Tashkent, 4*	19	66	4.4	58
H7	Khiva, 3*	8	44	3.6	30
H8	Khiva, 4*	17	69	4.5	50

Applying Equation (1) to normalize each column against its sample maximum, and Equation (2) with weights (0.3, 0.3, 0.2, 0.2) to aggregate, yields the integral index and resulting ranking reported in Table 4.

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Table 4. Normalized indicators, integral index, and ranking, illustrative eight-hotel sample.

Hotel	City	MS norm	OR norm	SAT/HR norm	Integral	Rank
H3	Bukhara	1.000	1.000	1.000/1.000	0.9269	1
H8	Khiva	0.773	0.972	0.978/0.806	0.8866	2
H6	Tashkent	0.864	0.930	0.957/0.935	0.8453	3
H1	Samarkand	0.818	0.901	0.935/0.887	0.8165	4
H5	Tashkent	0.682	0.817	0.913/1.000	0.7040	5
H2	Samarkand	0.409	0.676	0.826/0.565	0.6127	6
H7	Khiva	0.364	0.620	0.783/0.484	0.5899	7
H4	Bukhara	0.318	0.549	0.761/0.452	0.5428	8

4.2. Interpretation

H3 ranks first on the integral index by leading the sample on all four raw indicators simultaneously, while H8 ranks second despite a comparatively modest market share, driven primarily by high occupancy and satisfaction scores. The ranking illustrates that the index rewards balanced performance across all four criteria rather than dominance on any single dimension: H5, despite the sample's highest human-capital share (62 percent trained staff), ranks only fifth owing to comparatively lower market share and occupancy.

4.3. Macro-Level Context

Over the period reviewed here, Uzbekistan's rank on the Travel & Tourism Development Index [14] improved from unranked in 2019 to 94th (index value 3.40) in 2021 and 78th (index value 3.76) in 2024, while Spain, the top-ranked destination, scored 5.40 in 2024 [14]. This macro-level improvement provides context for the firm-level results: national-level gains in tourism competitiveness are consistent with, but do not on their own demonstrate, improving competitiveness at the level of individual accommodation establishments, which is precisely the gap the survey-based integral-index method is designed to address.

4.4. Discussion and Policy Implications

Three considerations qualify the use of this method for policy and managerial purposes. First, the method is comparison-group dependent: normalization against the sample maximum means a hotel's index value reflects standing relative to the specific peer set analyzed, not an absolute international standard. Regional tourism boards applying the method should therefore define comparison groups carefully — for example, comparing hotels within the same star category and city rather than across heterogeneous groups — and should report the comparison group alongside any published ranking.

Second, the illustrative weighting scheme (0.3, 0.3, 0.2, 0.2) was chosen for transparency and ease of replication rather than derived from a formal weight-elicitation procedure. Structured methods such as the Analytic Hierarchy Process [15] could be used to elicit weights reflecting the judgments of hotel-sector stakeholders — regulators, association representatives, and managers — and the ranking's sensitivity to plausible alternative weights should be reported as a robustness check before the index is used to inform resource-allocation or recognition decisions.

Third, because all four indicators are self-reported by hotel management, the method is exposed to social-desirability and recall bias. Triangulating self-reported occupancy and satisfaction figures against independent data sources — such as booking-platform analytics or third-party review aggregators — where available, would strengthen confidence in the resulting rankings.

5. Conclusions

This study presented a structured survey instrument and a benchmark-normalization, weighted integral-index method for assessing hotel-sector competitiveness, illustrated using an eight-hotel sample across four Uzbek cities. The results show that the index rewards balanced performance across market share, occupancy, satisfaction, and human-capital indicators rather than dominance on any single dimension, and that smaller establishments in lower-demand regions can outscore larger competitors on the integral index when their relative performance across these four criteria is strong.

The method offers regional tourism boards and individual hotel managers a transparent, replicable way to benchmark competitiveness using readily available self-reported data, complementing macro-level indices such as the Travel & Tourism Development Index. Its principal limitations — comparison-group dependency, weighting-scheme sensitivity, and exposure to self-report bias — are addressable through careful comparison-group definition, structured weight elicitation, and triangulation with independent data sources, and represent priority directions for follow-up empirical work using larger, randomized hotel samples.

ISSN 2714-7444 (online), https://acopen.umsida.ac.id, published by Universitas Muhammadiyah Sidoarjo

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Acknowledgment

The author thanks the International University of Tourism and Cultural Heritage “Silk Road” for institutional support during the preparation of this study. No additional acknowledgments apply.

Funding

This research received no external funding from any funding agency in the public, commercial, or not-for-profit sectors.

Conflict of Interest

The author declares no conflict of interest.

References

1. State Statistics Committee of the Republic of Uzbekistan. Tourism statistics: January–August 2025 (as of 1 September 2025). Tashkent: State Statistics Committee; 2025.
2. Sobirov B. Calculator: a decision-support tool for tourism enterprise competitiveness assessment [software]. Samarkand: International University of Tourism and Cultural Heritage “Silk Road”; 2026.
3. Porter ME. The Competitive Advantage of Nations. New York: Free Press; 1990.
4. Porter ME. On Competition. Boston: Harvard Business School Press; 1998.
5. Crouch GI, Ritchie JRB. Tourism, competitiveness, and societal prosperity. J Bus Res. 1999;44(3):137–152.
6. Ritchie JRB, Crouch GI. The Competitive Destination: A Sustainable Tourism Perspective. Wallingford: CABI Publishing; 2003.
7. Parasuraman A, Zeithaml VA, Berry LL. SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. J Retailing. 1988;64(1):12–40.
8. Camp RC. Benchmarking: The Search for Industry Best Practices That Lead to Superior Performance. Milwaukee: ASQC Quality Press; 1989.
9. Nardo M, Saisana M, Saltelli A, Tarantola S. Tools for Composite Indicators Building. Ispra: European Commission Joint Research Centre; 2005.
10. OECD, European Commission Joint Research Centre. Handbook on Constructing Composite Indicators: Methodology and User Guide. Paris: OECD Publishing; 2008.
11. Saisana M, Tarantola S. State-of-the-Art Report on Current Methodologies and Practices for Composite Indicator Development. Ispra: European Commission Joint Research Centre; 2002.
12. Man TWY, Lau T, Chan KF. The competitiveness of small and medium enterprises: a conceptualization with focus on entrepreneurial competencies. J Bus Venturing. 2002;17(2):123–142.
13. Ambastha A, Momaya K. Competitiveness of firms: review of theory, frameworks, and models. Singapore Manage Rev. 2004;26(1):45–61.
14. World Economic Forum. Travel & Tourism Development Index 2024: Insight Report. Geneva: World Economic Forum; 2024.
15. Saaty TL. The Analytic Hierarchy Process: Planning, Priority Setting, Resource Allocation. New York: McGraw-Hill; 1980.