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STRATEGIC SUSTAINABILITY IN DESIGN-LED GEOSITES: ENHANCING HUMAN CAPITAL FOR TOURISM AND REGIONAL COMPETITIVENESS

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Abstract: This study explores how sustainability is strategically embedded within architectural firms operating in tourism-linked geosite contexts. It reframes sustainability not merely as an environmental responsibility, but as a driver of regional competitiveness and human capital development. A quantitative research design was adopted, utilizing survey data from 182 professionals across the architecture and construction sectors. Analytical procedures included descriptive statistics, reliability testing, factor analysis, and multiple regression via SPSS. Structural Equation Modeling (SEM) was employed to validate the proposed conceptual framework and test key hypotheses. The analysis revealed a strong positive correlation between sustainable practices and employee outcomes, particularly satisfaction and performance. Sustainability, redefined as a multidimensional construct encompassing employee engagement, workplace wellbeing, and organizational agility, emerged as a strategic asset. These findings highlight its role in fostering organizational resilience and talent retention, especially in regions where geosite development and tourism infrastructure demand adaptability and innovation. By focusing on the internal dynamics of sustainability, this study offers actionable insights for design-led firms and policymakers aiming to strengthen geotourism ecosystems. It contributes to the literature by demonstrating how employee-centered sustainability mechanisms can enhance both organizational performance and territorial value in tourism-driven environments.

Keywords: sustainability, corporate strategy, employee satisfaction, organizational performance, architecture industry, sustainable development, competitive advantage

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INTRODUCTION

In today's rapidly evolving tourism and development landscape, sustainability has moved from the margins to the heart of strategic decision-making. No longer confined to symbolic gestures or regulatory compliance, it now shapes how organizations operate, how professionals engage with their work, and how regions position themselves competitively.

This shift reflects a deeper understanding: sustainability is not just about protecting the environment, it's about building smarter, more resilient systems from within. Within architecture and construction, especially in contexts tied to geosite development and tourism infrastructure, firms face a complex balancing act. They must deliver design excellence while navigating innovation, social responsibility and strategic practicality (Mensah, 2019).

In these settings, sustainability influences far more than material selection or energy efficiency. It informs how teams collaborate, how roles evolve, and how organizations thrive amid uncertainty and regional competition. This study approaches sustainability not as a reactive obligation but as a proactive strategy, one that directly enhances two critical employee outcomes: satisfaction and performance. It further explores how these human-centred effects ripple outward, contributing to broader organizational gains such as improved reputation, operational agility, and regional competitiveness.

By focusing on the internal mechanisms through which sustainability generates value, the research offers a fresh, people-first perspective often missing from conventional tourism and development discourse. Rather than treating sustainability as a standalone initiative, this study positions it as a deeply embedded practice, one capable of unlocking meaningful benefits for individuals, firms, and the geotourism ecosystems they help shape. The insights presented here aim to guide leaders and decision-makers in design-led industries toward evidence-based strategies that foster talent, boost performance, and support responsible growth in a world defined by rapid change and spatial complexity.

LITERATURE REVIEW

Over the past twenty years, sustainability has shifted from being a moral obligation to a key element of organizational strategy and regional development. It is no longer limited to environmental regulation but is now seen as a complex catalyst

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for innovation, workforce engagement, and long-term competitiveness across various sectors, including those influencing tourism and geosite infrastructure (Mensah, 2019; Makhrout & Ait Hbibi, 2023). Geosites are natural or cultural locations with distinctive geological features that embody scientific, educational, and tourism value. They act as living records of Earth's history while offering opportunities for conservation and public engagement (Herman & Wendt, 2011). Geosite infrastructure refers to the facilities and services that make geosites accessible, safe, and meaningful for visitors. It includes pathways, signage, interpretive tools, and protective measures that balance tourism development with heritage preservation Within this perspective, geosites are increasingly managed as destination assets whose long-term value depends on sustainable products and coordinated destination management rather than on natural endowment alone (Šambronská et al., 2023).

As regions and industries confront increasingly intricate ecological and economic challenges, integrating sustainability into daily decisions has become vital for managing uncertainty and promoting adaptable growth.

Globally, sustainability is defined as meeting present needs without compromising the ability of future generations to meet their own (United Nations, 1987). While this foundational concept originated from ecological discussions, its scope has broadened to cover organizational behavior, governance, and strategic planning. Today, sustainability impacts how leaders make decisions, how employees engage with their roles, and how companies preserve operational integrity and reputation, particularly in sectors connected to tourism and spatial development. In architecture and construction, fields closely connected with geosite design, resource management, and innovation, the adoption of sustainable practices holds both ecological and strategic importance. The architecture industry remains a major contributor to global energy use and emissions (Hendawy et al., 2024), emphasizing the need to incorporate environmentally conscious design and building methods. Beyond meeting regulations, these practices give firms a competitive advantage by lowering costs, boosting efficiency, and making sustainability a market differentiator, especially in areas where tourism and geosite appeal rely on careful spatial planning. Recent research has increasingly emphasized the internal dimensions of sustainability, particularly its impact on employees. Workplace initiatives that promote eco-conscious behavior and responsible governance have been linked to higher morale, stronger commitment, and improved performance (Thorne & Duran, 2016; Patterson et al., 2021). These findings suggest that sustainability functions not only as an external branding tool but also as an internal performance lever, shaping employee behavior in ways that align with broader organizational and regional goals. Building on this evolving perspective, the present study investigates how sustainability initiatives within architectural firms affect employee satisfaction and performance, and how these human-centered outcomes help strengthen organizational resilience and regional competitiveness. By focusing on socially responsible practices in design-led industries, the research offers new insights into how empowered human capital can support sustainable growth in tourism-driven geosites. Recent evidence from tourism-linked service settings reinforces this internal view of sustainability, showing that socially responsible practices translate into measurable gains in employee engagement and satisfaction when they are embedded in organizational culture rather than treated as external compliance (Ahmed et al., 2025; Bannour & Varga, 2025).

Corporate Performance

Sustainability has also emerged as a powerful influence on investment behavior and strategic business performance, particularly in sectors where spatial development and tourism intersect. As organizations respond to shifting market expectations and heightened stakeholder scrutiny, integrating sustainability into core strategy has proven to be more than a values-driven gesture, it is now a measurable determinant of financial and reputational success. Corporate performance, traditionally assessed through resource efficiency and goal attainment, increasingly reflects how deeply sustainability is embedded in organizational thinking and practice (Kuo et al., 2022; Frempong et al., 2021). A growing body of research affirms the financial upside of sustainable practices. Lima & Jucá (2024), in a longitudinal study of 2,509 firms over 12 years, found that companies with transparent and proactive sustainability strategies consistently outperformed their peers, especially in emerging markets, where such approaches often serve as strategic differentiators. These findings are particularly relevant for firms operating in tourism-driven regions, where sustainability can enhance both operational resilience and destination appeal. Eccles et al. (2014) further demonstrated that organizations committed to sustainability tend to achieve superior financial and operational outcomes, benefiting from increased efficiency, stronger customer loyalty, and enhanced brand reputation. These advantages are especially critical in geosite contexts, where public perception, environmental stewardship, and visitor experience are tightly interwoven. From an investment standpoint, Al Amosh et al. (2022) confirmed that firms aligned with environmental, social, and governance (ESG) criteria tend to deliver higher returns.

Their findings point to tangible benefits such as elevated brand visibility, greater investor confidence, and reduced operational costs, all of which are vital for firms contributing to tourism infrastructure and regional development. Similarly, Poursoleyman et al. (2022), in their analysis of 3,701 firms, emphasized that sustainability enhances corporate performance across multiple dimensions, with even greater impact in mature markets where competition and stakeholder expectations are high. Together, these studies reinforce the idea that sustainability is not only a moral or ecological imperative, it is a strategic asset. For architectural firms engaged in geosite development, this means that sustainable practices can simultaneously elevate internal performance, attract investment, and contribute to the broader competitiveness of tourism regions. Importantly, the way leaders model environmental values shapes these outcomes, as environmentally specific servant leadership has been found to encourage pro-environmental behavior among employees in tourism and hospitality firms (Fatoki, 2021).

Role of Policy Makers in Promoting Sustainable Methods

The literature also underscores the pivotal role of policymakers in advancing sustainability within architecture and construction, especially in regions where built environments contribute directly to tourism appeal and geosite development.

Effective supervisory frameworks, targeted incentives, and capacity-building programs are essential for embedding sustainability into industry norms and fostering long-term environmental stewardship. A notable example is the UAE's Estidama Pearl Rating System, developed in collaboration with the Abu Dhabi Urban Planning Council. As reported by SAS (2024), this comprehensive initiative evaluates buildings across financial, ecological, cultural, and social dimensions, offering a holistic benchmark for sustainable construction. By mandating compliance from contractors and stakeholders, Estidama not only promotes environmentally responsible design but also raises awareness of green building solutions, an increasingly vital component in tourism-driven urban planning. Singapore's Green Mark Certification offers another internationally recognized model. According to the Building and Construction Authority (2023), this rating system assesses the environmental performance of both new and existing structures, providing a clear framework for sustainable design, construction, and operations. By encouraging industry-wide adoption of resource-efficient strategies, Green Mark supports urban resilience and environmental integrity, qualities that are essential for maintaining the attractiveness and viability of geosites in densely developed regions. Together, these frameworks illustrate how policy-driven sustainability can shape architectural practice, enhance regional competitiveness, and support the development of tourism-linked geosites. They also highlight the importance of aligning design excellence with strategic governance, ensuring that sustainability is not just a technical standard, but a shared commitment across public and private sectors. Beyond regulatory frameworks, firms also translate such commitments internally through green human-resource and learning practices, which have been shown to strengthen competitive advantage and sustainable work behavior among employees in tourism-oriented enterprises (Alshehri et al., 2024; Alhemimah et al., 2024).

Research gap and research direction

Although the link between sustainability and organizational performance has been extensively studied across many sectors, much of the current research focuses on external results, like productivity, brand reputation, or stakeholder compliance. There is significantly less attention given to the internal processes through which sustainability influences organizational behavior, especially regarding employee experience, workplace culture, and strategic flexibility.

In architecture and construction, industries that thrive on innovation, interdisciplinary collaboration, and spatial precision, this internal aspect is especially important. These fields play a key role in shaping geosites and tourism infrastructure, yet the human impact of sustainability within such firms remains underexplored. While previous research has highlighted the financial and operational benefits of sustainable practices, questions still remain about how these strategies affect employees' daily experiences and how those experiences, in turn, influence organizational direction and resilience. This study addresses that gap by examining how sustainability, when strategically integrated into the core operations of design-led firms, influences employee morale and effectiveness. It also explores how these people-centered outcomes contribute to broader organizational efficiency and long-term competitiveness, particularly in tourism-driven regions where architectural quality and human capital are critical to geosite value. To clarify the hypothesized relationships among these variables, Figure 1 presents the conceptual model developed for this study, illustrating how sustainable practices are expected to influence employee satisfaction and performance, and how these internal outcomes contribute to overall organizational success. Guided by this perspective, the research poses a central question: How do sustainable architectural practices influence employee satisfaction and performance, and how do these internal outcomes shape broader organizational success in geosite-linked contexts? To explore this question, the following hypotheses are proposed:

- **H1:** Sustainable methods serve as a strategic resource that enhances employee performance in the architecture industry.
- **H2:** Sustainable methods improve employee satisfaction in the architecture industry.
- **H3:** Employee performance acts as a critical mediator in corporate performance.
- **H4:** Employee satisfaction strengthens corporate performance.

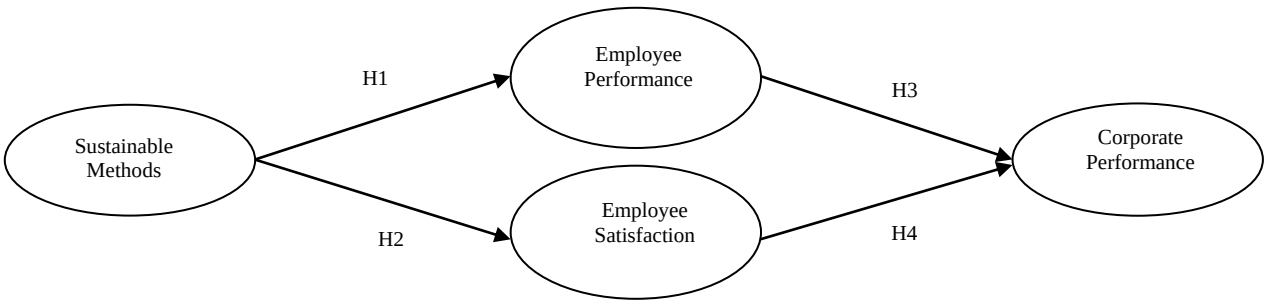

Figure 1. Conceptual Model

MATERIALS AND METHODS

To address the research question and test the proposed hypotheses, this study adopts a quantitative methodology using an online questionnaire. This approach is well-suited for examining relationships between variables and generating statistically robust insights. As noted by Munther et al. (2024), quantitative methods offer a practical and reliable framework for hypothesis testing, while Lim (2024) emphasizes their value in enhancing consistency and analytical depth. By applying this design, the study contributes to the growing literature on sustainability's internal impact, specifically within architecture and construction firms engaged in geosite-linked development. Data collection was conducted through multiple digital channels to ensure broad reach and informed participation. The survey was distributed via email

and WhatsApp to professionals working in architectural and construction firms. Each message included a clear explanation of the study's purpose, its relevance to sustainable development in tourism contexts, and the importance of voluntary, ethical participation. To expand outreach, the survey was also posted on LinkedIn with a personalized message encouraging recipients to share it with colleagues in the industry. The linked questionnaire opened with a brief overview of the research and outlined all ethical considerations, including confidentiality and data protection.

The questionnaire itself was structured into five sections. The first section gathered demographic data to contextualize the responses. The remaining four sections focused on key variables: employee motivation, performance, sustainable practices, and corporate success. These constructs were selected to explore how internal dynamics, particularly human capital, mediate the relationship between sustainability and organizational outcomes in design-led firms contributing to tourism infrastructure and geosite development.

Research Population and Sampling

Table 1 summarizes the choice of the population for the research and the sampling type allocated for the data collected:

Table 1. Research population and sampling

Element	Description
Sample Type	Human
Target Population	professionals in the architecture and construction industry (e.g., architects, project managers, construction managers, civil engineers)
Sampling Technique	Snowball sampling
Sample Size	182 participants
Eligibility Criteria	Open to individuals regardless of age or years of experience

Data Analysis

After the data collection phase ends, the information gathered from the online questionnaires is analyzed using various statistical techniques, including normality tests, descriptive statistics with means, reliability tests, factor analysis, regression, and Structural Equation Modeling (SEM). These methods are chosen to produce clear results and ensure that employees' perceptions of sustainable architecture are accurately presented.

Ethical Considerations

Upholding the highest ethical standards is essential to the credibility, reliability, and integrity of this research. The study design places strong emphasis on protecting participants from any form of physical, psychological, or social harm, ensuring that their involvement is fully informed, voluntary, and confidential. Prior to participation, individuals received a clear and detailed explanation of the research's purpose, scope, and procedures. The questionnaire began with an introductory statement outlining the study's aims and ethical safeguards. Participants were invited to ask questions or seek clarification, and a dedicated email address was provided to facilitate direct communication with the researcher. This ensured that consent was not only obtained, but meaningfully informed. To protect participant privacy, all responses were anonymized using assigned numerical identifiers, and no personal data was collected or stored. Participation was entirely voluntary, with individuals free to withdraw at any time without consequence. The opening section of the survey included a consent statement, "I agree to participate in this research", with a binary response option ("Yes" or "No") to confirm willingness. Those who consented were reminded that their responses would remain confidential and used solely for academic purposes. The survey also clarified that the data and final research outcomes may be stored permanently as part of the academic record, but would never be linked to individual identities. Participants were encouraged to reach out with any concerns regarding the research process, expected outcomes, or ethical implications. Finally, the researchers acknowledged their responsibility to halt the study if any unforeseen risks or ethical violations emerged. They reserved the right to exclude participants who failed to comply with ethical guidelines and committed to seeking guidance from the project advisor or the Institutional Review Board (IRB) should any concerns arise. These measures reflect a proactive commitment to ethical integrity and participant well-being throughout the research process.

RESULTS & DISCUSSIONS

Next, this section provides a comprehensive analysis of the results, aiming to answer the following research question:

How do sustainable methods impact corporate performance, with a focus on employee motivation and performance, in the architecture industry? To begin, Table 2 defines the variables and their abbreviations:

Table 2. Definitions of Variables

Variable	Abbreviation	Role	Description
Sustainable Methods	SP	Independent	The adoption of environmentally friendly and socially responsible methods in an organization.
Employee Performance	EP	Mediator	The effectiveness and productivity of employees in the workplace are influenced by other factors like SP.
Employee Satisfaction	ES	Mediator	The level of contentment and satisfaction of employees, influenced by factors such as SP and EP.
Corporate Performance	CP	Dependent	An organization's overall success and financial health, potentially impacted by SP, EP, and ES.

Reliability

Cronbach's Alpha is a key measure of internal consistency reliability in research, especially with Likert-scale questionnaires. In SPSS, we use Cronbach's Alpha to determine if a set of items consistently assesses the same underlying concept. In our research on sustainability in corporate strategy, ensuring high internal reliability enhances our empirical results. Our Likert-scale variables measure constructs like organizational performance, competitive advantage, or stakeholder engagement, and verifying Cronbach's Alpha confirms these metrics are consistent.

To evaluate the reliability of all variables, Cronbach's Alpha was calculated for each. First, Sustainable Methods (SP) showed strong reliability with a Cronbach's Alpha of 0.877, as indicated in Table 3, across 8 items. Similarly, EP and ES demonstrated high reliability, as shown in Table 4 and Table 5, respectively, with scores of 0.890 each, with EP assessed across 7 items and ES across 6 items. However, the highest reliability was observed for CP, with a Cronbach's Alpha of 0.930 over 6 items indicated in Table 6. The high reliability scores obtained through Cronbach's Alpha confirm the rigor and consistency of the measurement framework, ensuring that the constructs under study display internal coherence and solid empirical validity. This indicates that the variables effectively measure aspects of organizational performance, competitive advantage, and sustainability integration within corporate strategy.

1. Variable 1 – SP; Reliability Statistics

Table 3. Reliability Statistics for SP

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.877	.883	8

2. Variable 2 – EP; Reliability Statistics

Table 4. Reliability Statistics for EP

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.890	.908	7

3. Variable 3 – ES; Reliability Statistics

Table 5. Reliability Statistics for ES

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.890	.892	6

4. Variable 4 – CP; Reliability Statistics

Table 6. Reliability Statistics for CP

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.930	.931	6

Factor Analysis

To ensure the reliability of our measurement model, we performed Factor Analysis to examine how well the variables represent the main concepts in the research. This helps identify patterns among responses, ensuring that the data aligns with our theoretical framework. First, we used the Kaiser-Meyer-Olkin (KMO) test to assess whether the dataset is suitable for factor analysis. A high KMO value (above 0.6) indicates that the data has sufficient meaningful relationships for this statistical method to work effectively. Then, we applied Bartlett's Test of Sphericity to see if the correlation matrix reveals real connections between variables. If this test is statistically significant ($p < 0.05$), it indicates the variables are related enough to justify grouping them into underlying factors.

Finally, we examined communalities, which show how much of each variable's information is explained by the factors we identify. High communalities indicate that these variables significantly contribute to the overall structure, supporting the validity of our measurement model. By conducting these tests, we ensure that our data is well-structured and provides accurate insights into how sustainability methods influence corporate strategy and performance.

1. Variable 1 – SP; KMO and Bartlett's Test

Communalities; Initial; Extraction; Starting with the factor analysis for SP, the results in Table 7 are strong, with a Kaiser-Meyer-Olkin (KMO) value of 0.836. These results indicate excellent sampling adequacy, with Bartlett's Test of Sphericity also showing significant correlations ($p<0.001$), confirming the data's suitability for factor analysis. In terms of communalities in Table 8, most items (SP1 to SP7) exhibited results above 0.8, meaning each item is well explained by underlying factors. The only item below 0.8 is SP8 with 0.665, indicating a weaker connection to the overall factor. Overall, the data collected for SP support the use of factor analysis with adequate and reliable results.

Table 7. KMO and Bartlett's Test for SP

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.836
Bartlett's Test of Sphericity	Approx. Chi-Square	1410.447
	df	28
	Sig.	<.001

Table 8. Communalities for SP

SP1	1.000	.905	SP5	1.000	.843
SP2	1.000	.907	SP6	1.000	.884
SP3	1.000	.816	SP7	1.000	.855
SP4	1.000	.866	SP8	1.000	.665

2. Variable 2 – EP; KMO and Bartlett's Test

Communalities; Initial; Extraction; Moving on, the factor analysis for EP extracted from Table 9 also shows overall strong results, with a Kaiser-Meyer-Olkin Measure of .848 and Bartlett's Test of Sphericity ($p < 0.001$) confirming good overall sampling and the presence of strong correlations. Communalities, extracted from Table 10, are also adequate, with all items showing measures above 0.7, and a particularly high communality for EP1 (0.957). Overall, the data also support using factor analysis for EP with positive projected outcomes.

Table 9. KMO and Bartlett's Test for EP

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.848
Bartlett's Test of Sphericity	Approx. Chi-Square	1037.534
	Df	21
	Sig.	<.001

Table 10. Communalities for EP

EP1	1.000	.957	EP5	1.000	.753
EP2	1.000	.883	EP6	1.000	.862
EP3	1.000	.745	EP7	1.000	.798
EP4	1.000	.798			

3. Variable 2 – ES; KMO and Bartlett's Test

Communalities; Initial; Extraction; Similarly, the factor analysis for ES extracted from Table 11 also showed positive results, confirming adequate sampling technique and significant correlations. All items extracted from Table 12 have strong communalities with values above 0.7, with significant results for both ES3 and ES4 (0.913 and 0.9, respectively). These findings also indicate that factor analysis is suitable for ES.

Table 11. KMO and Bartlett's Test for ES

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.792
Bartlett's Test of Sphericity	Approx. Chi-Square	853.687
	df	15
	Sig.	<.001

Table 12. Communalities for ES

ES1	1.000	.808	ES4	1.000	.900
ES2	1.000	.726	ES5	1.000	.852
ES3	1.000	.913	ES6	1.000	.819

4. Variable 4 – CP; KMO and Bartlett's Test

Communalities; Initial; Extraction; Lastly, the factor analysis for CP extracted from Table 13 also showed strong results with an acceptable KMO (0.892) and Bartlett's Test of Sphericity ($p<0.001$). Regarding communalities, most items extracted from Table 14 had values above 0.7, although CP6 had a lower value of 0.586. Nonetheless, the overall analysis confirms the validity of using factor analysis for CP with reliable results.

Table 13. KMO and Bartlett's Test for CP

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.892
Bartlett's Test of Sphericity	Approx. Chi-Square	887.077
	Df	15
	Sig.	<.001

Table 14. Communalities for CP

CP1	1.000	.761	CP4	1.000	.773
CP2	1.000	.752	CP5	1.000	.831
CP3	1.000	.765	CP6	1.000	.586

Structural Equation Modelling

Structural Equation Modeling (SEM) is highly effective for analyzing complex relationships among various factors, ensuring that aspects like sustainability, corporate strategy, organizational performance, and competitive advantage are precisely measured. By using statistical tests such as Confirmatory Factor Analysis (CFA) and assessing key model fit indices, this approach confirms how different elements interact. It identifies both direct and indirect effects, demonstrating how sustainability impacts business success.

Ultimately, this model improves understanding by providing a clear, data-driven framework to evaluate corporate strategy in the architectural sector. The conceptual model was implemented in SEM, as shown in Figure 2.

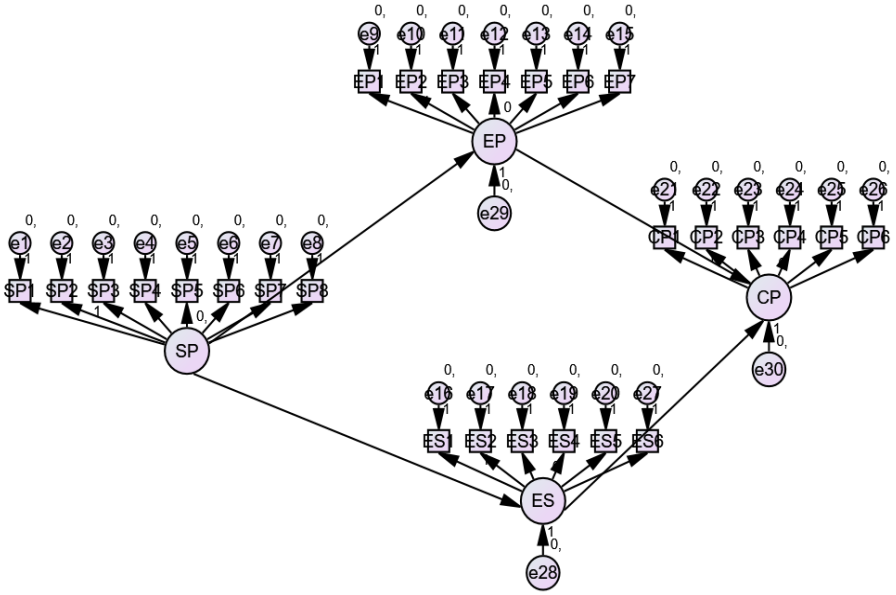

Figure 2. Conceptual Model in SEM

RMSEA

In our research, the RMSEA value of 0, indicated in Table 15, indicates a perfect model fit, meaning there is no discrepancy between the hypothesized structure and the observed data. To test the hypotheses, p was collected.

Table 15. RMSEA Coefficient

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.205	.198	.212	.000
Independence model	.298	.291	.304	.000

Table 16. Path Diagram for Hypotheses testing - SEM

			Estimate	S.E.	C.R.	P	Label
EP	<---	SP	1.137	.543	2.096	.036	
ES	<---	SP	1.441	.696	2.070	.038	
CP	<---	ES	.152	.061	2.489	.013	
CP	<---	EP	1.179	.253	4.653	***	
SP1	<---	SP	1.000				
SP2	<---	SP	.889	.553	1.608	.108	
SP3	<---	SP	4.263	1.781	2.393	.017	
SP4	<---	SP	4.714	1.967	2.397	.017	
SP5	<---	SP	5.222	2.188	2.387	.017	
SP6	<---	SP	4.984	2.077	2.399	.016	
SP7	<---	SP	4.816	2.009	2.397	.017	
SP8	<---	SP	2.988	1.270	2.353	.019	
EP1	<---	EP	1.000				

RESULTS AND DISCUSSION

Hypothesis 1 suggested that integrating sustainability into corporate practices would positively influence employee performance. The statistical analysis supports this hypothesis, with a significance value of 0.036 ($p < 0.05$), extracted from Table 16 confirming a meaningful link between sustainable methods and improved employee outcomes. These findings imply that when architectural and construction firms incorporate sustainability into their operational strategies, beyond superficial compliance, it can result in measurable gains in employee efficiency and effectiveness. In practice, this means that sustainability is not just an environmental or reputational advantage but also a practical tool for boosting daily performance. Employees working in sustainability-driven environments may feel more connected to organizational values, more motivated in their roles, and better equipped to contribute to long-term objectives. This reinforces the idea that sustainability, when applied strategically, can act as a catalyst for internal excellence and operational resilience.

Hypothesis 2 explored the relationship between sustainability practices and employee satisfaction. The analysis yielded a significance value of 0.038 ($p < 0.05$) extracted from Table 16, confirming a meaningful connection. This suggests that when organizations prioritize sustainable operations, employees respond with greater satisfaction and morale. In design-led

industries, where creativity and collaboration are central, this emotional engagement translates into stronger workplace culture and deeper alignment with organizational values. Sustainability, therefore, plays a dual role: enhancing environmental outcomes while cultivating positive human experiences within the firm.

Hypothesis 3 examined whether employee performance mediates the link between sustainability initiatives and broader corporate success. The data supports this mediating role, with a significance value of 0.013 ($p < 0.05$) extracted from Table 16. This finding highlights that employees are not just passive recipients of sustainability strategies, they are active agents through whom these strategies generate tangible business results. In geosite development, where precision, innovation, and stakeholder coordination are key, investing in performance-enhancing environments becomes a strategic imperative. Sustainability fosters such environments, enabling firms to adapt, compete, and thrive.

Hypothesis 4 posed that employee satisfaction directly influences corporate performance. With a highly significant value of 0.000 ($p < 0.05$) extracted from Table 16, this hypothesis is strongly supported. The data underscores that a satisfied workforce is essential for building organizational resilience and competitive advantage. Firms that embed sustainability into their culture not only retain talent but also benefit from increased productivity, loyalty, and innovation, qualities that are especially valuable in tourism-driven regions where architectural excellence and human capital shape geosite appeal. Together, these results affirm that sustainability is not just a strategic priority, it is a human-centered catalyst for organizational growth. By enhancing employee satisfaction and performance, sustainable practices unlock internal pathways to success, positioning design-led firms as key contributors to regional competitiveness and geotourism development.

CONCLUSION

Sustainability has steadily evolved from a peripheral obligation into a strategic cornerstone of modern organizational practice. This research provides empirical evidence that when sustainability is embedded into the core operations of architectural firms, particularly those contributing to geosite development and tourism infrastructure, it yields substantial internal benefits. These include enhanced employee satisfaction, stronger commitment, and improved productivity. Such outcomes are no longer just ethical aspirations; they represent critical pathways through which sustainable strategies translate into operational flexibility, market competitiveness, and organizational resilience. By foregrounding the human dimension of sustainability, this study adds to a growing body of literature that seeks to understand the internal forces driving organizational progress. Rather than viewing sustainability solely through the lens of cost-efficiency or external compliance, the research positions it as a dynamic, people-centered force, one that shapes everyday performance and fosters strategic agility. This perspective invites leaders to see sustainability not just as a regulatory requirement, but as a practical mechanism for unlocking workforce potential and generating long-term value.

A key contribution of this study lies in its focus on the mediating role of employees, those who operate at the intersection of policy, strategy, and performance. In industries where design, innovation, and spatial impact are central, this internal dynamic is often overlooked. By emphasizing the connection between sustainable practices and human capital, the research opens new avenues for understanding how sustainability initiatives influence individual behavior and, ultimately, shape competitive advantage in tourism-driven regions.

Naturally, the study has limitations. The findings are drawn from a specific professional context, which may affect their generalizability across other sectors. Moreover, the cross-sectional design limits insight into how these relationships evolve over time or under varying conditions. These constraints should be considered when interpreting the results.

Future research could benefit from longitudinal studies that track the effects of sustainability-driven strategies across different timeframes. Comparative analyses across industries may also help determine whether the employee-mediated benefits of sustainability are universal or context-specific. Additionally, exploring distinct dimensions of sustainability, social, environmental, and operational, could yield more profound insights into how these elements interact with workforce dynamics and performance outcomes. Ultimately, this study encourages design-focused and talent-driven firms to embrace sustainability not merely as an external benchmark but as a robust, internally anchored strategy for cultivating human potential and achieving excellence in geosite-linked development and beyond.

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