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From Knowledge and Digital Capability to Sustainable Action: The Mediating Role of Managerial Intention in Hotels' Sustainable Collaborative Consumption Adoption

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ABSTRACT

This study examines how hotel managers' digital literacy, sustainability knowledge, and environmental values are translated into sustainable collaborative consumption adoption through managerial intention. Drawing primarily on upper echelons theory and behavioral-intention logic, the study analyses a cleaned cross-sectional dataset of 576 hotel owners and managers in Pakistan using partial least squares structural equation modelling. Digital literacy ($\beta = .293, p < .001$), sustainability knowledge ($\beta = .205, p < .001$), and environmental values ($\beta = .408, p < .001$) were positively associated with sustainable collaborative consumption intention. Intention was positively associated with adoption behaviour ($\beta = .375, p < .001$). Significant indirect effects were found for digital literacy ($\beta = .110$), sustainability knowledge ($\beta = .077$), and environmental values ($\beta = .153$), while the corresponding direct effects on adoption were non-significant, indicating indirect-only statistical mediation. The findings show that managerial capabilities, knowledge, and environmental commitment become organizationally consequential when converted into an explicit intention to implement collaborative sustainability practices. Hotels and tourism authorities should connect digital training and sustainability education with concrete implementation plans. The cross-sectional, self-reported, single-informant design limits causal inference and may involve common-method and key-informant bias. Longitudinal, multi-source, multilevel, and cross-country studies should test temporal ordering and organizational boundary conditions. The study reframes sustainable collaborative consumption from a predominantly consumer-side phenomenon to a managerial organizational-adoption problem.

Keywords: Collaborative Consumption, Sustainable Hospitality, Digital Literacy, Sustainability Knowledge, Environmental Values, Managerial Intention Analysis.

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INTRODUCTION

Hotels are being asked to decouple service quality and business growth from resource-intensive operating models. Energy, water, food, furnishings, amenities, logistics, and guest services all create opportunities for resource efficiency, reuse, shared access, and collaboration, yet the organizational move from conventional linear practices to more circular and collaborative arrangements remains uneven. Recent hospitality research shows that sustainability implementation is shaped not simply by the availability of technologies or formal environmental policies, but by managerial commitment, knowledge, organizational learning, digital capability, and the ability to coordinate practices across internal and external actors (Bekele *et al.*, 2024; Guerra-Lombardi *et al.*, 2024; Kim *et al.*, 2025). The most recent synthesis of circular practices in hotels similarly concludes that leadership, staff capability, resources, stakeholder collaboration, and digital tools are central to circular transition rather than peripheral implementation details (Gohoungodji & Chembessi, 2026). These developments make the managerial foundations of sustainable adoption an increasingly consequential research problem.

Collaborative consumption is relevant to this problem because it changes the logic through which resources are accessed, coordinated, used, and recirculated. The literature has defined collaborative consumption around coordinated access to, acquisition of, or distribution of resources without necessarily requiring conventional ownership (Belk, 2014; Benoit *et al.*, 2017). In hospitality and tourism, however, research on the sharing economy and collaborative consumption has been dominated by platforms, particularly Airbnb, and by questions concerning consumer participation, trust, value, regulation, and market disruption (Kuhzady *et al.*, 2021). Reviews of the wider collaborative-consumption literature reach a similar conclusion: demand-side and co-consumption perspectives are much more developed than supply-side and co-production perspectives, even though organizational actors determine whether collaborative practices are actually designed and implemented (Wei *et al.*, 2021). Treating hotels only as incumbents affected by sharing platforms therefore leaves an important part of the phenomenon underexamined. Hotels can also be organizational adopters of collaborative resource arrangements by implementing shared procurement, reusing and redistributing, digital coordination, local partnerships, resource-sharing systems, and service models that reduce idle capacity and/or extend the life of resources.

The framing of the collaborative consumption sustainability promise is also an organizational perspective that needs attention. Environmental benefits do not necessarily occur from sharing or access. In the sharing economy, there are competing economic, community, and platform logics, and its environmental outcomes depend on how the resources are sourced, used, substituted, and governed (Acquier *et al.*, 2017). Faraji *et al.* (2024) similarly demonstrate that sustainability claims of the sharing economy are not inherent in the notion of sharing. The relevance of the collaborative consumption approach for a hotel is thus less the question of whether the collaborative consumption approach per se is sustainable, and more whether decision-makers choose forms of collaboration that likely lead to more sustainable, better use and reuse of resources, responsible access, and coordination. This paper uses the term sustainable collaborative consumption to denote such organizational practices rather than to equate all sharing-economy activity with sustainability.

A second limitation in the literature concerns the unit of analysis. Much of the established evidence explains why consumers intend to participate in collaborative consumption. Meta-analytic evidence confirms the usefulness of intention-based behavioral models for consumer collaborative consumption (Ashaduzzaman *et al.*, 2022), and studies continue to extend these models with environmental, moral, technological, and social drivers. Yet organizational adoption in hotels involves a different decision architecture. Hotel owners and senior managers must assess operational feasibility, resource commitments, compatibility with service standards, technological requirements, and potential stakeholder consequences. Their personal cognitive bases and values can therefore become organizationally consequential. Upper echelons theory provides a useful foundation for this shift because it argues that strategic choices partly reflect executives' experiences, cognitive frames, and values (Hambrick & Mason, 1984). Evidence from hotels supports this logic: senior executives' attitudes, education, experience, and environmental exposure are associated with differences in sustainability practices (Heenipellage *et al.*, 2022), while recent work on small hotels integrates upper-echelons reasoning with digital transformation to explain how sustainability initiatives are converted into performance (Lescop *et al.*, 2025).

The present study focuses on three managerial attributes that capture distinct but complementary micro foundations of sustainable adoption. Digital literacy represents the decision-maker's ability to use and evaluate digital information and tools. This matters because collaborative arrangements increasingly depend on platform connectivity, digital communication, information exchange, booking and payment infrastructure, and data-supported coordination. Hotel digital capability research shows that digital competence is multidimensional and strategically relevant rather than merely a technical support function (Fan *et al.*, 2023). Sustainability knowledge is the understanding of environmental and resource-management practices that allows managers to identify options that are feasible and assess the implications of implementation. Environmental values reflect managers' motivational orientations about environmental protection and resource conservation. These are all features of capability, cognition, and motivation – managers might have all of these and still not act on sustainability issues.

This distinction motivates the paper's central mechanism: sustainable collaborative consumption intention. Behavioral intention is interpreted here in a very limited sense. The study does not purport to test the entire theory of planned behaviour, as the constructs that precede the three core components are not the 'canonical' attitude, subjective norm, or perceived behavioral control constructs. Rather, Ajzen's (1991) behavioral logic is applied to understanding the reason a created intention works as the proximal motivational commitment to facilitate the conversion of more distal managerial attributes into behavior. This matches up with recent hotel research. In addition to absorptive capacity, Khan (2026) suggests that hotel managers' behavioral intention plays a crucial role in the adoption of circular practices, and Husain *et al.* (2025) reveal that hotel managers' environmental attitudes indirectly shape the adoption of green practices through their behavioral intention. An emerging integrative review also highlights that there is still a gap between what managers envision and what they actually do in the path towards the circular economy and calls for a need to explain not only what managers envision but how those beliefs become implementation (Vaculčíková *et al.*, 2025).

Problem statement and purpose. Despite growing research on collaborative consumption, sharing platforms, and circular hospitality, the organizational decision process through which incumbent hotels adopt sustainable collaborative-consumption practices remains insufficiently explained. Existing work is weighted toward consumers and platform users, while hotel adoption requires managers to evaluate digital feasibility, sustainability options, resource commitments, and stakeholder consequences. A further problem is the intention-action gap: managerial capability, knowledge, or environmental concern may exist without being translated into implementation. Accordingly, the purpose of this study is to explain whether and how hotel managers' digital literacy, sustainability knowledge, and environmental values are associated with sustainable collaborative consumption adoption through managerial intention.

Study Objectives

The study has four objectives: (1) to examine the association between hotel managers' digital literacy and sustainable collaborative consumption intention; (2) to assess the association of sustainability knowledge and environmental values with that intention; (3) to determine whether sustainable collaborative consumption intention is associated with reported adoption behaviour; and (4) to test whether managerial intention statistically mediates the relationships between the three managerial antecedents and adoption behaviour.

Significance of the Study

The study is significant because it shifts collaborative-consumption research from a predominantly demand-side perspective toward the managerial micro foundations of organizational adoption in hotels. It also distinguishes capability (digital literacy), cognition (sustainability knowledge), and motivation (environmental values), and identifies intention as the mechanism through which these attributes become behaviorally focused. This provides a parsimonious explanation of why favorable managerial attributes may not translate directly into sustainable action and offers practical guidance for linking training, sustainability knowledge, and environmental commitment to concrete implementation decisions.

Contributions

The paper makes three contributions. First, it moves collaborative-consumption research upstream from consumer participation toward the managerial micro foundations of organizational provision and adoption. This responds to calls for more attention to the co-production and supply side of collaborative consumption (Wei *et al.*, 2021) and to recent hospitality research showing that circular transition depends on hotel managers' knowledge, technology, and implementation choices (Fonseca & Dias, 2025; Gohoungodji & Chembessi, 2026). Second, it integrates digital literacy, sustainability knowledge, and environmental values within an upper-echelons-informed model of sustainable action. This provides a clearer distinction between what managers can do, what they know, and what they value. Third, it identifies intention as a statistical transmission mechanism. The empirical pattern of significant indirect effects combined with non-significant direct effects indicates that these managerial attributes are associated with adoption primarily through intention rather than through independent direct paths. This finding refines the common assumption that favorable capabilities or values translate automatically into implementation and provides a more process-oriented explanation of sustainable collaborative consumption in hotels.

THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

Sustainable Collaborative Consumption as an Organizational Adoption Phenomenon

Collaborative consumption is conceptually adjacent to, but not identical with, the sharing economy, access-based consumption, and the circular economy. Belk (2014) emphasizes coordinated acquisition and distribution of resources, while Bardhi and Eckhardt (2012) distinguish access-based consumption from ownership. Benoit *et al.* (2017) add an actor-centered perspective in which collaborative consumption depends on the motives, activities, resources, and capabilities of participating actors. This framework is useful for an organizational hotel context because it directs attention away from the consumer alone. A hotel can serve as a resource provider, service organizer, or participant in a collaborative network, and its ability to do so depends on managerial choices and organizational capabilities.

For this study, sustainable collaborative consumption refers to the activities of hotels that encourage responsible sharing, re-use and re-distribution, open access, efficiency in the use of resources, digital facilitation of collaboration and cooperation with the tourism sector. These include coordinated reuse or redistribution of materials, shared procurement and logistics, partnerships to prolong the service life of materials, digital systems for shared services, and arrangements that provide access or sharing of materials instead of repeated acquisition. This definition excludes from the definition of collaborative consumption all environmental initiatives that do not qualify under the specific definition given above. An energy efficiency project that is done completely within a hotel, for example, is environmentally productive but not necessarily a collaborative project. A collaborative aspect comes into play if the coordination of resources/access, information and/or services influences the acquisition and use of resources.

The circular economy aims to keep resources in use and minimize waste by reusing, repairing, refurbishing, redistributing and recovering resources. Collaborative models can help achieve these objectives: they boost utilization rates or link actors that can share resources; but collaborative consumption is only one strand of a wider circular transition. A recent study on hotels highlights furniture-as-a-service, refurbishment, buy-back models, circular food systems and supply chain partnerships as viable pathways to a more circular approach (Chang *et al.*, 2025; Fonseca & Dias, 2025). The systematic review of Gohoungodji and Chembessi (2026) also reveals that circular hotel transitions involve four types of change: managerial, technological, institutional, and behavioral. The current research falls at this intersection by investigating managerial adoption of collaborative practices geared towards more sustainable resource use.

Managerial Micro Foundations: Upper Echelons and Intention as an Action Mechanism

The upper echelons theory assumes that, since managers interpret complex situations according to their bounded cognitive frames (Hambrick & Mason, 1984), organizational outcomes and strategic decisions are in part a function of the characteristics of powerful decision makers. Theory doesn't suggest that executives operate outside of the boundaries of the organization or

the environment. Instead, observable and psychological traits shape the information that managers notice, the information that they interpret as alternatives, and the strategic options they deem legitimate and feasible. This is particularly relevant with sustainability uptake in hotels where many of the actions required are discretionary, implementation-heavy, and require the commitment of senior management.

There is growing evidence of the relevance of managerial micro foundations in the hotel environment. As demonstrated by Heenipellage *et al.* (2022), environmental sustainability practices are influenced by senior hotel executives' attitudes, educational background, prior experience, and environmental exposure. Riva *et al.* (2021) find that managers' green knowledge contributes to environmental performance through green creativity. Husain *et al.* (2025) also show that managers' environmental attitude towards green-practice implementation is mediated by their intention. All these studies indicate that the problem of organizational sustainability is not only the result of external factors or available technology. In order for organizations to take steps towards sustainability, managers need to identify opportunities, understand, value, and commit to them.

The present model operationalizes this managerial micro foundation in three forms. Digital literacy reflects a capability-related cognitive base, sustainability knowledge reflects substantive environmental understanding, and environmental values reflect a motivational evaluative orientation. Their effects are expected to converge on sustainable collaborative consumption intention, defined as a manager's willingness and plan to implement relevant practices. Intention is thus not treated as a competing theory but as a proximal action mechanism. Ajzen (1991) conceptualizes intention as motivational readiness to perform a behaviour, and subsequent collaborative-consumption research consistently shows that intention is an important antecedent of participation or adoption (Ashaduzzaman *et al.*, 2022). For strategic organizational action, intention can be interpreted as the point at which distal managerial attributes become a commitment to allocate attention and initiate implementation.

Digital Literacy and Sustainable Collaborative Consumption Intention

Digital literacy concerns more than basic device use (Nawaz & Kundi, 2010). It includes the skills of accessing, assessing, producing, sharing, and organizing information using digital technologies (Bawden, 2001; Ng, 2012). Van Laar *et al.* (2017) also demonstrate how digital skills are increasingly related to information management, communication, collaboration, and problem-solving. These competences are especially important for collaborative consumption, as the present-day sharing and access models rely heavily on digital infrastructures that link actors, share information, coordinate availability, facilitate payment, and lower transaction costs. At the hotel level, digital literacy may change and redefine what managers see as feasible, as well as the possibilities for collaboration. Managers who are able to assess digital tools have a greater chance of coordinating with local suppliers, being able to join in with shared service networks, using online tools to redistribute underused resources, monitoring resource flows, and communicating sustainability efforts. Fan *et al.* (2023) define hotel digital capability as a strategic capacity composed of three aspects: basic dimension, integration dimension, application dimension, and optimization dimension. Recent research also corroborates the relationship between digital transformation and hotel environmental sustainability and sustainable business-model innovation (Bekele *et al.*, 2024), and the relationship between digital dynamic capabilities and ESG-related practices and performance in the hospitality sector is growing (Kim *et al.*, 2025). The results indicate that digital competence can help to decrease the cognition and operation gap between abstract collaborative ideas and concrete managerial alternatives. Upper-echelons reasoning reinforces this argument. A digitally literate manager is likely to see technologically based alternatives, assess the risks, and view the hotel as being able to be part of digitally coordinated collaboration. This should reinforce intention at an earlier stage than adoption. Therefore, the effect of the proposed relationship is motivational, not in the sense that the transfer of digital literacy means that implementation is guaranteed, but rather in the sense that digital literacy is perceived as manageable. Accordingly:

H₁. Digital literacy is positively associated with hotel managers' sustainable collaborative consumption intention.

Sustainability Knowledge and Sustainable Collaborative Consumption Intention

Sustainability knowledge refers to an understanding of environmental, economic, and social sustainability principles and of the operational practices through which these principles can be implemented. Measurement scholarship takes a wider perspective

on sustainability knowledge than environmental awareness, given that it includes the substantive linkages between resource use, ecological impacts, economics, and social systems (Zwickle *et al.*, 2014). In Hospitality, this knowledge encompasses the management of energy, water, and waste; waste minimization, reuse, green procurement, local procurement, resource efficiency, and the implications from circular in the operations of a hospitality business. Knowledge is important because sustainable collaborative consumption is often based on unconventional arrangements that are not apparent. A manager can be idealistic about sustainability but not know how to align resource sharing, reusing, or partnerships to enhance operations. This ambiguity can be mitigated through knowledge, so that managers can relate environmental issues to operational options. It can also help them to better understand the difference between substantive and symbolic practices, make estimates about the requirements for implementation, and articulate the reason for change to their employees and partners. This is confirmed by evidence from the hospitality sector. Filimonau *et al.* (2022) show that environmental knowledge contributes to pro-environmental attitudes and green-hotel patronage intentions among consumers, while Patwary *et al.* (2022) identify environmental knowledge as an important element in green-hotel intention processes. At the managerial level, Riva *et al.* (2021) find that green knowledge is linked to environmental performance through an intervening creative process.

More recent research is especially relevant to implementation. Hassanli and Williamson (2024) describe a sustainability knowledge-practice gap among small accommodation firms, showing that knowledge becomes consequential when embedded in product adaptation, stakeholder relations, and supportive institutional arrangements. Khan (2026) finds that absorptive capacity, which involves acquiring and using knowledge, complements behavioral intention in explaining European hotels' adoption of circular practices. These findings imply that knowledge should strengthen intention by making sustainability opportunities cognitively available and operationally intelligible, even though intention and additional organizational capabilities are still needed for implementation. Thus:

H₂. Sustainability knowledge is positively associated with hotel managers' sustainable collaborative consumption intention.

Environmental Values and Sustainable Collaborative Consumption Intention

Capabilities and knowledge explain whether managers can understand and evaluate sustainable options, but they do not fully explain why those options should be prioritized. Environmental values provide this motivational component. Values are relatively enduring beliefs about desirable states or outcomes that guide attention and evaluation. Stern and Dietz (1994) argue that environmental concern has a value basis because environmental consequences are interpreted in relation to what individuals consider important. In organizational settings, such values can shape which strategic issues managers regard as worthy of scarce time, financial resources, and political attention. For the hotel decision makers, the values of the environment should strengthen the perception of the desirability of implementing the conservation of resources, their reuse, collaboration, and reduction of the ecological impact. Such managers tend to see sustainable collaborative consumption as being in line with the way the hotel should work, rather than just a compliance exercise. This congruence of value should be particularly significant where returns are not certain, or the benefits of actions are not financial. In fact, upper echelons theory suggests just this kind of influence: executives' values filter out interpretations and priorities for strategic options (Hambrick & Mason, 1984). Qualitative evidence with hotel executives indicates that there is a link between environmental attitudes and early environmental exposure to increased sustainability practices (Heenipellage *et al.*, 2022). Husain *et al.* (2025) also reveal that the value-based commitment of managers has a closer link with the implementation process, as it is through intention.

Digital literacy and knowledge can also be accompanied by environmental values. A manager may be 'digital' and know about sustainability but not see environmental improvement as a strategic priority. However, "wanting to do something about the environment" can lead to "aspiration but not action" if there is not enough competence. The paper therefore treats environmental values as a distinct motivational antecedent rather than as a proxy for knowledge or capability. Because managers who place greater importance on environmental protection should be more willing to commit their hotels to resource-sharing and circular practices, the following hypothesis is proposed:

H₃. Environmental values are positively associated with hotel managers' sustainable collaborative consumption intention.

Sustainable Collaborative Consumption Intention and Adoption Behaviour

Intention represents a manager's willingness and plan to perform a behaviour, whereas adoption behaviour refers to observable implementation. The distinction is theoretically important because sustainable hospitality research frequently reports favorable attitudes or intentions without equivalent changes in operating routines. Ajzen (1991) positions intention as the immediate motivational antecedent of behaviour but also recognizes that behaviour depends on actual control. Meta-analytic collaborative-consumption research confirms a robust intention-behaviour logic across consumer contexts, while also showing meaningful heterogeneity across settings (Ashaduzzaman *et al.*, 2022). Recent hotel circular-economy research makes this distinction more salient. Khan (2026) reports that administrators' behavioral intention contributes to circular-practice adoption, while Vaculčíková *et al.* (2025) describe the hospitality sector as characterized by circular intentions that often yield only minimal action. The latter review suggests that financial, structural, behavioral, and cognitive barriers can allow managers to rationalize limited implementation. The implication is not that intention is unimportant; rather, strong intention is necessary but not sufficient. A hotel manager who intends to adopt sustainable collaborative consumption is more likely to search for partners, allocate resources, change procedures, or introduce digital coordination than a manager who has not formed such commitment.

In the present study, adoption behaviour captures the reported implementation of sustainable and collaborative services, resource-sharing arrangements, responsible use of facilities and resources, and related practices. Because stronger managerial intention should increase the likelihood that these actions are initiated and maintained, the following hypothesis is proposed:

H4. Sustainable collaborative consumption intention is positively associated with sustainable collaborative consumption adoption behaviour.

The Mediating Role of Managerial Intention

The preceding arguments imply a process rather than a set of independent direct effects. Digital literacy, sustainability knowledge, and environmental values are relatively distal managerial attributes. They shape what managers can do, what they understand, and what they consider desirable. Adoption behaviour, by contrast, requires a decision to mobilize these attributes toward a particular organizational action. Intention is therefore expected to carry their effects by converting general capability and motivation into a specific commitment to implement sustainable collaborative consumption. For digital literacy, the mediation mechanism is one of actionable feasibility. Digital competence expands managers' perceived opportunity set and lowers the cognitive cost of coordinating collaborative arrangements, but it does not compel the hotel to use those capabilities for sustainability. A digitally capable manager could deploy the same competence for revenue management, marketing, or guest personalization. Digital literacy should affect sustainable collaborative adoption to the extent that it becomes attached to an explicit sustainability-oriented intention. This reasoning predicts an indirect pathway from digital literacy through intention to adoption.

For sustainability knowledge, the mechanism is one of problem-solution recognition. Knowledge helps managers identify why resource waste matters and which collaborative arrangements may address it, but knowledge can remain inert. Hassanli and Williamson (2024) demonstrate the broader problem of a knowledge-practice gap in accommodation businesses. In the present model, intention is the stage at which knowledge becomes directional: managers move from understanding sustainability to planning an organizational response. A significant indirect effect would therefore indicate that knowledge is associated with behaviour because it strengthens this commitment rather than because knowledge directly produces implementation. For environmental values, the mechanism is motivational prioritization. Managers who value environmental protection are likely to interpret collaborative resource use as normatively desirable, but values remain broad and can be expressed in many forms. Sustainable collaborative consumption intention specifies the focal behaviour through which those values are enacted. This logic is consistent with evidence that hotel managers' environmental attitudes influence green-practice implementation through behavioral intention (Husain *et al.*, 2025). Accordingly, mediation is expected across all three antecedents. Following contemporary mediation reasoning, the significance of indirect effects is assessed directly rather than relying on the older requirement that a total effect must first be statistically significant (Zhao *et al.*, 2010; Nitzl *et al.*, 2016).

H5. Sustainable collaborative consumption intention mediates the positive association between digital literacy and sustainable collaborative consumption adoption behaviour.

H6. Sustainable collaborative consumption intention mediates the positive association between sustainability knowledge and sustainable collaborative consumption adoption behaviour.

H7. Sustainable collaborative consumption intention mediates the positive association between environmental values and sustainable collaborative consumption adoption behaviour.

METHODS AND MATERIALS

Research Design, Context, and Analytical Sample

The original research design was a quantitative, cross-sectional questionnaire study focused on hotel owners, general managers, operations managers, and senior decision-makers in Pakistan. The questionnaire screened respondents for managerial involvement in hotel decision-making and for participation in operational, sustainability, technology, partnership, or service-innovation decisions. The instrument used a five-point agreement scale ranging from 1 (strongly disagree) to 5 (strongly agree). The present paper draws only on the five constructs required for the focused mediation model: digital literacy, sustainability knowledge, environmental values, sustainable collaborative consumption intention, and sustainable collaborative consumption adoption behaviour. Response-pattern screening identified six records with invariant or mechanically patterned responding, leaving 576 cases in the cleaned analytical file. The final sample was composed primarily of general managers (51.39%) and operations managers (31.60%), with owners and senior managers each representing 8.51%. Approximately 61.12% of respondents reported at least six years of hospitality experience. Hotels were represented across Punjab, Khyber Pakhtunkhwa, Sindh, Balochistan, Gilgit-Baltistan, and AJK/Islamabad Capital Territory. Three-star properties were the largest hotel-category group (25.87%), and 63.19% of properties had fewer than 50 rooms. Digital-platform use was reported for 70.66% of hotels, while 46.01% reported that sustainability-related practices were currently implemented.

Measures

Digital literacy was defined as managers' perceived ability to use digital platforms, online information, and digital tools for sustainable and collaborative hotel practices. Its conceptual basis drew on established digital-literacy research emphasizing information access, evaluation, communication, and technology use (Bawden, 2001; Ng, 2012; van Laar *et al.*, 2017) and was contextualized to hotel operations in light of recent hotel digital-capability research (Fan *et al.*, 2023). Sustainability knowledge captured managers' understanding of sustainability issues and hotel practices related to energy, water, waste, reuse, responsible resource use, and related operational choices. The adaptation drew on sustainability-knowledge measurement work (Zwickle *et al.*, 2014) and hospitality-specific green-knowledge research (Riva *et al.*, 2021). Environmental values represented the importance managers attached to environmental protection, resource conservation, and reducing hotel ecological impact. The construct was grounded on the value basis of environmental concern (Stern & Dietz, 1994) and reframed at the managerial level. Sustainable collaborative consumption intention captured respondents' willingness and plans to adopt relevant practices, consistent with Ajzen's (1991) conceptualization of behavioral intention. Sustainable collaborative consumption adoption behaviour captured reported implementation of practices involving collaborative services, digital coordination, and responsible or shared use of hotel facilities and resources. All measures used five-point Likert-type response categories.

Analytical Procedure

The focused model was evaluated with partial least squares structural equation modelling (PLS-SEM). Consistent with established PLS-SEM guidance, the reflective measurement model was assessed using indicator loadings, internal-consistency reliability, convergent validity, and discriminant validity (Fornell & Larcker, 1981; Henseler *et al.*, 2015; Hair *et al.*, 2019, 2022). Structural relationships were evaluated using path coefficients, explained variance (R^2), and bootstrap confidence intervals. Mediation was assessed from the significance of the bootstrapped indirect effects rather than requiring a significant total effect, consistent with contemporary mediation guidance (Nitzl *et al.*, 2016; Zhao *et al.*, 2010).

RESULTS AND FINDINGS

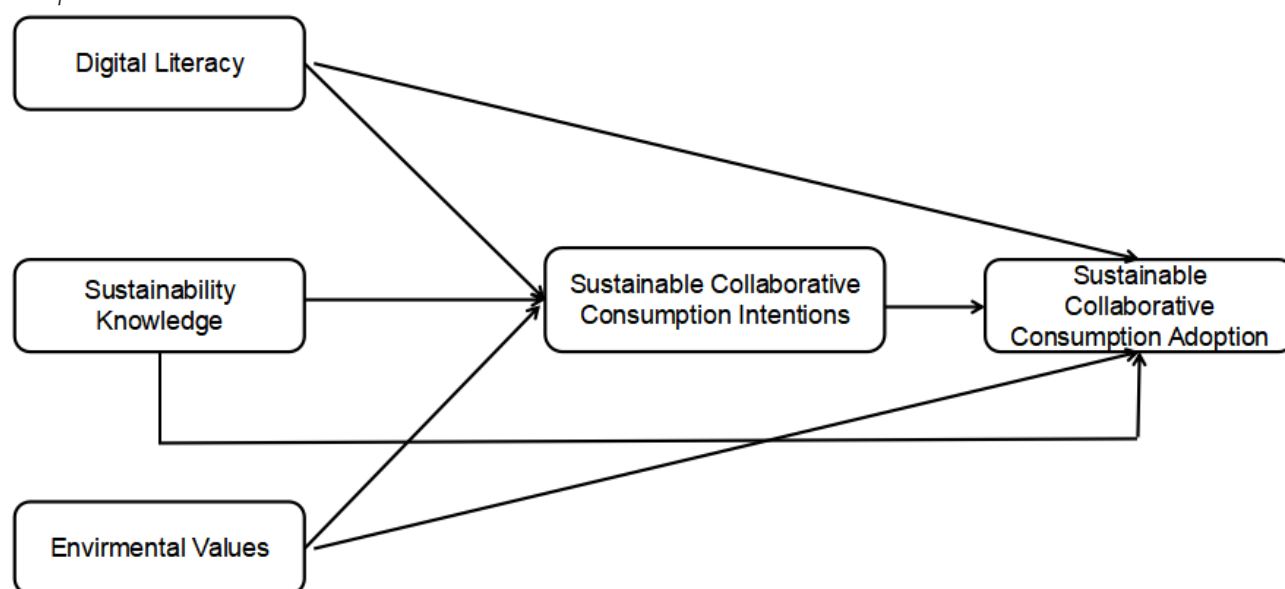
Table 1

Construct Operationalization

Construct	Final Items	Primary Adaptation Basis
Digital literacy (DL)	DL1–DL3	Bawden (2001); Ng (2012); van Laar <i>et al.</i> (2017); Fan <i>et al.</i> (2023)
Sustainability knowledge (SK)	SK1–SK3	Zwickle <i>et al.</i> (2014); Riva <i>et al.</i> (2021)
Environmental values (EV)	EV1–EV3	Stern and Dietz (1994); Heenipellage <i>et al.</i> (2022)
SCC intention (SCCI)	SCCI1–SCCI3	Ajzen (1991); Ashaduzzaman <i>et al.</i> (2022)
SCC adoption behaviour (SCCB)	SCCB1–SCCB3	Benoit <i>et al.</i> (2017); Wei <i>et al.</i> (2021)

Figure 1

Conceptual Model



Descriptive Statistics and Measurement Model

The five focal constructs displayed means close to the midpoint of the response scale. Sustainability knowledge had the highest mean ($M = 3.038$, $SD = 1.056$), followed by environmental values ($M = 3.030$, $SD = 1.058$), adoption behaviour ($M = 2.995$, $SD = 1.056$), digital literacy ($M = 2.968$, $SD = 1.069$), and sustainable collaborative consumption intention ($M = 2.930$, $SD = 1.053$). The relatively broad standard deviations and full 1–5 ranges indicated meaningful heterogeneity rather than ceiling effects.

The reflective measurement model met the adopted reliability and convergent-validity criteria. All 15 retained indicators loaded above .85, with loadings ranging from .848 to .907. Cronbach's alpha ranged from .841 to .866 across the five constructs, rho_a from .852 to .871, and composite reliability from .904 to .918. AVE values ranged from .758 to .788, indicating that each construct explained substantially more than half of the variance in its indicators. No indicator deletion was required in the focused model.

Table 2

Descriptive Statistics, Reliability, and Convergent Validity

Construct	M	SD	α	rho_a	CR	AVE
Digital Literacy	2.968	1.069	.855	.857	.912	.776
Sustainability Knowledge	3.038	1.056	.841	.852	.904	.758
Environmental Values	3.030	1.058	.857	.857	.913	.778
SCC Intention	2.930	1.053	.866	.871	.918	.788
SCC Adoption Behaviour	2.995	1.056	.863	.865	.916	.785

Table 3

Indicator Loadings in the Focused Measurement Model

Construct	Indicator	Outer loading	Decision
DL	DL1	.894	Retained
DL	DL2	.882	Retained
DL	DL3	.867	Retained
SK	SK1	.899	Retained
SK	SK2	.860	Retained
SK	SK3	.853	Retained
EV	EV1	.892	Retained
EV	EV2	.879	Retained
EV	EV3	.874	Retained
SCCI	SCCI1	.907	Retained
SCCI	SCCI2	.899	Retained
SCCI	SCCI3	.856	Retained
SCCB	SCCB1	.900	Retained
SCCB	SCCB2	.890	Retained
SCCB	SCCB3	.867	Retained

Discriminant validity was assessed using both the Fornell–Larcker criterion and HTMT. The square root of AVE for each construct exceeded its correlations with the other constructs. The highest interconstruct correlation was between environmental values and intention ($r = .662$), which remained below the square root of AVE for both constructs. HTMT values ranged from .270 to .766 across the five-construct model. The highest value, again between environmental values and intention, remained below the conservative .85 threshold. These results indicate that the model distinguishes digital literacy, sustainability knowledge, environmental values, intention, and adoption behaviour empirically despite their theoretically expected associations.

Table 4

Correlations, Fornell–Larcker values, and HTMT diagnostics

	DL	SK	EV	SCCI	SCCB
DL	.881				
SK	.514 (.604)	.871			
EV	.528 (.616)	.481 (.563)	.882		
SCCI	.614 (.712)	.553 (.644)	.662 (.766)	.888	
SCCB	.272 (.316)	.232 (.270)	.278 (.324)	.406 (.467)	.886

Note. Diagonal values are square roots of AVE. Values below the diagonal are latent-variable correlations; HTMT values are shown in parentheses.

Structural Relationships

The three managerial antecedents jointly explained 56.2% of the variance in sustainable collaborative consumption intention ($R^2 = .562$). Environmental values had the strongest association with intention ($\beta = .408$, $p < .001$), followed by digital literacy ($\beta = .293$, $p < .001$) and sustainability knowledge ($\beta = .205$, $p < .001$). Their bootstrap confidence intervals excluded zero. H_1 , H_2 , and H_3 were therefore supported. The relative magnitude of the coefficients suggests that value-based motivation was the strongest of the three proximal managerial foundations in this model, although capability and knowledge made independent contributions after the other predictors were controlled.

Sustainable collaborative consumption intention was positively associated with adoption behaviour ($\beta = .375$, $p < .001$), supporting H_4 . The outcome equation, which also retained direct paths from digital literacy, sustainability knowledge, and environmental values, explained 16.5% of the variance in adoption behaviour ($R^2 = .165$). The lower explanatory power for adoption compared with intention is theoretically plausible because organizational behaviour depends on additional resources, routines, constraints, and implementation conditions that are not represented in this focused paper. Importantly, none of the three antecedents had a statistically significant direct association with adoption behaviour after intention was included. Digital literacy had $\beta = .036$ ($p = .482$), sustainability knowledge $\beta \approx .000$ ($p = .969$), and environmental values $\beta = .011$ ($p = .841$).

Table 5

Structural Path Estimates

Hypotheses/path	β	Bootstrap SE	95% CI	p	Decision
H1: DL $\rightarrow$ SCCI	.293	.034	[.226, .357]	< .001	Supported
H2: SK $\rightarrow$ SCCI	.205	.035	[.138, .276]	< .001	Supported
H3: EV $\rightarrow$ SCCI	.408	.035	[.339, .476]	< .001	Supported
H4: SCCI $\rightarrow$ SCCB	.375	.057	[.265, .487]	< .001	Supported
DL $\rightarrow$ SCCB (direct)	.036	.050	[-.060, .134]	.482	Not significant
SK $\rightarrow$ SCCB (direct)	-.000	.047	[-.094, .089]	.969	Not significant
EV $\rightarrow$ SCCB (direct)	.011	.054	[-.096, .119]	.841	Not significant

Mediation Analysis

All three hypothesized indirect effects were positive and statistically significant. The indirect association between digital literacy and adoption behaviour through intention was $\beta = .110$, with a 95% bootstrap confidence interval from .070 to .155. H_5 was therefore supported. Sustainability knowledge also had a significant indirect association with adoption through intention ($\beta = .077$, 95% CI [.045, .116]), supporting H_6 . The largest indirect effect was observed for environmental values ($\beta = .153$, 95% CI [.104, .208]), supporting H_7 . Because each indirect effect was statistically significant while the corresponding direct effect on adoption behaviour was non-significant, the results are consistent with what Zhao *et al.* (2010) describe as indirect-only mediation. Rather, they were associated with behaviour via intention.

The result should not be considered as evidence of temporal causality as the data are cross-sectional; it is evidence of a mediation pattern supporting the proposed process model. The total effects also give us an idea of why it is important to directly test the indirect path when working with the significance of the total effect. The total effect of digital literacy was positive ($\beta = .146$, $p = .004$) and the total effect of environmental values was positive ($\beta = .165$, $p < .001$). The total effect for sustainability knowledge was not statistically significant ($\beta = .077$, $p = .121$), although the indirect effect was statistically significant. This pattern is allowed in contemporary mediation methodology because sampling variation and/or small residual direct effects can mask the total association even if there is an indirect path (Nitzl *et al.*, 2016; Zhao *et al.*, 2010).

Table 6

Bootstrapped Mediation Results

Hypothesis	Indirect path	Indirect β	95% CI	Direct β	Direct p	Mediation Conclusion
H ₅	DL → SCCI → SCCB	.110	[.070, .155]	.036	.482	Indirect-only; supported
H ₆	SK → SCCI → SCCB	.077	[.045, .116]	-.000	.969	Indirect-only; supported
H ₇	EV → SCCI → SCCB	.153	[.104, .208]	.011	.841	Indirect-only; supported

DISCUSSION

This study examined a focused question within sustainable hospitality: how do managerial digital literacy, sustainability knowledge, and environmental values become organizational collaborative-consumption action? The findings support a process in which all three antecedents are positively associated with sustainable collaborative consumption intention, and intention in turn is associated with adoption behaviour. More importantly, the three indirect effects are significant while the residual direct effects on adoption are not. The empirical pattern therefore shifts attention from a simple inventory of antecedents toward the mechanism through which managerial attributes become organizationally consequential. Environmental values emerged as the strongest predictor of intention and generated the largest indirect association with adoption. This result is consistent with upper-echelons reasoning because strategic sustainability choices require managers to assign importance to environmental consequences before scarce attention and resources are committed (Hambrick & Mason, 1984). It also complements hotel-specific evidence that senior executives' environmental attitudes and exposure shape sustainability practices (Heenipellage *et al.*, 2022). The present finding goes further by locating intention between values and adoption. Environmental values were not significantly associated with adoption once intention was included, suggesting that broad ecological commitment matters to the extent that it is translated into a specific plan to implement sustainable collaborative practices. This distinction is useful because hotels can display environmental concern symbolically without changing resource-use arrangements. When values are behaviorally focused, then the mediation result shows that values become strategically relevant.

The second strongest predictor of intention was digital literacy. This helps to explain the argument that current collaborative consumption is strongly tied to digital coordination processes. Earlier collaborative-consumption research often treated technology as part of the platform context, whereas the present model treats digital competence as a managerial micro foundation. It is different for hotels that have been around for a while. Hotels need not be peer-to-peer to be involved in collaborative resource arrangements, but managers must have digital skills to identify partners, share information, coordinate room availability, track resources, and integrate the collaborative services into the existing systems. There are two things to note about the study by Fan *et al.* (2023): First, digital capability in the hotel industry is not limited to having digital technology but also involves integration and optimization; and second, it translates to application, not only possession, of digital technology. Bekele *et al.* (2024) similarly find that digital transformation contributes to environmental sustainability through sustainable business-model innovation. The present findings include a behavioral dimension by substituting digital competence with sustainable collaborative consumption intention, which is considered to be a major factor in digital competence adoption.

Sustainability knowledge was also positively associated with intention and produced a significant indirect association with adoption through intention. Although the coefficient was less than that for environmental values and digital literacy, it is theoretically relevant. The role of knowledge in interpreting environmental problems and understanding available practices is evident, but it was not directly linked to adoption in the mediated outcome equation. This outcome aligns with Hassanli and Williamson (2024), who found that knowledge and practice of sustainability are not aligned. It also complements Riva *et al.* (2021), who show that managerial green knowledge contributes to environmental performance through green creativity. In both cases, there is a mediating step, an organizational or cognitive process, between knowledge and the performance-relevant aspect. In this case, the process is intention, and the manager has to plan to use the knowledge, e.g., in collaborative arrangements, to make it behaviorally relevant to them.

The strong antecedent model for intention ($R^2 = .562$) contrasts with the more modest explanatory power for adoption behaviour ($R^2 = .165$). This asymmetry should not be treated as a weakness to be hidden. It shows the gap between forming an intention and putting an organizational practice into operation. Digital competence, sustainability knowledge, and environmental values can explain why managers become willing to act, but implementation additionally depends on financing, infrastructure, employees, suppliers, regulatory support, service standards, and organizational routines. These are the exact barriers to implementing circular hospitality identified in recent circular hospitality studies. Financial and logistical constraints of circular models are reported by Fonseca and Dias (2025); circular food-practice adoption is found to be dependent on institutional pressures and perceived benefits by Chang et al. (2025); whereas governance, stakeholder coordination, technology, and staff capability are shown to be recurring conditions of hotel circular transition by Gohoungodji and Chembessi (2026). The modest R^2 for behaviour therefore reinforces rather than undermines the need to distinguish managerial intention from organizational enactment.

The conclusions also highlight the changing trend of intentional action in sustainable hospitality. According to Vaculčíková *et al.* (2025), it is possible to convey true circular statements at the hotel while only carrying out low-effort measures. Based on European hotels, Khan (2026) identified that absorptive capacity, along with behavioral intention, is both positively associated with circular-practice adoption. Husain *et al.* (2025), using Indian hotel managers, show that environmental attitudes influence green-practice implementation indirectly through intention. The present study has been carried out with two differences from these studies. First, it is not limited to green practices or circular adoption in general, but to sustainable collaborative consumption. Second, it outlines how intention is created using a balance of the managerial capability, knowledge, and value antecedents. The resulting model proposes that the intention-action gap starts before intention; hotels might not establish a strong implementation commitment if they do not have digital competence, knowledge of sustainability, or motivation for the environment.

The non-significant direct effects are also noteworthy. One managerial-capability theory would suggest a direct correlation between digital literacy or sustainability knowledge and implementation. However, after modeling intention, no direct relationship was found between the two variables and adoption. This is not to say that capabilities are not important, but it does indicate that they are not the most important. Instead, it indicates that capabilities are enabling inputs that have strategic direction and organizational relevance. Digital competence can be used for a range of goals, while sustainability knowledge can stay at a descriptive level. These resources are given a focus by Intention. Environmental values are equally applicable to the process of orienting managers towards environmental issues, but a commitment is needed to get the hotel to act together on collaborative consumption. In this respect, intention can be regarded as a focusing mechanism to link general managerial qualities with specific organizational behaviour. Causal interpretation should be done with caution, however, at the same time. Due to the cross-sectional nature of the data in this study, it is not possible to claim that digital literacy, knowledge, or values preceded intention, or that intention preceded adoption. There's a potential for reverse reinforcement: managers who are already involved in collaborative or sustainable practices in their hotel may learn more or feel more pro-environmental. The statistical mediation pattern is therefore best interpreted as consistent with the proposed process rather than as definitive evidence of a causal sequence. Longitudinal or experimental work is required to establish temporal ordering.

CONCLUSION

This study shows that sustainable collaborative consumption in hotels is not explained simply by whether managers possess digital competence, sustainability knowledge, or pro-environmental values. These three attributes were positively associated with managerial intention, and intention was positively associated with reported adoption behaviour. The significant indirect effects, together with non-significant residual direct effects, are consistent with an indirect-only mediation pattern in which intention focuses general managerial capabilities and values on a specific organizational action. Environmental values were the strongest predictor of intention, followed by digital literacy and sustainability knowledge. At the same time, the more modest variance explained in adoption behaviour indicates that implementation also depends on organizational and institutional conditions beyond the focused managerial model. The results therefore support a process-oriented view of

sustainable collaborative consumption: managers must not only value, understand, and be digitally capable of collaboration, but must also convert those attributes into a concrete implementation commitment.

CONTRIBUTIONS

The study makes a first contribution by repositioning sustainable collaborative consumption as an organizational adoption phenomenon. Hospitality sharing-economy research has generated extensive insight into Airbnb, consumer motives, trust, participation, value, and disruption (Kuhzady *et al.*, 2021), while general collaborative-consumption research has similarly concentrated on co-consumption and consumer antecedents (Wei *et al.*, 2021). This demand-side emphasis is understandable because digital platforms made collaborative consumption highly visible through consumer transactions. It is nevertheless incomplete. Sustainable resource sharing also depends on organizational actors that design, coordinate, and institutionalize collaborative practices. By examining hotel owner/managers rather than platform users, this paper directs attention to the supply-side managerial micro foundations of collaborative adoption.

Second, the paper refines upper-echelons reasoning in a sustainability context by separating three qualitatively different managerial attributes. Digital literacy represents the capability to work with the digital infrastructure through which contemporary collaboration is organized; sustainability knowledge represents cognitive understanding of environmental problems and operational responses; environmental values represent motivational prioritization. Treating these dimensions separately avoids reducing managerial sustainability orientation to a single attitude construct. The empirical results show that each dimension explains unique variance in intention, with environmental values strongest, digital literacy second, and sustainability knowledge third. This pattern suggests that sustainable collaborative adoption requires managers who value the environmental objective, can understand the underlying sustainability problem, and can navigate the digital means through which collaboration increasingly occurs.

Third, the study specifies a transmission mechanism rather than assuming that managerial attributes directly become organizational behaviour. The indirect-only mediation pattern indicates that the three antecedents are associated with adoption through intention. This process adds precision to upper-echelons reasoning. Upper echelons theory explains why managerial characteristics matter for strategic choices, but it is less specific about the proximal motivational mechanism connecting an executive attribute to a particular sustainability action. Incorporating behavioral intention as a focusing mechanism helps bridge that gap without claiming to test the full theory of planned behaviour. The model therefore links a strategic-management explanation of managerial heterogeneity with a behavioral explanation of action readiness.

Fourth, the findings qualify capability-based accounts of digital sustainability. Recent hospitality research increasingly demonstrates associations among digital transformation, digital capabilities, sustainability innovation, and ESG performance (Bekele *et al.*, 2024; Kim *et al.*, 2025; Lescop *et al.*, 2025). The present results suggest that digital competence should not be treated as self-executing. Its association with sustainable collaborative adoption was driven by intention. This implies that the digital-sustainability relationship may depend not only on technological resources but on whether senior managers deliberately direct digital competence toward sustainability objectives. The result is consistent with a micro-foundational view in which organizational capabilities become strategically consequential through managerial attention and commitment.

Finally, the study contributes to emerging circular-hospitality research by distinguishing knowledge from implementation. Recent reviews and empirical studies increasingly identify knowledge, training, technology, collaboration, and managerial support as key circular-economy enablers (Fonseca & Dias, 2025; Gohoungodji & Chembessi, 2026). The present model shows one way these enablers can be theorized rather than simply listed: knowledge and digital competence strengthen a managerial intention, and that intention is associated with reported adoption. This mechanism offers a parsimonious explanation that future studies can extend with organizational capabilities, institutional conditions, and longitudinal implementation outcomes.

MANAGERIAL AND POLICY IMPLICATIONS

The results imply that hotels seeking to expand sustainable collaborative consumption should avoid treating digital training,

sustainability education, and environmental commitment as separate initiatives. Their value lies in how they combine to create an implementation intention. For hotel owners and senior managers, this means that sustainability programmes should conclude with concrete adoption decisions rather than awareness alone. A training programme on circular resource use, for example, should identify specific collaborative opportunities, responsible actors, required digital systems, decision deadlines, and implementation responsibilities. This converts knowledge into an explicit organizational commitment.

Digital capability development should also be oriented toward sustainability use cases. Generic technology training may improve operational competence without affecting sustainable adoption. Hotels can instead develop managers' ability to use digital platforms for supplier coordination, shared procurement, inventory visibility, redistribution of surplus resources, local partnership management, collaborative services, and monitoring of resource use. Fan *et al.* (2023) show that hotel digital capability extends beyond basic technology to integration and application. The present results suggest that these capabilities are more likely to become sustainability-relevant when managers can connect them to a defined collaborative-consumption objective.

Sustainability knowledge initiatives should be similarly practice-specific. The significant indirect effect of knowledge, combined with its non-significant direct path to adoption, cautions against assuming that information automatically changes operations. Hotel associations and tourism authorities could structure knowledge programmes around decision scenarios: which assets can be shared, leased, refurbished, redistributed, or jointly procured; how partnerships can be governed; what information must be exchanged; and how guest experience and service standards can be protected. In recent years, the circular economy has been explored in the hospitality sector, and it is observed that training and hands-on experience sharing are crucial, especially when uncertainty exists regarding the implementation of CE in hotels (Khan, 2026; Gohoungodji & Chembessi, 2026).

Environmental values also have important practical implications because they were the strongest predictor of intention. Values can be cultivated through the process of recruiting and grooming managers who see resource stewardship as a strategic task, but values cannot be developed through slogans. Senior leadership can make the environment a priority more credible if it is tied to capital-allocation criteria, procurement rules, performance reviews, and partnership selection. Environmental values were predicted to have no independent influence on adoption when they are not strong. It is the managerial job then to turn environmental commitment into some set of intended actions.

The findings indicate a need for integrated programmes to support sustainable hotel transformation, using a combination of motivation, knowledge and digital enablement. Managers may be less able to manage collaborative arrangements with financial incentives or environmental guidelines due to a lack of digital competence or knowledge about how to assess them. However, if digitalization is not linked to environmental goals, it can also be restricted in terms of sustainability value. Tourism authorities can develop mutual initiatives that bring together capacity building in digital skills, knowledge about the circular economy, and planning for its implementation. These types of programmes would be particularly relevant for smaller independent hotels, which recent studies have found to be more constrained when it comes to finance, infrastructure and knowledge (Fonseca & Dias, 2025; Hassanli & Williamson, 2024).

LIMITATIONS

The results should be interpreted in light of several limitations. First, the study is cross-sectional and self-reported and relies on a single managerial respondent per hotel. Although the mediation results indicate significant indirect relationships, they do not establish temporal or causal mediation. Longitudinal study designs and/or multi-wave designs are recommended, as well as the use of managerial surveys alongside indices of sustainable collaborative consumption that can be independently verified, where possible.

Second, the managerial attributes and hotel adoption measures were obtained from the same person, which could cause common method bias and key-informant bias. Even though no dominant method factor was identified with the statistical diagnostics, future studies could use a multi-source design, getting information from the managerial characteristics of focal

managers and from the employees, the sustainability officers, the suppliers, or the operational records. Additional valid measures would include objective indicators like shared partnerships for resource sharing, shared procurement activities, redistribution practices, and digitally documented collaborative transactions.

Third, the conceptual boundaries of sustainable collaborative consumption require further refinement. Collaborative consumption is interrelated with the concepts of circular economy practices, green operations, and resource efficiency, but they are not synonymous. Future research should build on measures that are specific to the hotel, which better differentiate access, sharing, reuse, redistribution, co-provision, and circular resource exchange. The actor-based approach used by Benoit *et al.* (2017) and recent classifications for hotels relating to the circular economy (Gohoungodji & Chembessi, 2026) provide good starting points for this study.

Fourth, the high-level model does not include some of the organizational and institutional factors that affect implementation. Results of the comparatively modest level of explanatory power of adoption behaviour indicate that intention alone is not enough to explain implementation. Various other antecedents, mediators, or boundary conditions could be explored in future research, such as absorptive capacity (Khan, 2026), organizational environmental support, employee collaboration (Husain *et al.*, 2025), digital transformation (Bekele *et al.*, 2024), financial constraints, supplier readiness, infrastructure, and regulatory support.

Lastly, the results should be validated by hotel type and type of institutional setting. Comparative analysis of the emerging and developed tourism markets would enable the determination of whether digital literacy, sustainability knowledge, and environmental values have the same behavior with respect to technology, regulations, and competition. Further studies are also required to separate the individual managerial digital literacy from the organization-level digital capability. A multilevel design might explore how managers' digital competence affects the building of the digital capabilities of the organization, and then how such organizational capabilities enable the sustainable adoption of collaborative consumption.

FUTURE IMPLICATIONS AND RESEARCH DIRECTIONS

Future research should test the proposed process with longitudinal or multi-wave designs to establish temporal ordering between managerial attributes, intention, and adoption. Multi-source designs should combine managerial surveys with employee, supplier, sustainability-officer, or operational data and with independently verifiable indicators of collaborative practices. Further work should refine hotel-specific measures that distinguish collaborative consumption from broader green operations and circular-economy practices and should examine organizational and institutional boundary conditions such as absorptive capacity, employee collaboration, digital transformation, financial constraints, supplier readiness, infrastructure, and regulatory support. Comparative studies across hotel categories and emerging and developed tourism markets would clarify the generalizability of the model. A multilevel extension could also distinguish individual managerial digital literacy from organization-level digital capability and examine how the former contributes to the latter before influencing sustainable collaborative-consumption adoption.

DECLARATIONS

Ethical Considerations: This study strictly adhered to the Declaration of Helsinki and relevant national and institutional ethical guidelines. All procedures performed in this study were consistent with the ethical standards of the Declaration of Helsinki. The study was conducted according to ethical and clinical standards for research. The study involved hotel owners and managers as research participants and was conducted in accordance with established ethical principles for research involving human participants. Participation was voluntary, informed consent was obtained, and confidentiality and anonymity of respondents were maintained.

Originality, Plagiarism, and Similarity Statement: This manuscript is original and free from plagiarism. All sources have been appropriately cited and acknowledged. The manuscript was screened using the journal-approved similarity-checking system to ensure an overall similarity index below 19% and compliance with the journal's source-level similarity limit.

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Data Availability: The data supporting the findings of this study are available from the corresponding author upon reasonable request.

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Author Contributions: Zahoor Ahmad Khan: Conceptualization, methodology, formal analysis, investigation, and writing of the original draft. Syed Mohsin Ali Shah: Methodology, supervision, and writing review and editing. Shah Hussain Awan: Supervision, project administration, writing review and editing.

Declaration on the Use of Generative AI: Generative AI was used solely to assist with language editing, restructuring, and addressing reviewer comments. The authors reviewed and verified the final manuscript and took full responsibility for its content, accuracy, and integrity.

Similarity Index/ Plagiarism: The similarity index was checked, and it is well below the threshold value of 19%, whereas each source is less > 5%.

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