*Corresponding Author's Email: spal23@kgpian.iitkgp.ac.in
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From Service to Sustainability: How Servant Leadership Drives Innovation and Competitive Advantage in Tourism Management

Sekhar Pal[1*] and M.K. Rao[2]

[1] Junior Research Fellow, Human Resource Management, Department of Humanities and Social Sciences under the Faculty of Humanities, Social & Economic Sciences, Indian Institute of Technology Kharagpur, India

[2] Associate Professor, Human Resource and Organizational Behavior, Department of Humanities and Social Sciences under the Faculty of Humanities, Social & Economic Sciences, Indian Institute of Technology Kharagpur, India

Abstract

This study addresses the sustainability issues in tourism management by focusing on competitive advantage that has emerged as a crucial factor, necessitating leadership approaches to foster both innovation and responsible business practices. However, existing leadership models often fall short in addressing the balance between profitability, environmental responsibility, and social well-being, and thus, there remains a gap in understanding how servant leadership specifically influences competitive advantage and long-term organizational success within the tourism industry. In the backdrop of this gap, the study examines the mechanisms through which servant leadership cultivates an organizational culture that can potentially promote collaboration, ethical decision-making, and continuous improvement. Based on the sustainability-orientated innovation theory and resource-based view, the objective was to provide a novel framework that fundamentally reshapes our understanding of how servant leadership fosters stakeholder engagement, sustainability-orientated innovation, and long-term competitive advantage in tourism enterprises in the Indian context. Empirical evidence was collected from frontline employees and lower-level managers and analysed through R software. The analysis confirmed that servant leadership significantly influences sustainable competitive advantage. In addition, servant leadership significantly enhances stakeholder engagement and sustainability-orientated innovation, conducive to the indirect influence on sustainable competitive advantage. These insights contribute to leadership theory and sustainable tourism management by demonstrating that a service-driven leadership approach is a catalyst for engagement, innovation, and sustainability. The contributions of this study entail practical implications of embedding sustainability within operational and strategic frameworks, leading to improved brand reputation, increased employee and customer satisfaction, and long-term profitability in an eco-conscious market.

Keywords: Resource-Based View; Stakeholder Engagement; Sustainability-Oriented Innovation; Sustainability; Tourism Industry

1. Introduction

The tourism industry has become one of the fastest-growing economic sectors globally, contributing significantly to employment, GDP, and cultural exchange (Lin, 2023). However, with rapid expansion comes increasing pressure to integrate sustainable practices to mitigate environmental degradation, cultural exploitation, and social inequalities. Achieving long-term sustainability in tourism requires not only innovative business strategies but also leadership approaches that align economic success with ethical responsibility (Moisescu & Gică, 2014). The need for competitive advantage has emerged as a crucial factor, necessitating leadership approaches to foster both innovation and responsible business practices.

Among various leadership models, servant leadership has emerged as a transformative approach that prioritizes the well-being of employees, communities, and the environment while fostering innovation and long-term resilience. Existing leadership models often fall short in addressing the balance between profitability, environmental responsibility, and social well-being, creating a gap in understanding how servant leadership specifically influences competitive advantage and long-term organizational success within the tourism industry (Chon & Zoltan, 2019). Despite its potential, research on how servant leadership influences sustainability-driven innovation and competitive advantage in tourism management remains limited (Li et al., 2021). This study addresses these issues by focusing on competitive advantage. This study examines the mechanisms through which servant leadership cultivates an organizational culture that can potentially promote collaboration, ethical decision-making, and continuous improvement (Ruiz-Palomino et al., 2019).

1.1 Problem Statement

While sustainability has become a central concern in tourism management, many businesses struggle to balance profitability, environmental responsibility, and social well-being (He & Zaman, 2024). Traditional leadership models often focus on financial performance rather than fostering an organizational culture of service, ethical responsibility, and innovation (Amankwaa et al., 2021). This creates a gap, as existing leadership models often fall short in addressing the balance between profitability, environmental responsibility, and social well-being (Chon & Zoltan, 2019). Servant leadership, which emphasizes empowerment, stakeholder well-being, and sustainability, presents a promising but underexplored approach to driving competitive advantage through sustainable innovation (Toros et al., 2021). Indeed, the tourism industry needs to promote employees' green creativity via cultivating green entrepreneurial orientation (Tuấn, 2020). There is a need for empirical research that examines the relationship between servant leadership, sustainability-oriented innovation, and long-term business success in the tourism sector (Tajeddini et al., 2019).

1.2 Research Objectives

This study seeks to address the research gap by investigate the role of servant leadership in fostering sustainability through competitive advantage in tourism enterprises. The key objectives are:

To analyze the impact of servant leadership on competitive advantage through a full mediation mechanism to achieve long-term business resilience in an eco-conscious market.

To provide actionable insights for tourism businesses on implementing servant leadership principles to achieve sustainable growth and enhanced brand reputation.

1.3 Research Questions

How does servant leadership influence competitive advantage in tourism enterprises?

What mechanisms explain the relationship between servant leadership and competitive advantage in the tourism industry?

1.4 Significance of the Study

This study contributes to both leadership and sustainability literature by contextualizing the relationships between a service-driven leadership approach and sustainable tourism management, especially within the Indian tourism industry. The research demonstrates how servant leadership can be a catalyst for stakeholder engagement, sustainability-oriented innovation, and, consequently, sustainable competitive advantage (Li et al., 2021). By integrating empirical evidence from quantitative surveys, the research provides practical implications for tourism leaders seeking to balance profitability, innovation, and stakeholder well-being (Tajeddini et al., 2019). This is particularly relevant as service innovation enables tourism firms to enhance performance and enjoy financial rewards (Tajeddini et al., 2019). Furthermore, the findings offer insights for policymakers and tourism businesses on how leadership strategies can drive sustainable development goals in the tourism industry. As consumer preferences increasingly shift towards eco-conscious travel experiences, understanding the role of servant leadership in shaping sustainable tourism practices is more crucial than ever (Moisescu & Gică, 2014). In today's competitive market, service organizations must continuously innovate to gain a competitive edge and maintain sustainability, highlighting the practical importance of this research (Li et al., 2021).

2. Hypothesis Development

2.1 Theoretical Background

The proposed study is grounded in three primary theoretical frameworks: Servant Leadership Theory, Sustainability-Oriented Innovation Theory, and Resource-Based View (RBV) of Competitive Advantage. These theories collectively explain how servant leadership fosters stakeholder engagement, sustainability-driven innovation, and long-term competitive advantage in the tourism sector.

2.1.1 Servant Leadership Theory

Servant Leadership Theory - promotes a leadership style that focuses on the growth and well-being of people and communities (Opoku et al., 2019). Unlike authoritarian leadership models, servant leaders prioritize ethical responsibility, empowerment, and community involvement (Opoku et al., 2019). This approach can help organizations meet contemporary challenges by fostering belonging and association (Najam & Mustamil, 2022). Research has shown that servant leadership fosters a supportive culture conducive to innovation and long-term organizational success (Najam & Mustamil, 2022). Servant leadership is a people-centered leadership model that prioritizes the well-being of employees, communities, and stakeholders over hierarchical authority. Unlike traditional leadership, which focuses on organizational control and financial outcomes, servant leadership empowers employees, fosters ethical responsibility, and enhances organizational commitment (Broch et al., 2020).

2.1.2. Sustainability-Oriented Innovation Theory

Sustainability-Oriented Innovation Theory - posits that innovation should integrate environmental, economic, and social dimensions to address sustainability challenges (Mousa & Bouraoui, 2023). In tourism, this includes green infrastructure, ethical supply chains, and eco-conscious services—areas where servant leaders play a critical enabling role by empowering employees and engaging stakeholders in sustainable practices (Utaminingsih et al., 2020). This theory emphasizes the role of innovation in achieving sustainability objectives

by integrating economic, social, and environmental considerations into business models. Human-related factors such as leadership commitment are crucial for service innovation and performance (Tajeddini et al., 2019).

2.1.3 Resource-Based View (RBV) of Competitive Advantage

The Resource-Based View (RBV) - suggests that unique and valuable organizational resources—such as leadership style, human capital, and ethical culture—can lead to a sustained competitive advantage (Haag et al., 2019). Servant leadership, by nurturing these resources, becomes a strategic asset that enhances organizational resilience and brand value (Hassan et al., 2021). RBV suggests that firms achieve sustainable competitive advantage through unique, inimitable resources such as leadership capabilities, human capital, and corporate culture. This aligns with the idea that managing potential resources through green business initiatives in SMEs can contribute to competitive advantage (Utaminingsih et al., 2020).

2.2 Servant Leadership and Stakeholder Engagement

Servant leadership, rooted in ethical and humanistic values, emphasizes empathy, stewardship, and commitment to community welfare (Chon & Zoltan, 2019). Unlike traditional leadership styles prioritizing organizational goals, servant leadership places service to others at the forefront, promoting inclusion, dialogue, and ethical treatment of all stakeholders (Chon & Zoltan, 2019). This approach fosters trust, empowerment, and open communication (Canavesi & Minelli, 2021), which are critical for stakeholder engagement in tourism, leading to greater participation in sustainability initiatives. In tourism, stakeholder engagement includes collaboration with local communities, government bodies, and customers, which are vital for the sustainable development of destinations (Chan et al., 2021).

Servant leadership can enhance sustainability strategies and meet stakeholder demands more effectively (Mahran et al., 2025). This is achieved by cultivating environments of trust where individuals feel valued and respected (Canavesi & Minelli, 2021). This creates a conducive atmosphere for collaboration and shared decision-making, essential for addressing the complex challenges of sustainable tourism development (Waligo et al., 2012). By prioritizing the needs and interests of stakeholders, servant leaders can foster a sense of shared ownership and responsibility for sustainable tourism practices (Byrd, 2007).

H1a: Servant leadership has a direct positive impact on stakeholder engagement in sustainable tourism.

2.3 Servant Leadership and Sustainability-Oriented Innovation

Innovation is a key strategic element in sustainable tourism, especially with rising environmental concerns and changing consumer preferences. Servant leaders, by prioritizing stakeholder needs and fostering collaboration, are well-positioned to drive sustainability-oriented innovation (Mahran et al., 2025). Servant leaders enable the creation of sustainable solutions like eco-friendly products and green operations (Tuấn, 2020). This inspires innovative practices that align with sustainability goals, suggesting a positive influence of servant leadership on sustainability-oriented innovation (Tajeddini et al., 2019).

Servant leadership's emphasis on ethical decision-making and community welfare further strengthens its role in promoting sustainability-oriented innovation (Chon & Zoltan, 2019). By empowering employees and creating a supportive environment, servant leaders encourage experimentation and continuous learning (Amankwaa et al., 2021), which are essential for innovation in tourism settings (Tajeddini et al., 2019). This approach can lead to unique offerings and processes that set the organization apart (Li et al., 2021).

H2a: Servant leadership fosters sustainability-oriented innovation in tourism enterprises.

2.4 Mediating Role of Stakeholder Engagement and Sustainability-Oriented Innovation

The mediating role of stakeholder engagement in achieving a sustainable competitive advantage is well-documented in tourism literature (Byrd, 2007). Servant leaders, who prioritize the needs and interests of stakeholders, are more likely to foster trust and shared values, which contribute to organizational strategies that yield lasting competitive benefits (Assagaf et al., 2018). This approach enhances the quality and relevance of sustainability initiatives, suggesting that stakeholder engagement mediates the relationship between servant leadership and sustainable competitive advantage (Waligo et al., 2012). Engagement with diverse stakeholders helps align business strategies with community values, thereby increasing legitimacy and long-term success (Chan et al., 2021).

Servant leadership's focus on building relationships and empowering stakeholders can lead to innovative solutions that address the complex challenges of sustainable tourism (Mahran et al., 2025). By involving stakeholders in decision-making processes, servant leaders can create a sense of shared ownership and responsibility for sustainable practices (Babu, 2012). This collaborative approach not only enhances the effectiveness of sustainability initiatives but also strengthens the organization's reputation and builds customer loyalty, ultimately contributing to a sustainable competitive advantage.

H1b: Stakeholder engagement has a direct positive impact on sustainable competitive advantage in sustainable tourism.

H3a: Stakeholder engagement mediates the relationship between servant leadership and sustainable competitive advantage.

Similarly, sustainability-oriented innovation serves as a crucial mechanism through which servant leadership translates into tangible competitive outcomes. Innovations driven by sustainability goals enhance efficiency, reduce environmental impact, and differentiate the brand, leading to long-term advantages (Hussein et al., 2024). This innovation allows tourism businesses to distinguish themselves in a crowded market through unique value propositions such as low-carbon services and authentic local experiences. These innovations not only appeal to eco-conscious travelers but also contribute to operational efficiency and regulatory compliance (Tuấn, 2020).

Servant leadership, with its focus on ethical values and stakeholder inclusion, can foster a climate conducive to sustainability-oriented innovation (Karatepe et al., 2020). By empowering employees and encouraging collaboration, servant leaders enable the development and implementation of innovative practices that align with sustainability objectives (Ruiz-Palomino et al., 2019). This, in turn, can lead to a sustainable competitive advantage, as these innovations are often difficult for competitors to imitate and can create lasting value for the organization (Evans, 2016). Some studies suggest that leadership style has a central role in gaining sustainable competitive advantage for a firm (Saythongkeo et al., 2022).

H2b: Sustainability-oriented innovation fosters sustainable competitive advantage in tourism enterprises.

H3b: Sustainability-oriented innovation mediates the relationship between servant leadership and sustainable competitive advantage.

2.5 Servant Leadership and Sustainable Competitive Advantage

Finally, Servant leadership's role in fostering a sustainable competitive advantage is a complex interplay of direct and indirect effects. While servant leadership has a positive influence on service innovation, there could be a negative side to it (Li et al., 2021). One possible negative impact is the potential for slower decision-making processes. Servant leaders prioritize

consensus and collaboration, which can extend the time it takes to reach decisions (Tajeddini et al., 2019). Balancing the need for inclusivity with the demands of efficiency is crucial. The initial investment of resources and time required for servant leaders to prioritize stakeholder needs and sustainability initiatives might result a direct negative impact (Lemoine et al., 2020). This could potentially divert resources from immediate competitive activities. However, the indirect positive impacts are significant. Servant leaders, by prioritizing the needs of stakeholders, including employees, customers, and the community, foster a culture of trust and collaboration (Canavesi & Minelli, 2021). This enhanced stakeholder engagement, in turn, fuels sustainability-oriented innovation (Saxena et al., 2024). This suggests that by prioritizing stakeholders, servant-leaders build shareholder value (Lemoine et al., 2020).

Sustainability-oriented innovation, driven by servant leadership and strong stakeholder relationships, can lead to unique products, services, and processes that differentiate the organization from competitors (Hasanuddin et al., 2024). This ultimately results in a sustainable competitive advantage that is difficult to imitate, as it is rooted in the organization's values, culture, and relationships (Saxena et al., 2024).

H4a: Servant Leadership has a direct negative impact on Sustainable Competitive Advantage.

H4b: Servant Leadership has a total positive impact on Sustainable Competitive Advantage.

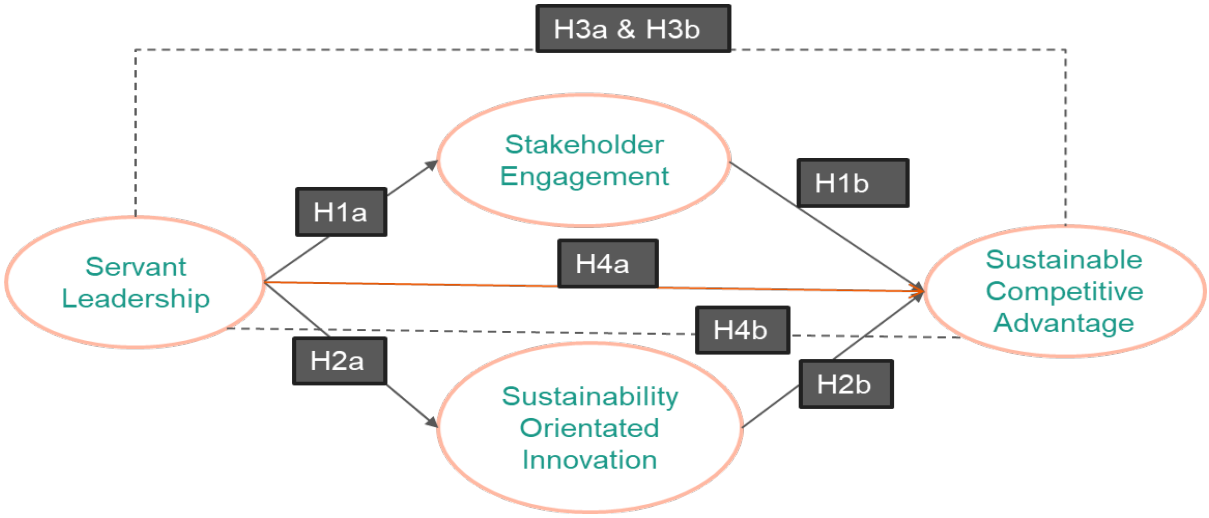

Figure 1: Theoretical Framework for SEM

3. Methodology

3.1 Research Instruments

A cross-sectional survey questionnaire, using well-established reflective measurement instruments were deployed for data collection (Trivedi & Srivastava, 2025). The items were assessed using a five-point Likert scale (5 = strongly agree; 4 = agree; 3 = Neutral; 2 = disagree; 1 = strongly disagree) and a seven-point Likert scale (1 = Strongly disagree, 2 = Disagree, 3 = Somewhat disagree, 4 = Neither agree nor disagree, 5 = Somewhat agree, 6 = Agree, 7 = Strongly agree). The use of Likert scales is a common practice in survey research to capture respondents' attitudes and perceptions (Lin, 2023). For reliability, the internal consistency of the Likert-scale data was checked; all the constructs belonged to reflective scales and has uni-dimensionality and uni-directionality (Trivedi & Srivastava, 2025). Cronbach's alpha was used to assess the internal consistency of the scales (Liu & Lee, 2018). The questionnaire includes a total of 47 items, representing:

Servant Leadership (7 items) - Adapted from Liden et al.'s several instruments exist to measure servant leadership (Hale & Fields, 2012; Latif & Marimón, 2019; Sendjaya et al., 2019), and the choice of Liden et al.'s scale ensures comparability with prior research. Stakeholder Engagement (12 items in three sections) - Adapted from Freeman, R. E. (1984), Vrontis, D., et al. (2021) and Dolnicar, S. (2013). Sustainability-Oriented Innovation (11 items from two sections) - Adapted from Wu et al. (2006), Homburg et al. (2002) and Oke and Idiagbon-Oke (2010). Sustainable Competitive Advantage (10 items in two sections) - Adapted from Porter (1985). In addition to above, another 7 items regarding the respondents' demographics were added and created the questionnaire using Google Forms (Trivedi & Srivastava, 2025).

3.2 Sampling and Data Collection

The study population comprised frontline employees at hotels and travel agencies in Eastern and North-Eastern India. To ensure data diversity, we focused on 3-star and above hotels and national-level travel agencies, as these establishments exhibit a range of operations from labour-intensive to innovation-intensive, operating in an uncertain business environment to create competitive advantages (Jaiswal & Dhar, 2015). Frontline employees in the tourism sector face unique challenges due to increasing work demands and the need for innovation.

We used purposive sampling (Hasanein & Elrayah, 2025; Kirima et al., 2017) to select 20 hotels and 10 travel agencies in 8 major cities: Kolkata, Patna, Ranchi, Siliguri, Guwahati, Agartala, Shillong, and Silchar. These cities were chosen for their population size and popularity among visitors, which supports the tourism sector. The criteria for city selection were large capital and a significant human-labor base. Furthermore, purposive sampling was employed to select frontline employees who engage in learning, are open to adopting an innovative environment, and have at least one year of work experience (Kim et al., 2018).

We first contacted the managers of the selected hotels and travel agencies to discuss the study objectives and gather information about the study population. After reviewing 3–5 frontline employee profiles from each establishment to ensure they met the sampling criteria, we sent invitations to participate in the survey (Buil et al., 2018). The Google Forms survey was distributed via email, LinkedIn, and WhatsApp (Jaiswal & Dhar, 2015). The survey form outlined the study's objectives, guaranteed confidentiality, and emphasized voluntary participation. No incentives were offered for completing the survey. Reminder emails were sent to non-respondents, and after three reminders, we received 263 consent and responses from 450 surveys sent, representing a response rate of 58%. After missing value analysis and removing disengaged responses, the final dataset consisted of 258 responses (Yang et al., 2021).

The sample size of 258 is adequate based on recommendations by Kline and Hair et al. Kline (1998, p. 10) suggests a sample size-to-parameter ratio of 20:1, while Hair et al. recommend a minimum sample size of 150 for SEM when measuring fewer than seven constructs and with modest communalities (Mount, 2005; Trivedi & Srivastava, 2025). Data collection occurred between November 2024 and February 2025. Following tests for multivariate normality and outlier removal, the final sample included 258 respondents. Demographic details of the participants are presented in Table 1.

Table 1: Demographic Details of Participants

No. of Cities – 8	Total organisation– 30		Total participants– 263	Final sample size– 258
Items	Level	No. of Employees	Level	No. of Employees
Gender	Male	131	Female	127
Age	18 to 25 Years	64	26 to 33 Years	54
	34 to 40Years	58	Above 40 Years	82
Work Exp.	1 to 3 Years	97	3 to 5 Years	82
	5 to 10 Years	55	More the 10 Years	24
Education	High school or below	79	College diploma	54
	Bachelor Degree	58	Master degree and above	67
Organization	Hotel	140	Travel Agency	118
Job position	Receptionist	28	Travel Consultant	45
	Concierge	28	Tour Coordinator	35
	Waitstaff / Bartenders	24	Tour Guide	38
	Housekeeping	34		
	Security Personnel	26		

3.3 Analytical Strategies

Following established guidelines, the data analysis for this study was conducted in several key steps (Lin, 2023). Initially, missing value and descriptive analyses were performed to ensure data normality (Aleryani, 2020). Subsequently, exploratory factor analysis using Harman's single-factor test was employed to evaluate common method bias (2023; Kim et al., 2016). Additionally, multivariate normality, outlier, and multicollinearity tests were conducted to validate the reliability and interpretability of individual variable effects (Kenkel, 2006).

Confirmatory factor analysis was then applied to assess the psychometric properties of the measures, including model fit, reliability, and validity. The hypothesized model's fit was compared against alternative models. Structural equation modeling was performed to test direct relationships between variables, and mediation analysis was conducted to determine the significance of mediators (Lin, 2023). A resampling method with Bootstrap (5000 samples) and a 95% confidence interval was used to address potential bias in estimations (Lin, 2023). All analyses were executed using R software (Mennens et al., 2018).

4. Results

4.1 Normality and Sampling Bias

A descriptive analysis of the dataset (N = 258) was performed to check the normality of data. Measures of kurtosis and skew are used to determine if indicators meet normality assumptions (Kline, 2005; Trivedi & Srivastava, 2025). The researcher calculated kurtosis and skewness to evaluate the normality of the data distribution. The results indicated that all 40 measurement items obeyed a normal distribution since they have acceptable values, the skewness (- 0.105 ~ 0.208) was between - 2 and + 2, recommended by Tabachnick et al. (2007), and kurtosis (- 0.286 ~ 0.274) ranged between - 7 and + 7 suggested Hair et al. (2019).

This study collected data using a self-administered and cross-sectional survey. Therefore, we sought remedial measures to check for common method bias (CMB) (Podsakoff et al., 2012; Trivedi & Srivastava, 2025). Harmon's one-factor test was applied to the data (Chakraborty et al., 2021; Podsakoff et al., 2003), and it was found that, the total variance explained by the

single factor was 52.6%, one dominating factor with slightly more than 50% variance. We have used different scale types e.g., mix 5- and 7-point Likerts items, thus ruling out the adverse impact of CMB.

4.2 EFA Result

Despite relying on a standardized questionnaire adapted from well-established literature, an exploratory factor analysis was performed to ensure the internal reliability of the factors (Bognár et al., 2024). The Kaiser-Meyer-Olkin *measure of sampling adequacy* was 0.98, which is close to 1.0, and Bartlett's test of sphericity was significant (P<0.001) with a value of 14567.89 for 780 degrees of freedom. Table 2 presents the output of the KMO and Bartlett's test.

Table 2: KMO and Bartlett's Test Result

KMO and Bartlett's Test		N=258
Kaiser-Meyer-Olkin (KMO)	Overall MSA	0.98
Bartlett's Test of Sphericity	Approx. Chi-Square	14567.89
	Degree of freedom (df)	780
	Significance (P value<0.001)	0.00

Table 3: Factor-wise Variance Explained

Eigenvalues and Variance Explained			
Factor	Eigenvalue	% of Variance	Cumulative %
Factor 1	9.45	38.30%	38.30%
Factor 2	6.71	25.50%	63.80%
Factor 3	4.12	12.50%	76.30%
Factor 4	2.21	8.10%	84.40%
Only factors with eigenvalues > 1 were retained. The cumulative variance explained (84.4%) confirms a strong factor structure.			

The total variance explained indicated that four factors had eigenvalues > 1 (Table 3), with rotation sums of squared loadings by all four factors cumulatively accounting for 84.40% of the variance (more than 50%), thus supporting the adequacy of the sample size.

The principal component analysis using the maximum likelihood method with varimax rotation was conducted in R to produce the EFA output. Table 4 shows the pattern matrix of the factor structure included in the scale. The rotated factor matrix shows the factor structure and item loadings (>0.77) in the data set, confirming that servant leadership comprises 7 items; stakeholder engagement comprises 12 items (Communication and Transparency, Involvement and Collaboration, and Trust and Relationship Quality with 4 items each); sustainability-oriented innovation comprises 11 items (Information and Communication Technologies with 4 items and Relational Innovation with 7 items); and sustainable competitive advantage comprises 11 items (Long-Term Competitive Positioning and Market Differentiation with 5 items each).

Table 4: Pattern Matrix of Rotated Factors

Pattern Matrix of Rotated Factors (Varimax, Kaiser Normalization)				
Item	Servant Leadership (SL)	Stakeholder Engagement (SE)	Sustainability-Oriented Innovation (SOI)	Sustainable Competitive Advantage (SCA)
SL1–SL7	.771–.804			
CT1–CT4		.825–.856		
IC1–IC4		.825–.858		
TRQ1–TRQ4		.841–.853		
ICT1–ICT4			.845–.879	
RI1–RI7			.865–.893	
LTCP1–LTCP5				.815–.847
MD1–MD5				.823–.857
Note: All factor loadings > 0.77 and items cleanly load onto their respective constructs.				

4.3 Multivariate Outliers, Multivariate Normality and Multicollinearity Check

Multivariate outliers were assessed using the Mahalanobis Distance Test via the CMAHALANOBIS package in R. The test indicated "Number of outliers = 0", suggesting no potential multivariate outliers in the data. Subsequently, multivariate normality and multicollinearity were examined (Naik, 2003). Multivariate normality was evaluated using Mardia's Test from the MVN package in R. The Mardia's kurtosis coefficient was 0.52 (within the range of -1.96 and +1.96), with a corresponding P-value of 0.603 (> 0.05), indicating that the data is multivariate normal (Keselman, 2014).

Table 5: Multivariate Outliers and Normality Test

Multivariate Outliers and Normality Test Results			
Test	Statistic	p-value	Result
Mardia Skewness	11645.46	0.138	✅ Multivariate normal
Mardia Kurtosis	0.52	0.603	✅ Multivariate normal
Mahalanobis Distance	Number of outliers = 0	—	✅ No outliers detected
Conclusion: The dataset meets assumptions of multivariate normality and has no multivariate outliers.			

To ensure result reliability, multicollinearity was assessed using the VIF method from the CAR package in R (Lin, 2023). The lowest VIF value was 2.001105 (> 0.3) and the highest VIF value was 4.778902 (< 5), suggesting no multicollinearity issues in the model (Lin, 2023).

Table 6: Variance Inflation Factor's Range

Variance Inflation Factor (VIF) Summary			
VIF Range	Lowest	Highest	Conclusion
Observed VIFs	2	4.78	✅ No multicollinearity (all < 5)
Acceptable Range	> 0.3	< 5	(Hair et al., 2006; Hair et al., 2019)

4.4 CFA Analysis

Confirmatory Factor Analysis was performed using the 'lavaan' and 'semTools' packages in R (Dash & Paul, 2021). The model's fit was assessed using various indices, and reliability (composite reliability, Cronbach's alpha) and validity (convergent and discriminant validity) were tested. Table 7 presents the model fit indices.

Table 7: Model Fit Indices

Model Fit Indices		
Fit Index	Value	Acceptable Threshold
Chi-square p-value	0.03	> 0.05 (not met)
CMIN/df	4	< 5.0 ✅
CFI	0.99	> 0.95 ✅
TLI	0.99	> 0.90 ✅
RMSEA	0.02	< 0.08 ✅
SRMR	0.03	< 0.05 ✅

Table 8: Discriminant Validity Test Result

Discriminant Validity (Fornell–Larcker Criterion)				
Construct	SE	SL	SOI	SCA
SE	0.89			
SL	0.68	0.93		
SOI	0.38	0.56	0.93	
SCA	0.45	0.44	0.57	0.9

The CFA results indicated a good model fit, with $\chi 2/df=4$, RMSEA of 0.024, RMR of 0.026, and CFI of .993. These values meet the recommended thresholds (RMSEA<.08, RMR<.05, CFI>.90) based on established guidelines (Park et al., 2020). Tables 8 and 9 respectively present the discriminant validity, and reliability and convergent validity test results.

Table 9: Reliability and Convergent Validity Test Results

Reliability and Convergent Validity						
Construct	Item	Std. Loading	Cronbach's α	Composite Reliability	AVE	MSV
Servant Leadership (SL)	SL1	0.936	0.979	0.979	0.87	0.465
	SL2	0.932				
	SL3	0.936				
	SL4	0.925				
	SL5	0.918				
	SL6	0.945				
	SL7	0.938				
Stakeholder Engagement (SE)	CT1	0.879	0.977	0.978	0.785	0.465
	CT2	0.879				
	CT3	0.877				
	CT4	0.894				
	IC1	0.89				
	IC2	0.879				
	IC3	0.874				
	IC4	0.884				
	TRQ1	0.899				
	TRQ2	0.9				
	TRQ3	0.895				
	TRQ4	0.881				
Sustainability-Oriented Innovation (SOI)	ICT1	0.931	0.986	0.986	0.869	0.329
	ICT2	0.925				
	ICT3	0.92				
	ICT4	0.931				
	RI1	0.926				
	RI2	0.935				
	RI3	0.941				
	RI4	0.936				
	RI5	0.936				
	RI6	0.936				
	RI7	0.937				
Sustainable Competitive Advantage (SCA)	LTCP1	0.878	0.974	0.974	0.792	0.329
	LTCP2	0.893				
	LTCP3	0.898				
	LTCP4	0.878				
	LTCP5	0.902				
	MD1	0.901				
	MD2	0.889				
	MD3	0.898				
	MD4	0.877				
	MD5	0.887				

All items had standardized factor loadings above 0.70, and the Average Variance Extracted values were also above 0.70, indicating good convergent validity (Wu et al., 2022). Furthermore, the Maximum Shared Variance was less than the respective AVE for all variables, providing additional evidence of convergent validity. Cronbach's alpha and composite reliability values for all variables were above 0.70, demonstrating good reliability (Wu et al., 2022).

Discriminant validity was assessed using the Fornell & Larcker criterion. The square root of the AVE for each construct was greater than its correlations with other constructs, supporting discriminant validity (Yang et al., 2021).

4.5 Hypotheses Testing

To examine the direct and indirect relationships between servant leadership, stakeholder engagement, sustainability-oriented innovation, and sustainable competitive advantage, structural equation modeling was employed using R software (Khairi et al., 2021; Testa, 2000). Path analysis was conducted by imputing the Factor Score from CFA using 'lavaan' and 'semTools' packages (Khairi et al., 2021). Stakeholder engagement and sustainability-oriented innovation were tested as mediators (Schuckert et al., 2018).

The model demonstrated a good fit, with RMSEA of 0.024, RMR of 0.026, GFI of .990, and CFI of .993 (Khairi et al., 2021). Tables 10, 11, and 12 present the path coefficients, mediation analysis, and hypothesis testing summary results.

Table 10: Path Coefficients Analysis

Path Coefficients (Direct Effects)			
Path	Std. Estimate	p-value	Result
Servant Leadership → Stakeholder Engagement	0.503	< .001	✅ Supported (H1a)
Servant Leadership → Sustainability Oriented Innovation	0.55	< .001	✅ Supported (H2a)
Servant Leadership → Sustainable Competitive Advantage	- 0.018	0.732	❌ Not significant (H4a)
Stakeholder Engagement → Sustainable Competitive Advantage	0.272	< .01	✅ Supported (H1b)
Sustainability Oriented Innovation → Sustainable Competitive Advantage	0.342	< .01	✅ Supported (H2b)

Path analysis revealed that servant leadership is positively and significantly associated with stakeholder engagement (β=.503, P<.001) and sustainability-oriented innovation (β=.55, P<.001) (Schuckert et al., 2018). However, servant leadership showed a negative and non-significant association with sustainable competitive advantage (β= -.018, P=.732). Stakeholder engagement and sustainability-oriented innovation were also positively and significantly associated with Sustainable Competitive Advantage (Mennens et al., 2018). Based on these results, H1a, H1b, H2a, and H2b were accepted, while H4a was rejected due to a non-significant p-value, although the relationship's nature aligned with the hypothesized direction.

Mediation analysis, treating Servant Leadership as the independent variable, Sustainable Competitive Advantage as the dependent variable, and Stakeholder Engagement and Sustainability Oriented Innovation as mediators, was conducted following the classical approach (Schuckert et al., 2018). The analysis, based on bootstrap procedures (500 samples) and bias-corrected bootstrap confidence intervals (95%), indicated that stakeholder engagement partially mediated the relationship between Servant Leadership and Sustainable Competitive Advantage (β=.137, P<.05). Similarly, Sustainability-Oriented Innovation partially mediated the relationship between Servant Leadership and Sustainable Competitive Advantage (β=.188, P<.05) (Schuckert et al., 2018). Thus, H3a and H3b were accepted. The results are provided in the following Table11.

Table 11: Mediation Effect Analysis

Mediation Results (Indirect Effect)			
Mediation	Estimate	p-value	Supported
Servant Leadership → Stakeholder Engagement → Sustainable Competitive Advantage	0.137	0.004	✅ Supported (H3a)
Servant Leadership → Sustainability Oriented Innovation → Sustainable Competitive Advantage	0.188	0.003	✅ Supported (H3b)

Summary of the hypotheses shows that direct effect of the input variable on the output variable was not significant, but the indirect effects of the input variable on the output variable were significant, resulting in a statistically significant total effect of the input variable on the output variable (β=.307, P<.05). Based on these results, H4b was accepted.

Table 12: Summary of Hypotheses Testing

Hypothesis Testing Summary					
Hypothesis	Path	Estimate	Std. Error	p-value	Result
H1a	SL → SE (a1)	0.503	0.036	< .001	✅ Supported
H2a	SL → SOI (a2)	0.55	0.057	< .001	✅ Supported
H4a	SL → SCA (b1)	–0.018	0.053	0.732	❌ Not supported
H1b	SE → SCA (c1)	0.272	0.041	< .01	✅ Supported
H2b	SOI → SCA (c2)	0.342	0.046	< .01	✅ Supported
H3a	SL → SE → SCA (indirect)	0.137	0.034	< .001	✅ Supported
H3b	SL → SOI → SCA (indirect)	0.188	0.031	< .001	✅ Supported
H4b	SL → SCA total effect	0.307	0.042	< .001	✅ Significant

5. Discussion

Servant Leadership demonstrated a strong, positive influence on both Stakeholder Engagement (H1a) and Sustainability-Oriented Innovation (H2a), affirming its role as a foundational leadership style for sustainable practices (Hasanuddin et al., 2024). This aligns with the idea that servant leadership motivates the cultivation of sustainable values and acknowledges the importance of environmental and cultural diversity (Nisha et al., 2022).

Both Stakeholder Engagement (H3a) and Sustainability-Oriented Innovation (H3b) significantly mediated the relationship between SL and Sustainable Competitive Advantage, indicating that SL enhances competitiveness indirectly by enabling collaborative innovation and trust-based engagement (Hasanuddin et al., 2024). This suggests that internal intangible resources like leadership, innovation, and stakeholder collaboration are critical for gaining a sustainable advantage (Jankalová & Jankal, 2020).

The direct effect of SL on SCA (H4a) was not significant, suggesting that the benefits of servant leadership materialize primarily through SE and SOI, supporting a full mediation model. However, the total effect (H4b) is significant, meaning SL still contributes to SCA through the mediators.

These findings align with the Resource-Based View, highlighting that internal intangible resources like leadership, innovation, and stakeholder collaboration are critical to gaining sustainable advantage (Jankalová & Jankal, 2020). Servant leadership fosters a broader focus that extends beyond shareholders, positively impacting employees, customers, suppliers, and the community (Lemoine et al., 2020).

6. Conclusion

This study provides empirical evidence supporting the positive impact of servant leadership on stakeholder engagement and sustainability-oriented innovation, ultimately contributing to sustainable competitive advantage within the tourism sector, as confirmed by the model fit indices. Path analysis and mediation analysis further validated these relationships. The findings underscore the importance of fostering servant leadership behaviors to enhance sustainable practices and competitive performance. The study also highlights the crucial role of stakeholder engagement and sustainability-oriented innovation as mediators in translating servant leadership into tangible performance outcomes.

Several limitations should be considered. First, the study employs a cross-sectional design, which limits the ability to establish causality between the variables (Broch et al., 2020; Chen et al., 2012). Longitudinal studies could provide more robust evidence of the relationships over time (Le & Lei, 2019; Schuckert et al., 2018). Second, while the data demonstrates good model fit and validity, cultural effects might influence the interactions between leaders and followers, given the specific context (Pai et al., 2022; Schuckert et al., 2018). Future research could benefit from samples with greater cultural and geographical diversity to enhance the generalizability of the findings (Schuckert et al., 2018). Also, the data was collected from a single industry, which limits the generalizability of the findings to other sectors (Pai et al., 2022).

Theoretical Implications - Extending Servant Leadership Theory: This study extends servant leadership theory by empirically validating its role in promoting sustainability-oriented innovation and stakeholder engagement within tourism, aligning with the Resource-Based View (Hasanuddin et al., 2024). This reinforces the idea that internal intangible resources are vital for a sustainable advantage (Jankalová & Jankal, 2020). Mediated Model: The non-significant direct effect of servant leadership on competitive advantage supports a fully mediated model, emphasizing that intangible organizational processes are crucial mechanisms in translating leadership into performance outcomes.

Practical Implications - Investment in Leadership Development: Tourism enterprises should invest in training programs that cultivate servant leadership behaviors, such as empowerment, ethical commitment, and stakeholder empathy, to drive innovation and long-term competitiveness (Broch et al., 2020). Strategic Prioritization of Stakeholder Engagement and Sustainability-Oriented Innovation: Stakeholder engagement and sustainability-oriented innovation should be treated as core strategic pillars in tourism management—enabling businesses to enhance brand reputation, employee loyalty, and eco-conscious customer appeal (Lemoine et al., 2020).

Future research could address the limitations of this study by: Employing longitudinal research designs to establish causality between servant leadership, stakeholder engagement, sustainability-oriented innovation, and sustainable competitive advantage (Schuckert et al., 2018). Examining the moderating effects of organizational culture and environmental factors on the relationships between these variables (Schuckert et al., 2018). Expanding the sample to include multiple industries and countries to enhance the generalizability of the findings (Lin, 2023). Investigating the role of other leadership styles, such as transformational leadership, in promoting sustainability within the tourism sector. Focusing on how leaders' demographic and psychological traits impact their commitment to sustainability (Mahran et al., 2025). Exploring customer-related outcomes in addition to business performance and employee behaviors related to sustainability initiatives (Mahran et al., 2025).

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