International Journal of Environmental Sciences ISSN: 2229-7359 Vol. 11 No. 7, 2025 https://theaspd.com/index.php

Environmental Strategies in Hotel Industry: A Systematic Framework-Based Review and Future Research Directions

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Abstract

Environmental strategies in the hotel industry (ESHI) have gained significant attention from practitioners, academicians, stakeholders, and policymakers. Implementing these strategies is vital to the environmental sustainability of the hotel industry. This review paper aims to synthesize the existing literature on environmental strategies and to provide a comprehensive understanding of the concept. For this purpose, a framework-based systematic review of 99 articles from the last twenty-four years was conducted. This review uses two organizing frameworks to provide comprehensive insights. The Antecedents, Decisions, and Outcomes (ADO) framework provides deep insight into the research domain. Additionally, the Theories, Contexts, and Methods (TCM) framework highlights theoretical foundations, contexts, and analysis methods used in the existing literature. Additionally, this review identifies research gaps in the current literature and provides future research directions using the two aforementioned frameworks. This study offers several important implications. It provides evidence-based guidance for practitioners on designing and implementing more effective and integrated environmental strategies. For policymakers, it underscores the need to create enabling regulatory and institutional environments that incentivize sustainable practices. The review maps future research directions for researchers by highlighting underexplored theoretical perspectives, methodological innovations, and emerging sustainability challenges, such as climate adaptation and circular economy practices in hospitality.

Keywords: Environmental strategies, hotel industry, sustainability, framework-based review, systematic literature review.

1. INTRODUCTION

1.1 BACKGROUND

The hotel industry has attracted attention because of its extreme resource intensity and potential release of pollutants in the environment in its daily functioning [26] [73]. The industry is under criticism for slow implementation of environmental strategies to reduce the environmental impact. Integration of environmental strategies in hotel industry has significantly improved, but a large number of hotels still fail to meet the regulatory requirements [73]. Further, many companies cover basic strategic aspects, leaving behind specific performance indicators such as targets and achievements, which points to limited commitment to the cause of environmental conservation [17]. It has also been witnessed that strategic environmental competencies that lead to competitiveness and differentiation against the competitors are lower in comparison to the preventive competencies that focus only on evaluating and analysing the future sustainability scenarios to solve sustainability issues [4].

The lack of implementation of environmental strategies is often associated with insufficient financial resources and inadequate environmental awareness [14,38, 23, 42] Lack of adequate follow-through of policy implementation, conflict between environment friendly practices and luxuries offered to customers complying to a particular star category and green hotel standards being too difficult to meet are some other reasons for lack of implementation of environmental strategies in hotel industry. Heung and Pun (2013) and Singh et al., (2023) identified lack of adequate government support, inadequate environmental awareness and concern among customers, traditional and deep-rooted travel habits of customers, lack of benchmarks, lack of environmental awareness among managers and hotels' preference towards short-term gains over long-term gains and profit maximisation as the main reasons behind slow implementation of environmental strategies. Further lack of resources, complex decision-making process,

ISSN: 2229-7359 Vol. 11 No. 7, 2025

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lack of a standard procedure, lack of coordination with partners and lack of owner initiative as major challenges for conducting carbon footprint analysis [12, 6].

Environmental strategies implemented in the hotels come in the form of water saving initiatives such as installation of automatic faucets, recycling of used water and rainwater harvesting, energy saving initiatives such as efficient lighting and regular maintenance of equipment, and waste reduction strategies such as recycling of paper, garbage segregation, food wastage, and employee education programs. Implementation of environmental strategies often results in cost savings, fewer penalties due to regulatory compliance, a better image for stakeholders, and enhanced financial and environmental performance.

1.2 CONTRIBUTION OF THIS STUDY

This review contributes to the literature in three ways. First, this study analyses the existing literature, which is of key importance given the resource intensity of the hotel industry, visibility of environmental degradation, and growing environmental concern among stakeholders.

Second, this review uses two well-established organizing codes (ADO and TCM) to provide deep and structured insight into ESHI literature. The combined use of these frameworks is required because ADO will provide insights into the categorical relationship between various dimensions of ESHI literature, and TCM will provide insight into theoretical bases, contextual factors, and methodological elements advancing the research in this area [54]. Researchers can use this review to conduct an advanced theory-based systematic review by focusing on the theoretical gap identified in this review. Managers can use this review to construct an ecosystem, enabling the result-oriented implementation of environmental strategies.

Third, by applying the ADO framework to the current ESHI literature, we identify gap areas, frame research questions, and provide pathways for future research by formulating research objectives to answer the research questions using the gaps identified in the literature based on the TCM framework.

1.3 STRUCTURE OF THIS SYSTEMATIC REVIEW

The article's structure is as follows. In Section 2, the methodology for this study has been discussed. This study uses SPAR 4 SLR put forth by Paul et al. (2021 to select the suitable articles for the review. In sections three and four, findings based on ADO and TCM frameworks have been discussed. Future research directions and the suggested measures based on ADO and TCM are provided in Section 5. In sections six and seven, conclusions and practical implications are discussed. Limitations of the study are discussed in section eight.

2. METHODOLOGY

This systematic literature review implements the TCM and ADO framework on ESHI research. The framework-based reviews provide more robust results than simple systematic reviews. We have used both Scopus and Web of Science (WoS) databases to increase the generalizability of the review. The details of the SPAR 4 protocol used in this review are presented in Figure 2.

In Table 1, we indicate the most productive journals in ESHI research. The findings of this review are presented in the subsequent section.

Table 1 MOST PRODUCTIVE BIBLIOGRAPHICAL SOURCES

S.No.	Journal	Number of articles
1	International Journal of Contemporary Hospitality	14
	Management	
2	Journal of Sustainable Tourism	10
3	Tourism Management	8
4	Business Strategy and the Environment	7
5	International Journal of Hospitality Management	5
6	Cornell Hospitality Quarterly	4
7	Corporate Social Responsibility and	3
	Environmental Management	
8	Environment, Development and Sustainability	3

9	Business Strategy and Development	2
10	Journal of Hospitality and Tourism Insights	2
11	International Journal of Tourism Cities	2
12	Technological Forecasting and Social Change	2
13	Current Issues in Tourism	2
14	Journal of Cleaner Production	2
15	International Journal of Hospitality and Tourism	2
	Administration	

2.1 REVIEW PROTOCOL

This review systematically synthesizes the ESHI literature using the SPAR 4 protocol given by Paul et al. (2021) to provide logical and concrete results. The review consists of three main stages (assembling, arranging, and assessing) and six sub-stages (identification, acquisition, organization, purification, evaluation, and reporting) that are discussed subsequently and summarised in Figure 2.

2.1.1 STAGE1: ASSEMBLING

This stage includes the identification and acquisition of relevant literature. The domain name, research question, and source quality are decided in the identification sub-stage. For this review, only articles are included in the source type. We excluded conference proceedings, dissertations, reviews, editorials, abstracts, and book chapters. We ensured good source quality by covering Web of Science (Social Science Citation Index) and Scopus databases. We maintained a good journal selection criterion by selecting journals with an impact factor of more than 1.In the acquisition sub-stage, a Boolean search using the keywords "environmental strategies" in "hotel industry" was run in the Web of Science and Scopus databases to cover all the relevant results.

We did not limit our search to any period to increase the scope of the literature. The last search for data was performed on 23 May,2024(see figure 1).

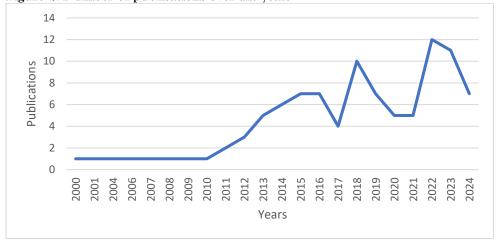


Figure 1: Number of publications over the years

2.1.2. STAGE 2: ARRANGING

In organizing the sub-stage, we organized the data based on two organizing codes: (a) ADO that covered Antecedents, Decisions, and Outcomes, and (b) TCM that covered theories, sample, geographical area, type of study, method of analysis, to provide a holistic view of the literature.

In the purification sub-stage, the inclusion and exclusion criteria are decided. In terms of exclusion, all non-English articles were excluded. Regarding inclusion, we chose articles published in peer-reviewed journals, avoiding reviews to avoid double-barreled reporting. We selected business, management, economics, econometrics, and finance articles.

2.1.3 STAGE 3: ASSESSING

The assessment stage comprises two sub-stages: (a) evaluation and (b) reporting. In this framework-based review, we conducted a descriptive analysis to assess the most productive journals, most popular theories, most popular methods of analysis, and contexts, as well as ADO in Environmental strategies in hotel

ISSN: 2229-7359 Vol. 11 No. 7, 2025

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industry research [54]. The use of TCM and ADO frameworks increases the reliability of results. Research gaps were evaluated based on the same framework [48]. Subsequently, framework-based future research directions are proposed. A comprehensive view of this review's findings after applying the ADO and TCM framework has been summarised in Figure 3.

Figure 2. SPAR4 SLR FRAMEWORK FOR SYSTEMATIC LITERATURE REVIEW

Identification

Domain: Environmental strategies in hotel industry (ESHI)

Research questions: (a) What are the various dimensions of environmental strategies in hotel industry? (b) what are the various gaps in environmental strategies in ESHI literature? (c) What should be the direction for future research?

Source type: Peer reviewed journal articles

Source quality: Web of Science (WOS) SSCI and Scopus journals with impact factor>1

Acquisition

Search mechanism and acquisition of materials: Boolean search on WOS and Scopus

Search period: January 2000-26th May 2024

Search keywords: a Boolean search using keywords environmental strategies and in hotel industry

Total number of articles returned from the search: N=257 (search was restricted to English language articles in the

domain Business, Management, Finance, Economics and Econometrics)

Organization

Organizing codes: theories, countries, method of analysis, dimensions, antecedents and outcomes Organizing framework: combination of ADO (Paul and Benito,2018) and TCM (Paul, Parthasarthy and Gupta,2017) frameworks

Purification

Article type excluded: Total articles (n=158) were excluded based on (a) articles were present in both Scopus and Web of Science databases(b) articles were published in Journal with impact factor less than 1 (c) articles were not related to environmental strategies in hotel industry or the content to non-relevant to the topic

Articles type included: articles were included if (a) articles discussing the theoretical bases, antecedents, dimensions and outcomes of environmental strategies in hotel industry

Evaluation

Analysis method: performance analysis of journals and contexts, most used theoretical bases, methods of analysis and antecedents, decisions and outcomes

Agenda proposal method: gap analysis

Reporting

Reporting conventions: detailed discussion along with summaries using tables and Figures are used. Limitations of the study have also been discussed

Assembling

Arranging

Assessing

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3. FINDINGS BASED ON ADO FRAMEWORK

In the subsequent sub-sections, we discuss the findings of ESHI research based on ADO framework. Antecedents refer to the reasons responsible for the presence or absence of ESHI. Decisions refer to the dimensions that characterize ESHI, and outcomes represent the results obtained after implementing these strategies.

3.1 ANTECEDENTS

The review identifies various antecedents that affect the implementation of environmental strategies. These antecedents can be categorised as (a) organizational, (b) environmental.

3.1. ORGANIZATIONAL ANTECEDENTS

3.1.1(A)HOTEL SIZE, AFFILIATION, AND LOCATION

Hotel size (number of rooms), star category (number of stars), and chain affiliation significantly impact the adoption of these strategies. These hotels have more resources to invest in environmental management, standardised business processes, and clearly defined structures to implement environmental strategies [68, 25, 58, 78, 17]. Hotels' geographical proximity positively and significantly impacts the implementation of green strategies [76, 48]. In addition, listed hotels are more likely to implement environmental strategies because they have more pressure to respond to investors ([17]. Gu et al. (2013) found that political connections play a vital role in implementing environmental strategies.

3.1.1(B) ORGANIZATIONAL VALUES AND BELIEFS

In addition, organizational values are key to implementing environmental strategies, especially in the case of small and medium hotels that have fewer resources compared to large hotels, which also acts as a barrier to the extent of implementation of these strategies [80, 44]. Customer orientations, information processing, responsiveness, value, and norms play a key role in adopting environmental strategy. Commitment to corporate governance mechanisms, environmental certifications, and standards is necessary to implement the environmental strategy [41].

3.1.1(C) GREEN EMPLOYEE ENVIRONMENT

An environment where employees can have the authority to work responsibly and independently is positively and directly linked to pro-environment behaviour, job satisfaction, and environmental performance. Green teams and staff facilitate the development of social and environmental management control, which provides formal and informal routines for the dialectic of control. These routines help employees express their environmental commitments. Regular collaboration among various branches and reporting by these subsidiaries to headquarters, also reporting by green teams and green meeting minutes. Social and environmental management initiatives are expressed through signification, legitimation, and domination [53].

3.1.1(D) ENVIRONMENTALLY RESPONSIBLE LEADERSHIP

Green leadership plays a key role in expressing environmental strategies in mission and vision and formulating green policies, which foster green innovation and enhance employee willingness to perform eco-friendly activities because employees feel encouraged by their superiors, which leads to achieving the organization's environmental goals. [25,37].

3.1.1 (f) Resources and capabilities

Firm's physical resources (infrastructure, equipment), financial resources (working capital, financial capacity and borrowing capacity [45], experiential resources (knowledge developed through exposure to environmental strategies of competitors, internal environment audit, knowledge from industry experts, advisory boards and other sources) positively influence the implementation of environmental strategies [41]. Further, organizational capabilities: shared vision (collective belief and commitment towards environmental issues)[45], relationship building (relationships with customers, suppliers, tour operators, NGOs, government to increase sensitivity to their environmental and other needs) and technological sensing/response (capability to transform products, services and business processes to incorporate environmental attitudes of stakeholders and shape environmental strategies [40].

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3.1.2 ENVIRONMENTAL ANTECEDENTS

Environmental antecedents are the external factors that influence environmental strategies. Stakeholders' environmental awareness and environmental attitudes positively and significantly influence the adoption of environmental programs [42, 63,17].

Environmental factors such as (1) sectoral pressure, (2) government policy and regulation [34,53], (3) financial and non-financial government support (4) information and experience sharing among practitioners, (5) collaboration among industry, government and academia (6) increase in customer awareness of environmental issues [14, 42] and (7) degree of competition in market impact the adoption of environmental strategies.

3.2 DECISIONS

In this section, we explore various dimensions that have been used to define environmental strategies in the literature. We observe that environmental marketing strategies, environmental initiatives, environmental knowledge strategy, environmental innovation strategy, green human resource strategies, and green management strategies are the most discussed dimensions of environmental strategies (see Table 2).

3.2.1 ENVIRONMENTAL MANAGEMENT STRATEGIES

Environmental management strategies are characterized by product and service management, sustainable development and pollution prevention [78]. Adoption of environmental strategies in hotel industry play a crucial role in resource conservation [54]. Mak and Chang (2019) identified 21 environmental strategies. These strategies were further divided into 14 key areas: water conservation, energy conservation, sustainable transport, waste reduction, green amenities, reduction in use of harmful substances, environment friendly guest rooms, building design and materials, sustainable procurement, sustainable food services, outdoor environment, corporate social responsibility, environmental communication with guests, management and staff commitment.

3.2.2 ENVIRONMENTAL KNOWLEDGE STRATEGIES

Environmental knowledge strategies are key to environmentally responsible firm behaviour. Environmental knowledge strategy relates to the understanding, retention, and sharing of information on environmental problems [49]. The continuous upgradation and sharing of ecological information are crucial to the successful adoption and implementation of environmental strategies.

3.2.3 ENVIRONMENTAL MARKETING STRATEGIES

Tailoring of strategies to conserve the environment is associated with analysing the stakeholder needs for environmental products and services, offering green products, green brand positioning, eco-labelling and packaging, green pricing, and green distribution [10,2]. Hotels can not materialise the successful implementation of environmental strategies without incorporating the elements of green marketing in their activities.

3.2.4 SUSTAINABLE SERVICE INNOVATION

Sustainable service innovation is composed of three components: innovation, organizational factors and innovation diffusion. Further innovation directly and significantly affects sustainable innovation [28]. Additionally, diffusion of innovation within the industry also influences the adoption of sustainable innovation [37]. The degree of adoption of sustainable innovation adoption depends on its relative advantage (the extent to which innovation is perceived superior to the idea it supersedes), compatibility(the extent of the compatibility of innovation with organizational values), simplicity(the degree to which innovations can be experimented on with a limited time basis) and visibility(chances of adoption of innovation become high when its benefits are visible to users)[28, 37].

3.2.5 GREEN HUMAN RESOURCE STRATEGIES

Implementation of environmental strategies is intermingled with green human resource strategies. These strategies outline a set of approaches, policies, and methods that promote employee green behaviour and create a resource-efficient and socially responsible environment that complements environmental conservation. Green employee training increases environmental awareness, environmental efficiency,

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environmental involvement, and environmental performance, positively translating environmental conservation goals to results [70].

Table 2 DIMENSIONAL SPREAD

Dimensions	Exemplary papers
Environmental strategies	Carmona-Moreno et al.,(2004);Sharma(2007); Kasim(2007); López-Gamero et al,(2011); Alonso-Almeida and Rodríguez-Antón(2011); Hsieh(2012);Segarra-Oña,et al,(2012); Park and Kim(2014); Singh et al,(2014); Bagur-Femenías et al,(2015); Chung and Parker (2008); Pérez-Pineda et al,(2017); Han et al.,(2018)Abaeian et al,al(2019);Sourvinou and Filimonau(2018); Shanti and Joshi (2021); Singjai et al,(2021); Chan(2021); Dang-van et al,(2022); Maté-Sánchez-Val and Teruel-Gutierrez(2022);Fatima and Elbanna(2023); Singh et al,(2023);Akel and Noyan(2023); Lin et al,(2023);Abdou et al.,(2023); Kusa et al.,(2023); Apolloni et al.,(2024)
Environmental	Martinez-Martinez et al,(2019)
Knowledge strategy Environmental marketing	Ham and Choi (2012); Leonidou et al, (2013; Chan (2013) Martinez (2015); Vlad et al., (2016) Yadav et al, (2016); Ettinger et al., (2018); Tranford et al, (2020); Sahin et al, (2019); Kang and Atkinson (2021); Sadom et al, (2022)
Environmental innovation	Horng et al, (2018); Kumar and Sheoran(2021); Bani-melhem et al, (2022); Gu (2023); Khassawneh et al,(2024)
Green human resource strategies	Chou (2014); Yoon et al.,(2016); Pérez-Pineda et al., (2017); Pham N T (2018); Darvishmotevali and Altinay (2022); Islam et al., (2022); Al-Sabi et al., (2024); Khassawneh et al., (2024); Tanveer et al., (2024)

3.3 OUTCOMES

3.3.1 COMPETITIVE ADVANTAGE

The implementation of environmental strategies results in cost-saving in the long run, resource efficiency and differentiation of offerings from competitors, which results in competitive advantage [19] [54] [40] [23][8][49] [65] [42]. Environmental strategy components such as environmental goals, vision, mission and policies and budgets make investment in eco-innovations easier. Hotels practicing environmental protection earn more profits because of environmental protection strategies (tacit and explicit), consideration of these practices as strategic capabilities, and experience in the implementation of these strategies [11].

3.3.2 FINANCIAL PERFORMANCE

The implementation of environmental strategies leads to firm superiority in environmental offerings and communicating these offerings to increase brand reputation, leading to generating overall green image, which leads to green trust and satisfaction, finally leading to green loyalty [25] [48] [8] [84];[82] [72] [31]; [16]. The ability of a hotel to provide green services enables it to charge higher prices, generate more profits, and more sales from existing segments compared to its competitors and achieve superior business performance [58]; [48][64].

3.3.3. GREEN EMPLOYEE BEHAVIOUR

Environmental strategies are positively associated with employee environment behaviour, implying that environment management significantly impacts employee attitudes and behaviour. In addition, environmental strategies instil a sense of fulfilment among employees [79]. Employee environment behaviour is positively linked to sustainable performance, implying that employee behaviour supplements the environment management [60][4]. Islam et al. (2021) provided evidence of a positive relationship between green human resource strategy and employee retention, confirming the social exchange theory, which postulates that employees pay back to the organizations through loyalty and positive attitudes.

4. FINDINGS BASED ON TCM FRAMEWORK

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4.1 THEORIES

In this review, we highlight that ESHI research has heavily drawn from a number of theoretical foundations (see Table 3). It is evident that a significant share of the literature draws from resource theories.

Table 3 MOSTLY USED THEORETICAL FOUNDATIONS

Theory	Exemplary papers		
Resource-based	Kuo et al.(2022); Rehman et al,(2023); Shazali et al,(2023); Tahhan		
	and E.K.A.S(2024); Dolores Lopez-Gamero et al,(2011); Loannidis		
	et al,(2021; López-Gamero,et al,(2023)		
Stakeholder	Gosbois and Fennell(2021); Chan (2021); Sajjad et al, (2018); Singh		
	et al,(2014); López-Gamero,et al,(2023); Jiang et al,(2023)		
Natural-resource-based view	Maté-Sánchez-Val and Teruel-Gutierrez (2022); Singjai etal,(2018);		
	Rehman et al,(2023)		
Stimulus-organism-response	Sadom et al,(2022); Sadom et al,(2022); Sadom et al,(2022)		
Social identity	Sourvinou and Fimunou(2018); Yoon et al,(2016); Ishaq et al,(2023)		
Social exchange	Pham et al,(2018); Islam et al,(2022);		
Resource dependency	Kuo et al,(2022)		
Dynamic capabilities	López-Gamero,et al,(2023)		
Diffusion of innovation	Horng et al,(2018)		
theory			
Organizational change	Vlad et al.,(2016)		
theory			
Construal level theory	Kang and Atkinson (2019)		
Conservation of resource	Çop et al.,(2021)		
Hierarchy of effects	Martinez (2015)		
Win-win theory	Kasim (2009)		
Institutional theory	Chung and Parker(2008)		
Agency theory	Pereira-Moliner et al.,(2015)		
Legitimacy theory	Grosbois and Fenell(2022)		

4.2 CONTEXT

In the TCM framework, context refers to the geographical setting and sampling frame used for the study [51]. In this review, we have used two contexts, countries and population (see Table 4). Most of the environmental strategies in hotel industry research have been carried out in developed countries, with maximum research based in Spain, the USA, Hong Kong, Taiwan, Malaysia, and China. Developed countries contribute to 58% of the ESHI literature. Asian countries dominate the ESHI research landscape by covering approximately 44% studies. African countries contribute only 2% of the literature, providing scope for future research to focus on this part of the world.

As regards population, 53.57% of the ESHI literature consists of managers as the sample. While 28.57% of the literature consists of customers as a sample, the share of the multilevel sample comprising managers and customers, owners and managers, top management and employees stands at 9.52%. In comparison to managers and customers, the share of employees, directors, students, and experts is very limited.

Context	Number articles	of	percentage articles	of	Context	Number of articles	Percentage of articles
Countries					Countries (cont)		
Spain	17		17.89		UK	2	1.86
US	9		9.47		Balearic Island	1	0.93
Malaysia	8		8.42		Brazil	1	0.93
India	7		7.37		Kazakhstan	1	0.93

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China	7	7.37	Egypt	1	0.93
Hongkong	5	5.26	Poland	1	0.93
Taiwan	5	5.26	Australia	1	0.93
Pakistan	3	3.16	Bangladesh	1	0.93
Canada	2	1.86	Austria	1	0.93
Turkey	2	1.86	France	1	0.93
Singapore	2	1.86	Uganda	1	0.93
Greece	2	1.86	Sweden	1	0.93
Dubai	2	1.86	Slovenia	1	0.93
Jordan	2	1.86	Botswana	1	0.93
Mexico	2	1.86	Dominican Republic	1	0.93
Romania	2	1.86	Total	93 ^A	100
Population			Population(contd)		
Managers	48	55.68	Directors	2	2.27
Customers	24	27.27	Experts	1	1.14
Multilevel	8	9.09	Students	1	1.14
Employees	3	3.41	Total	88	100

4.3 METHOD

In the TCM approach, the method relates to the research technique and methods of analysis utilized by researchers. We reviewed 99 research documents to find out the contribution of different research techniques and analysis methods in the ESHI literature. We observe that most of the ESHI researchers have adopted a quantitative research approach with a share of 62.62%. The adoption of the qualitative research approach lags far behind the quantitative research approach, with a share of 17.17% (see Table 5). The contribution of mixed-method studies in the literature is even less, with a share of 4.83%. Only 2% studies adopted an experimental research approach. And 2% studies are conceptual in nature. Only one study is based on longitudinal data; the rest of the studies are cross-sectional.

Most quantitative studies based on primary data use structural equation modelling as a method of analysis. Other frequently used techniques of quantitative analysis are: regression, t-test, ANOVA, MANOVA, MANCOVA, clustering, K-means, correlation, and data envelopment analysis (see Table 6). The most frequently used qualitative ESHI analysis techniques are thematic analysis, importance-performance analysis, DEMATEL and FUZZY TOPSIS, post-hoc analysis, SWARA, TISM, and force field analysis.

Table 5 RESEARCH TECHNIQUES

Research Technique	Number of articles	Percentage of articles			
Primary data(n=84)					
Quantitative	62	62.62			
Mixed-method	3	4.83			
Qualitative	17	17.17			
Experiment	2	2.02			
Secondary data (n=13)	13	13.13			
Conceptual	2	2.02			
Total	99	100			

Table 6 MOSTLY USED METHODS OF ANALYSIS

Structural equation modelling Pereira-Moliner et al,(2015); Kuo et al.(20 et al,(2022); Martinez et al,(2019); Sadom e	Exemplary papers		
Kang and Atkinson(2019); Pham et Tanford et al,(2020); Salmones et al,(2021 et al,(2023); López-Gamero et al,(2023);	et al,(2022); al,(2018);		

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Panel-regression	Alonso-Almeida and Rodríguez-Antón(2011); Rivera		
	and Roeschmann(2019; Loannidis et al,(2021)		
Logistic regression	Valdivieso(2019); Jiang et al,(2023)		
Heckman-spatial model	Maté-Sánchez-Val and Teruel-Gutierrez(2022		
Linear regression	Inoue and Lee(2011);Cavero-Rubio and Amorós-		
	Martínez(2020); Marco-Lajara et al,(2022)		
Importance-performance analysis	Cvelbar and Dwyer(2013)		
Total Interpretive Structural	Singh et al,(2023)		
Modelling-Polarity			
ANOVA	Carmona-Moreno et al,(2004); Segarra-Oña et		
	al,(2012);Chan (2013);López-Gamero et al,(2016)		
Decision-making trail and evaluation	Horng etal,(2018)		
laboratory			
Content Analysis	Hseih(2012); Heung and Pun(2013); Ettinger at		
	al,(2018);		
Data Envelopment Analysis	Ramanathan et al,(2016)		
Fuzzy-set qualitative comparative	Kusa et al,(2023)		
analysis			
Fuzzy TOPSIS	Sari and Suslllu		
Thematic analysis	Sajjad et al,(2018)		
ANCOVA	Sahin et al,(2019)		
MANCOVA	Sahin et al,(2019)		

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Figure 3. An integrative view of findings from ADO and TCM framework

Theories

Resource-based view Agency theory
Natural-Resource Based View Legitimacy theory
Stakeholder Conservation of resource
Stimulus-organism-response Win-win
Social exchange Organizational change

Context					
(Population				
Spain	China	Botswana	Customers		
Malaysia	Egypt	Poland	Managers		
Mexico	Bangladesh	UK	Experts		
Taiwan	Australia	Canada	Employees		
USA	Dubai	Austria	Directors		

France

Conceptual

Pakistan Poland

Empirical Quantitative

structural equation modelling, regression (linear, multivariate, panel, probit, ordered logistic)

Empirical Qualitative

semi-structured interviews, in-depth interview, focusgroup interview, case study, force field analysis, stepwise weight assessment ratio analysis, thematic analysis

Mixed-method Content analysis

Antecedents

Internal

Financial resources

Physical resources

Experiential resources
Organizational capabilities
Shared vision
Relationship building
Green leadership
Organizational culture
Technology sensing
Readiness to change
Employee pro-environment
behaviour
Hotel size
Chain affiliation

External

Environmental regulation
Location
Stakeholder pressure
Close political ties
Social environment
Legal environment
Political environment

Decisions

Indicators of presence of environmental strategies

Environmental strategies
Environment marketing strategies
Environment certification
Green innovation performance
Environmental policy and training
Green advertising
Environmental knowledge strategy
Green team resilience
Green work engagement
Environment management practices
Waste management practices
Cause-related marketing

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5. FUTURE RESEARCH DIRECTIONS

In the previous sections we discussed the review findings on the basis of ADO and TCM framework. This section presents the gaps identified from the review of 99 articles. On the basis of the identified gaps, we propose a research agenda using the frameworks of ADO and TCM. Future researchers can focus on the identified research questions to increase the understanding of ESHI literature. Tables 7 and 8 present the summary of research gaps using Miles' (2017) taxonomy.

Table 7 FUTURE RESEARCH DIRECTIONS BASED ON ADO FRAMEWORK

	Gap area	Pertinent Research Questions
Antecedents	Implication of leader characteristics for environmental strategies	RQ1: How do different leader characteristics and styles influence implementation of environmental strategies?
Decision	Knowledge dimensions of environmental strategy	RQ1: How does an organization craft environmental knowledge strategy? RQ2: Can knowledge strategy act as antecedent of environmental strategies?
Outcomes	The implication for environment management for human resource management The implication of ESHI on organizational agility and innovation	RQ1: Does environment management work as a key capability for human resource management? RQ2: How does implementation of environmental strategies impact organizational agility and innovation?

Table 8	SUGGESTED FUTURE TCM PA	ATHWAYS TO AN	ISWER RESEARCH QUESTIONS
	Gap area	Type of gap	Research objectives
Theory	No specific theory for the impact of leader characteristics on environmental strategies	Theoretical	RO1: To study and develop leadership theories through the lens of environmental sustainability.
	No specific theory concerning role of environmental management as capability for human resource management and innovation	Theoretical	RO2: To analyse resource theories focusing on environmental management as a capability for human resource management and innovation.
Context	Limited studies in African and south American region	Population	RO1: To study the implementation of environmental strategies in hotel industry in African and south American region.
Methods	Need for longitudinal studies to validate the findings of cross-sectional studies	Methodological	RO1: To deploy longitudinal research design to affirm and validate the relationships between antecedents-environmental
	Need for more mixed-method and experimental studies	Methodological	strategies-outcomes RO2: To deploy experimental techniques to analyse the environmental strategy dimensions, antecedents and outcomes.

International Journal of Environmental Sciences ISSN: 2229-7359

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6. CONCLUSION

Integration of environmental strategies in hotel industries is driven by both internal and external factors. Internal antecedents include physical, financial and experiential resources, organizational capabilities, shared vision, green leadership, technological sensing, readiness to change, hotel size, chain affiliation and employee-pro environment behaviour. External antecedents of adoption of environmental strategies include environmental regulation, stakeholder pressure, location, close political ties, social environment, political environment and legal environment. Presence of environmental strategies is indicated by environmental marketing strategies, environmental strategies, environmental certification, green innovation, environmental policy and training, performance, green advertising, environmental knowledge strategy, green team resilience, green work engagement, environment management practices, waste management practices and cause-related marketing. The implementation of environmental strategies results in enhanced environmental performance and positive image among stakeholders causing enhanced competitive advantage and financial performance.

7. PRACTICAL IMPLICATIONS

This review article has significant managerial implications. First, it provides holistic view of the various processes that interact together for implementation of environmental strategies. Therefore, managers can use this study to design the support system that can act as a predecessor for the implementation of these strategies. Second, the study provides a detailed outline of the positive outcomes associated with pursuing these strategies and processes and variables that can help in achieving maximum gains from implementation of environmental strategies.

The study highlights the importance of government support for financial and technical resources especially for small and medium size hotels and regulatory guidelines regarding consumption of key resources and emission in environmental behaviour of hotels. These findings provide significant insights for the policymakers and governing bodies.

The study further highlights key role hotel industry plays in environment friendly behaviour of individual hotels. Further customers, employees, investors, environmental NGOs are the key stakeholders that are found to be the key forces for the implementation of environmental strategies. Drawing on stakeholder theory, these stakeholders can be further sensitised to push forward the cause of environment protection.

8. FUTURE SCOPE AND LIMITATIONS

This study covers articles from both Scopus and Web of Science database and provides comprehensive review of environmental strategies in hotel industry literature. Our review is the first to be conducted using SPAR 4 Protocol. In this review we have included Scopus and Web of Science (SSCI index) journals having an impact factor of more than 1. The purpose of choosing the selected journals was to ensure quality, still we recognize that some articles related to the environmental strategies and its various dimensions were relevant and left out. Other reviews dedicated to the theories, antecedents and outcomes in ESHI literature may relax this criterion and increase the breadth of journal coverage.

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