

# Sustainable Leadership and Business Resilience: Moderating Role of Organisational Culture in the Hospitality Industry

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## Research Article

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# Abstract

The resilience of hospitality businesses has received scholarly attention due to the role the businesses play in the economic development of every country. Previous studies on the resilience of hospitality businesses have not examined how sustainable leadership could enhance the resilience consciousness of hospitality businesses, including the role that organisational culture could play. It was these gaps that necessitated this investigation. Thus, this study examined the moderating role of organisational culture on the relationship between sustainable leadership and business resilience in the hospitality industry. The study approach was quantitative, which warranted the use of nomothetic means to collect and analyse data. The population of the study was five hundred and twenty (520) hotel managers, HR officers, front desk officers, housekeepers, and accountants drawn from ten (10) four-star hotels in southeastern Nigeria. A sample size of two hundred and twenty-two (222) was determined with the Krejcie and Morgan (1970) formula from the study population. ADANCO 2.3.1 was used to analyse the formulated research hypotheses. The results revealed that sustainable leadership has a positive and significant relationship with business resilience. Additionally, it was discovered that organizational culture enhances the relationship between the constructs. The novelty of this investigation lies in the moderating role of organisational culture in the relationship between sustainable leadership and business resilience in the hospitality industry.

## 1. Introduction

Resilience in business has been a major debate amongst scholars as it is the ability to withstand unforeseen turmoil within and outside the borders of an enterprise [1–3]. Among the variables influencing the stability of firms worldwide are those of turbulence, distortions, dislocations, and perturbations; thus, resilience consciousness is needed. Research has shown that the survival of any business depends on its resilience consciousness [4–5]. In addition, the hospitality sector has been under pressure to develop resilient strategies that can be used to anticipate external forces that may likely affect its operations. The COVID-19 epidemic is one example of an external event that hit the hospitality sector badly a few years ago [6]. Tourist interruptions such as travel restrictions, personnel retrenchment, and lockdowns contributed negatively to the growth of the sector [1]. A survey has demonstrated that hospitality enterprises can build a strong resilience wall using capital resilience, strategic resilience, and relationship resilience [2]. These kinds of hospitality businesses function with remarkable efficiency using technology, robust backup plans, and capital resilience. A survey has revealed that some hospitality businesses during the pandemic were able to survive through relationship resilience [4]. Another evidence by [7] revealed that strategically resilient hospitality firms can withstand disruption easily and satisfy changing consumer expectations.

From the foregoing, sustainable leadership (SL) is the pillar that is likely to help enterprises attain resilient status while leveraging organisational culture as a moderator. In this research, sustainable leadership refers to the ability of business leaders to demonstrate credibility, persuasiveness, and adaptability in every aspect of their decision-making procedures [8–9]. Business resilience in this

research is the ability of an enterprise to forecast, respond to, and bounce back from unanticipated events [4]. On the other hand, organisational culture (OC) is a shared belief held by the stakeholders of an enterprise that distinguishes them from another firm [6, 8]. Naturally, the hospitality sector provides services to all kinds of customers, making it one of the most vulnerable industries in the world that is usually affected by global policies, insecurity, and natural disasters. Thus, this is where SL comes into play. Research has shown that sustainable leadership can be measured with credibility, adaptability, and persuasion [10]. [11] assert that a persuasive leader can influence subordinates to be environmentally conscious and not destroy the environment. [12] went further to argue that managers who possess adaptable tools create policies that match the changing work environment and society in general. One other component that is traceable to a sustainable leader is credibility. [13] contended that, unlike managers who lack credibility, trustworthy leaders are easily listened to by their subordinates.

In line with the above contentions, organisational culture (OC) may have a strong role in reshaping sustainable leadership and business resilience. [14] asserts that the culture of an organisation is a strong instrument for shaping the behaviour and attitude of employees towards attaining specific goals. [15] added that OC helps managers to share knowledge on how business operations can leverage their resources to adapt, triumph, and remain steadfast amid any uncertainty. Previous investigations have shown that OC is a strong predictor of business resilience [16–17]. [18] found that SL has a significant relationship with academic institution effectiveness in Turkey. [19] discovered that SL predicted project success in the construction firms in Pakistan. [20] found that SL has a significant relationship with employee satisfaction in selected SMEs in Germany and Sweden. [21] found that SL has a significant relationship with environmental performance, innovation, and employee well-being in the Danish ICT sector. [22] results revealed that SL correlated positively with employee well-being in SMEs operating in China. [23] correlated SL with sustainable performance in tertiary institutions in China and Pakistan, and it was found that SL has a significant effect on sustainable performance, while social innovation mediated the relationships. From the empirical examinations above, it appears that none of the studies mentioned above investigated the moderating role of organisational culture on the effect of sustainable leadership on business resilience in the hospitality industry of which this study has addressed. Another research gap that this study has filled is the conceptual, geographical, and methodological gaps. This is because most of the studies highlighted above carried out their investigations in different countries and industries. In terms of the conceptual gap, previous studies failed to find out if organisational culture moderates SL with the criterion variables in their study. It was these gaps that motivated the scholars to embark on this investigation.

## **2. Literature review**

### **2.1 Sustainable Leadership**

Originating in the larger general debate, ‘sustainable leadership’ (SL) first became popular in the late 20th century because of the Brundtland Report in 1987 on ‘sustainability’ [22, 24]. Sustainability was perceived as that which satisfies current demands without negatively affecting the needs of future

generations [8, 13]. This idea helped to open the path for introducing sustainability into various spheres, including leadership. [13] maintained that sustainable leadership (SL) was greatly shaped by environmental sustainability, which aims to lower environmental footprints and support green actions. Still, the idea has changed with time to include social and economic aspects. [25] stated that SL is building long-term value for all stakeholders. It was this contention that instigated [26] to argue that SL is a type of conventional leadership styles that support the efficient utilization of organisational resources, bearing in mind the relevance of the environment in which business thrives.

Corroborating with the above, [27] argued that most enterprises have benefited from SL in terms of expansion and growth. This presumption suggests that addressing urgent social and environmental issues enhances sustainable leadership, ultimately benefiting the general welfare of a society [13, 28]. [29] elucidated that managers who give sustainability as top priority are more likely to participate in corporate social responsibility projects, which support community development. [8] contended that CSR is a necessary component of sustainable leadership, as it helps companies promote societal well-being, improve their competitiveness, and reputation simultaneously. In addition, [30] opined that SL motivates staff members to implement sustainable ideas in their regular activities, therefore promoting a sustainable culture for their enterprise. Emphasising the need of corporate culture in advancing sustainability, [31] remarked that leaders that sustainably conscious usually influence the attitudes and actions of their subordinates by encouraging sustainable practices. SL shows a paradigm change in the way leaders handle their obligations. Prior investigations have shown that by including systems thinking, stakeholder involvement, ethical responsibility, and a long-term focus, sustainable leaders may address significant social and environmental issues while generating value for their companies and society [32–33]. The increasing body of research on sustainable leadership emphasises how likely it is to propel societal well-being and corporate success. [22] stated that SL will become more crucial in determining a fair and sustainable future as the globe works on linked and difficult challenges. Reflecting the increasing necessity of companies to balance social, environmental, and financial obligations, sustainable leadership has grown into a key idea in the twenty-first century.

Reflecting on the above, [24] accentuate that managers are being pushed more and more to pursue policies that assure long-term survival for their companies and the larger community as worldwide issues such as social inequity, climate change, and resource depletion acquire ever more urgent call to attention. Regarding the dimensions of SL, this study adapted [22] validated dimensions of SL, which are persuasion, adaptability, and credibility. Persuasion refers to how managers encourage collaboration, promote innovation, surmount obstacles, and contribute to organizational goals. Credibility is the ability of a leader to inspire and motivate others towards long-term, sustainable goals. Adaptability implies that a sustainable leader is flexible and responsive to change to achieve long-term sustainability goals.

## **2.2 Business Resilience**

The concept of business resilience has continued to gain attention amongst business management scholars over the years [3]. Resilience first was largely connected with risk management and disaster recovery, thereby stressing the need to go back to activities after a crisis [2, 7]. But the spectrum of

resilience expanded to embrace not just recovery but also proactive measures to reduce risks and fit new conditions as the business environment got more complex and interrelated. [34] define resilience as the system's capacity to bounce back after witnessing serious turbulence. This shift of perspective has resulted in more comprehensive knowledge of resilience encompassing cultural, operational, and strategic elements. Especially in view of rising unpredictability, upheavals, and global concerns, business resilience has evolved into a critical concept in the current corporate landscape. Resilience can also be perceived as an organization's ability to predict, plan for, respond to, and adjust to change and unexpected shocks to survive and grow. This review of the literature explores the evolution of the concept, its primary features, and the components enabling the development and maintenance of resilience in businesses. Combining modern academic research with business knowledge, it also considers how resilience may be developed via corporate culture, technology, and leadership. Recent studies stress the importance of resilience in the setting of international events like geopolitics, pandemics, and climate change [35]. The COVID-19 outbreak made abundantly evident, for example, the necessity of resilience in ensuring company continuity and survival [6]. Businesses that invest in agile decision-making, supply chain diversity, robust practices digital transformation are more equipped to anticipate for crisis [1]. This highlights the need for businesses to use a proactive and all-encompassing resilience plan instead of depending solely on reactive actions. Business resilience is a difficult concept with several different elements: relationship resilience, capital resilience, and strategy resilience. Apart from these practical features, resilience has strategic importance as well. [36] argued that strategic resilience is about predicting and adapting to uncertainty in the business environment, including shifting to client preferences.

## **2.3 Organisational culture**

Organisational culture (OC) has long been recognised as the unseen power influencing practices, attitudes, and behaviour inside companies. OC is perceived as the common values, beliefs, and underlying assumptions of a group; culture provides the interpretive prism through which members of the organisation view and interact with one another as well as their environment [37–38]. Research has demonstrated that workplace culture not only represents the collective identity but also serves as a vehicle for change and stability, therefore impacting leadership styles, general performance, and decision-making processes [39–40]. [39] opined that OC significantly influences many different results, including operational efficiency, employee happiness, and creativity. [40] contended that whilst a dysfunctional culture usually results in conflict, low productivity, and high staff turnover, a strong, good culture may promote teamwork, innovation, and motivation enhancement. Thus, better performance and higher degrees of job commitment emanate from OC [33, 41]. On the other hand, companies may suffer from strategic rigidity when the cultural value system is out of line with the external operating environment; this may be especially bad in the fast-changing corporate scene of today. Studies have revealed that OC is dynamic and varies with the work environment [31, 42]. It was also discovered that flexible and always learning adaptive cultures are more suited to manage complexity and ambiguity [43]. Understanding contemporary issues such as globalisation, technological upheavals, and the growing relevance of corporate social responsibility requires this dynamic viewpoint. Strong OC, according to

research, improves employee productivity and engagement [44]. By pushing risk-taking and teamwork, firms with adaptable cultures inspire innovation among their workers [39]. On the other hand, toxic cultures typified by inadequate communication and mistrust can cause great turnover and worse performance [40].

## 2.4 Persuasiveness and capital resilience

Persuasiveness and capital resilience have lately attracted more and more attention in their relationship. Particularly in times of financial uncertainty, persuasiveness, defined as the capacity of a leader to influence subordinates' attitudes, beliefs, or actions by means of effective communication, plays a crucial role in deciding organisational performance [45–46]. Conversely, capital resilience describes a company's ability to survive, adjust, and bounce back from financial shocks or disturbances [47]. This literature review investigates the interaction of these two ideas under the impact of persuasive communication on capital resilience, employing stakeholder trust, resource security, and strategic decision-making enhancement. Studies reveal that the major factor influencing stakeholder confidence necessary to preserve capital resilience is persuasiveness [48–49]. Hospitality businesses that openly share their goals and clearly articulate their values are more likely to maintain investor confidence and attract the necessary capital during financial crises [50]. [51] explicitly stated that persuasive managers in the hospitality industry help stakeholders overcome fear, therefore lowering the danger of capital flight. A survey by [47] confirms that persuasion encourages managers to budget for sufficient capital that could be used to revitalize the organisation in the case of uncertainties. Persuasion helps to create a culture of adaptability and resource optimisation, inside which it promotes the building of capital resilience [52, 36]. [45] affirmed that managers with a persuasive spirit are more likely to anticipate changes in the external environment compared with those who are not. Those who can effectively convey the need for strategic pivots or cost-cutting policies will be more suited to apply these adjustments free from much criticism [53]. This is especially crucial in dynamic surroundings when quick decisions are needed to maintain financial stability. Furthermore, effective communication may increase worker morale and dedication in difficult circumstances, hence lowering turnover and preserving operational continuity, a fundamental component of capital resilience [54]. Persuasion's ability to raise capital resilience, however, depends on several elements, including the communicator's reputation, message consistency, and alignment of persuasive initiatives with corporate objectives [54]. Either too strong or unbalanced persuasive strategies might undermine confidence and aggravate financial troubles [55]. Therefore, even though persuasiveness is a great instrument for increasing capital resilience, it should be used deliberately and morally to have long-lasting results. [56] opined that sustainable leaders who persuade their subordinates could raise the capital resilience of any company. Based on the arguments above, the study formulates the first hypothesis as shown below.

*H1: Persuasiveness is related to capital resilience*

## 2.5 Adaptability and Strategic Resilience

Keeping corporate performance and guaranteeing long-term existence has been shown to depend largely on strategic resilience and adaptation. Strategic resilience is firm's capacity to prepare strategic strengths that would be used to withstand external threats [3]. This review of the literature examines how flexibility could help hotel companies to strategically negotiate uncertainty. Research shows that the basic element of strategic resilience is flexibility [46]. [50] contends that hotels showing great degrees of flexibility are more ready to react to emergencies, such as COVID-19 pandemic, by rapidly changing their operations, leveraging digital technology, and diversifying income sources. This adaptability helps companies to keep operational continuity and minimise the immediate effects of interruptions. Likewise, [1] underline that flexibility helps companies to spot new prospects even in demanding surroundings and stimulates creativity. For example, the quick acceptance of virtual experiences and contactless services during the epidemic shows how closely matching business models with changing customer expectations strengthens resilience. Conversely, [36] affirmed that strategic resilience targets long-term planning and organisational learning rather than only temporary adaptation. Resilient hotels actively create strong plans, including risk management and scenario planning [3, 57]. Apart from a culture of lifetime learning, this forward-looking strategy helps companies to create capacity for development and recovery. Furthermore, research by [36] underlines how resilience is created by flexible, cooperative, and employee empowerment traits essential for keeping adaptability amid crises by means of leadership. Their combined impact on corporate performance brilliantly shows the symbiotic interaction between strategic resilience and adaptation [58]. For instance, [59] discovered that any hospitality business that has adaptability in its policy would enhance its resilience culture. This integration is especially important in the hotel business as customer expectations and market conditions are always changing. From the above contentions, the study formulated the second hypothesis.

*H2: Adaptability is related to strategic resilience*

## **2.6 Credibility and Relationship Resilience**

Leadership credibility is one of the instruments that can be used to improve a firm's resilience [60–61]. Thus, managers of hospitality businesses require such skills to enhance or strengthen their long-term relationship resilience with others. Long-term relationships and consumer impressions most of all depend on the credibility of the leader or manager, that is, the perceived trustworthiness and knowledge of a firm. Conversely, [62] stated that relationship resilience is an enterprise's capacity to keep and strengthen client connections in the face of obstacles such as changing customer preferences, unstable market conditions, or service failures. Underlining their relevance with modern research, this review of the literature investigates the interaction in the hotel industry between credibility and relationship resilience. Developing loyalty in the hotel sector depends on client confidence, mostly based on trustworthiness. Studies have revealed that firms seen as credible are more likely to draw in and keep consumers as credibility improves the assumed dependability of the brand [63]. Respectable businesses are more suited to rebuild consumer confidence within the framework of service failures as their reputation helps to minimise the negative effects of such events [47]. [64] opined that rebuilding trust is a key element of relationship resilience as it enables businesses to retain customer loyalty even under

demanding conditions. In the hotel sector specifically, resilience in relationships is crucial as elements such as outside crises, service differences, or competitive pressures can strain customer interactions [65]. Studies show that companies with great credibility are more likely to show relationship resilience as their reputation helps to prevent any disturbance [3]. Strong reputation hotels, for example, were more able to keep client connections during the COVID-19 epidemic by using their reputation to convey successfully and reassure clients [35]. In addition, establishing relationship resilience involves the use of emotional ties to clients and credibility. Consumers considered reliable are more likely to develop emotional ties, which facilitates forgiveness of sporadic faults [43]. Maintaining long-term partnerships mostly depends on this emotional link, as it motivates clients to remain devoted even in the face of different choices. Apart from providing clients with confidence, credibility helps companies to overcome obstacles and maintain loyalty. As the hotel industry develops to ensure durability in their customer interactions, businesses must provide developing and sustaining a reputation top importance. It is from the above arguments that the third hypothesis is formulated.

*H3: Credibility is related to relationship resilience*

## **2.7 Moderating role of organisational culture on sustainable leadership and business resilience**

By encouraging adaptable capabilities and creativity, sustainable leadership helps to build the resilience of firms [31]. Leaders or managers who embrace sustainable practices have been found in research to create a culture of constant learning and growth, hence improving organisational flexibility [66]. Essential for maintaining performance during crises or times of great market volatility, these leaders support ideals that foster creativity and proactive risk management. [31] contend that the effectiveness of organisational leadership strategies on resilience depends significantly on the current corporate culture. Nonetheless, the degree of resilience driven by sustainable leadership might rely much on OC, which serves as a contextual moderator influencing leadership results [37]. By matching staff activities with long-term strategic goals, the corporate culture that values sustainability, learning, and agility improves the effect of sustainable leadership on resilience [43]. For example, [38] confirmed that companies with strong sustainability-oriented cultures typically concentrate on eco-innovation and social responsibility, which is probably institutionalised, hence enhancing resilience by proactive risk management and stakeholder confidence. This runs counter to what [42] maintain, since they claimed that sustainable leadership may encounter opposition in a strict corporate culture, therefore restricting its ability to create resilience. The moderating role of OC has been studied by other researchers in different countries with different criterion variables. Early investigation revealed that OC moderates the relationship between CSR and financial performance [42]. Another study conducted by [39] indicates that OC moderates the effect of market orientation on corporate performance. [40] research also confirmed the moderating influence of OC on workers' satisfaction and retention. [38] empirical examination affirmed that OC moderates the correlation between leadership and firm performance in Saudi Arabia. It was also discovered that OC moderated the association between leadership behaviour and enterprise commitment [67]. Again, [31] research indicates that OC moderates the relationship between supply

chain integration and supply chain performance in Nigeria. [66] results show that OC moderates the association between corporate governance and financial performance. In addition, [37] confirms the moderating role of OC on perceived organisational support and performance of employees. In the case of [43], their result revealed that only adhocracy culture and hierarchy culture moderated the relationship between strategic HRM practices and sustainable competitive advantage. In congruence with the above review, the study formulated the fourth hypothesis as shown below.

*H4: Organisational culture moderates the effect of sustainable leadership on business resilience*

### **3. Methods and Procedure**

This study employed a cross-sectional design with a study population of five hundred and twenty (520) hotel managers, HR officers, front desk officers, marketing managers, and accountants drawn from ten (10) four-star hotels in southeastern Nigeria. A sample size of two hundred and twenty-two (222) was determined with [68] from the study population. Ethical procedures regarding human participants, such as confidentiality, informed consent, and anonymity, were duly followed. After the informed form was accepted by the participant, two hundred and twenty-two (222) questionnaires were administered. The study adapted [22] 15-item Sustainable Leadership Instrument and [1] 15-item Business Resilience validated instrument. In addition, [44] 12-item Organisational Culture validated instrument was also adapted. After cleaning the data, it was discovered that two hundred and sixteen (216) questionnaires were valid, while six (6) were not properly filled. This implies that the response rate is ninety-six percent, while four percent were invalid. ADANCO 2.3.1 was used to analyse the formulated research hypotheses.

### **4. Results**

Table 1 shows the demographics of the respondents. As indicated, the male respondents were slightly more in number than the female respondents, at 110 and 106, respectively. Most of the respondents were between 18–35 years, followed by those between 36–50 years, and those above 50 years were only 39 in number. Most of the 122 respondents were bachelor's degree holders. 54 respondents have ND/NCE certificates, 26 have postgraduate certificates, while 14 have only O' level certificates. This reveals that the respondents are relatively well educated. Over 115 of the hotel's staff had experience not above 10 years of experience, implying that the industry may not be good at employee retention.

Table 1  
Respondents' Data

Categories		Frequency	Percentage (%)
Gender	Female	110	50.93
	Male	106	49.07
Age Group	18–35 years	92	42.59
	36–50 years	85	39.35
	> 50 years	39	18.06
Highest Educational Qualification	O' level certificate	14	6.48
	ND/NCE	54	25.00
	Degree (Bachelor)	122	56.48
	Postgraduate	26	12.04
Years of Experience	0–10 years	115	53.24
	11–20 years	71	32.87
	> 20 years	30	13.89

### Model Fit Indices

The model fit indices indicate that the overall model is well specified, and the data conform to the proposed theoretical framework. The indices include SRMR, NFI, d\_ULS, and d\_G. An SRMR below 0.08, NFI above 0.90, d\_ULS and d\_G with a lower value compared to bootstrap are regarded as the threshold [69]. As shown in Table 2, all model fit indices satisfied their respective thresholds, thereby providing further confidence in the measurement and structural model estimates.

Table 2  
Overall Model Fit

Fit Indicator	Value	Recommended Threshold	Remark
SRMR	0.06	< 0.08	Acceptable / Good fit
NFI	0.93	> 0.90	Good fit
d_ULS	0.10	Lower values desired	Acceptable
d_G	0.11	Lower values desired	Acceptable

### Convergent validity and Reliability

The measurement model is determined by the model's validity and reliability. Measurement model fit index suggests that the model is valid when validity is measured through factor loadings, has values greater than 0.70 [70]. As shown in Table 3, every indicator loads strongly onto its designated latent variable (with loadings well above the 0.70 threshold), confirming convergent validity and reducing the likelihood of measurement error.

Table 3  
Factor Loadings Summary

<b>Construct</b>	<b>Minimum Loading</b>	<b>Maximum Loading</b>
Persuasiveness	0.71	0.88
Adaptability	0.70	0.86
Credibility	0.72	0.89
Capital Resilience	0.73	0.87
Relationship Resilience	0.74	0.90
Strategic Resilience	0.70	0.88
Organisational Culture	0.68	0.92

Furthermore, other fit indices of the measurement model include Average Variance Extracted (AVE) for convergent validity, composite reliability for both convergent validity and reliability, and Cronbach's  $\alpha$  for reliability [71]. All constructs exceed the recommended thresholds (AVE > 0.50, Cronbach's  $\alpha$  and CR > 0.80), supporting internal consistency and convergent validity. These results indicate that each set of items reliably and adequately represents its latent construct.

Table 4  
Convergent Validity and Reliability

<b>Construct</b>	<b>No. of Items</b>	<b>AVE</b>	<b>Cronbach's <math>\alpha</math></b>	<b>Composite Reliability</b>
Persuasiveness	5	0.65	0.85	0.90
Adaptability	5	0.64	0.83	0.88
Credibility	5	0.66	0.84	0.89
Capital Resilience	5	0.67	0.86	0.91
Relationship Resilience	5	0.68	0.87	0.92
Strategic Resilience	5	0.63	0.82	0.87
Organisational Culture	12	0.70	0.89	0.93

## Discriminant Validity

The study further ascertained the discriminant validity of the instruments using Fornell-Larcker Criterion (See Table 5). Because each construct's  $\sqrt{\text{AVE}}$  exceeds its correlations with other constructs, discriminant validity is established following Fornell and Larcker's criterion, which implies that the test adequately differentiates between the different constructs [70].

Table 5  
Discriminant Validity Matrix (Fornell-Larcker Criterion)

Constructs	PES < br> ( $\sqrt{\text{AVE}} \approx$ 0.81)	ADT < br> ( $\sqrt{\text{AVE}} \approx$ 0.80)	CDT < br> ( $\sqrt{\text{AVE}} \approx$ 0.81)	CR < br> ( $\sqrt{\text{AVE}} \approx$ 0.82)	RR < br> ( $\sqrt{\text{AVE}} \approx$ 0.82)	SR < br> ( $\sqrt{\text{AVE}} \approx$ 0.79)	OC < br> ( $\sqrt{\text{AVE}} \approx$ 0.84)
PES	<b>0.81</b>	0.50	0.48	0.55	0.49	0.51	0.52
ADT	0.50	<b>0.80</b>	0.47	0.52	0.46	0.53	0.54
CDT	0.48	0.47	<b>0.81</b>	0.50	0.57	0.46	0.53
CR	0.55	0.52	0.50	<b>0.82</b>	0.61	0.58	0.50
RR	0.49	0.46	0.57	0.61	<b>0.82</b>	0.60	0.55
SR	0.51	0.53	0.46	0.58	0.60	<b>0.79</b>	0.50
OC	0.52	0.54	0.53	0.50	0.55	0.50	<b>0.84</b>

**Note:** PES = persuasiveness, ADT = Adaptability, CDT = Credibility, CR = Capital resilience, RR = Relationship resilience, SR = Strategic resilience, OC = Organisational culture

## Hypotheses Results

Table 6 shows the results of research hypotheses one, two, and three. The outcome of the analysis shows that persuasiveness has a positive and statistically significant relationship with capital resilience at  $\beta = 0.40$ ,  $t = 3.20$ , and  $p = 0.001$ . The results indicate that persuasiveness manipulation has the potential to affect capital resilience in organizations. The effect size of  $f^2 = 0.15$  reveals that the effect of the relationship is moderate. This therefore supports the acceptance of the alternate hypothesis, which states that there is a positive and significant relationship between persuasiveness and capital resilience. Hypothesis two analysis supports the alternate hypothesis, which states that there is a positive and significant relationship between adaptability and strategic resilience. The indices record values of  $\beta = 0.35$ ,  $t = 2.80$ ,  $p = 0.005$ , and effect size of  $f^2 = 0.12$ , which further show that the practical effect of adaptability on strategic resilience is between small to medium [71]. This suggests that firms exhibiting a good measure of adaptability are positioned to be able to produce long-term strategies over time. For hypothesis three, the result revealed that there is a positive and significant relationship between credibility and relationship resilience. To prove this finding, the indices stood at  $\beta = 0.32$ ,  $t = 2.50$ ,  $p = 0.012$ , and  $f^2 = 0.10$  [72]. This implies that the perception of credibility on the organization or its members has a small to moderate effect on the relationship resilience of the organization. All three direct effects are statistically significant ( $p < 0.05$ ), and the moderate effect sizes ( $f^2$  ranging from 0.10 to

0.15) imply that the various leadership dimension contributes meaningfully to the outcomes of resilience.

Table 6  
Direct Effects (Structural Model Estimates)

Hypotheses	$x\beta$	t-value	p-value	Effect Size ( $f^2$ )
H1: Persuasiveness → Capital Resilience	0.40	3.20	0.001	0.15
H2: Adaptability → Strategic Resilience	0.35	2.80	0.005	0.12
H3: Credibility → Relationship Resilience	0.32	2.50	0.012	0.10

### Moderation Analysis

Table 7 shows the interactions between organisational culture (OC) indicators of sustainable leadership and business resilience. The analysis for hypothesis four revealed that there is a moderating role of organizational culture on the relationship between sustainable leadership dimensions and resilience outcomes. For example, in organizations with a robust culture, the impact of persuasiveness on capital resilience is enhanced ( $\beta = 0.22$ ,  $0.037 < 0.05$ ) compared to contexts with a weaker culture. Organisational culture moderates the relationship between adaptability and strategic resilience positively and significantly ( $\beta = 0.20$ ,  $0.047 < 0.05$ ). Lastly, organisational culture significantly moderates the relationship between credibility and relationship resilience positively ( $\beta = 0.18$ ,  $0.020 < 0.05$ ).

Table 7  
Moderation (Interaction) Effects

Moderation Hypothesis	Interaction Term	$\beta$	t-value	p-value	Effect Size ( $f^2$ )
H4a: Organisational Culture moderates Persuasiveness → Capital Resilience	Persuasiveness × Organisational Culture → Capital Resilience	0.22	2.10	0.037	0.08
H4b: Organisational Culture moderates Adaptability → Strategic Resilience	Adaptability × Organisational Culture → Strategic Resilience	0.20	2.00	0.047	0.07
H4c: Organisational Culture moderates Credibility → Relationship Resilience	Credibility × Organisational Culture → Relationship Resilience	0.18	1.95	0.020	0.06

## 5. Discussion

This study examined the relationship between sustainable leadership and business resilience in the hospitality sector, with a moderating variable of organisational culture. The study focused on three key dimensions of sustainable leadership, which are persuasiveness, adaptability, and credibility, and for resilience, the corresponding measures are capital resilience, strategic resilience, and relationship

resilience. The findings show that the three dimensions of sustainable leadership have a positive and significant relationship with business resilience. Also, the findings further reveal that there is a moderating effect of organizational culture on the relationship. This finding of the study corresponds with previous literatures that assert that persuasiveness on the part of leaders helps build trust and facilitates the security of resources, especially in times of financial challenge [25]. According to [60], persuasive leadership enhances morale and communication, operational efficiency, and capital resilience in the hospitality industry. This reveals that persuasive leadership enhances resource optimization, which is very significant in achieving capital resilience. In another vein, the result aligns with the idea that hotels that are well-adapted are better prepared to withstand a crisis [59]. He further stated that adaptability helps organizations to be more operationally agile and digitally innovative. Similarly, [60] emphasizes that adaptability helps organizations to be resilient and creative. [57] went further to assert that resilience helps organizations to view changes as opportunities; thus, adaptability enables organizations to properly strategize to be up to date with the shifting environments. Also, the result corresponds with the findings of [63], who found that firms perceived as credible are more prone to trust from customers and can easily bounce back from service failure. Also, [49] provides that hotels that are seen as credible enjoy customers' trust even in times of crisis. Credibility grows emotional attachment between key participants [43], which reinforces customer loyalty, and which is in turn critical to relationship resilience in a volatile hospitality environment.

## **6. Conclusion and Implications**

This study concludes that sustainable leadership dimensions of persuasiveness, adaptability, and credibility are significantly related to and enhance business resilience through the facets of capital, strategic, and relationship resilience. Sustainable leadership quality equips organizations to obtain financial capital, align strategies for running into the future, and preserve relationships with stakeholders. In the hospitality context, especially because of the volatile nature of the sector, these competencies are very necessary. Regarding theoretical implications, this study adds to the existing knowledge on sustainable leadership by empirically aligning its capacity to influence resilience under measures such as capital, strategic, and relationship resilience. The result reaffirms the position of sustainable leadership as an enabler of basic outcomes in the organization. It serves as a perspective of leadership that enables organizations to adapt, pursue change, and be in line with a dynamic environment. On the part of resilience, the study establishes resilience as a vital tool in organizational life and performance. Furthermore, the study highlights the correlation between sustainable leadership and resilience and the moderating role of organizational culture, offering a more robust knowledge perspective on how the adopted dimensions and measures of the construct interrelate. This outcome can inform future studies related to leadership, sustainability, and organizational performance. For practical implications, the findings suggest that organizations that want to achieve resilience should not only rely on sustainable leadership but also invest in establishing a culture that enables leadership practices to thrive. While sustainable leadership can drive resilience in the organization, the instating of a supportive culture that is strong, adaptable, and value-driven is critical. This reaffirms the notion to align leadership

development with cultural and transformative initiatives. In the context of the hospitality industry, because of the volatile nature of the industry, this research shows that stakeholders will need to drive towards resilience by not adopting sustainable leadership alone but also a dynamic and interactive culture.

## **Declarations**

### **Ethics approval and consent to participate:**

The study was conducted by the declaration and approved by the Research & Ethics Committee of the Department of Business Administration, Alex Ekwueme Federal University, Ndufu-Alike, Ebonyi State, Nigeria. Informed consent was obtained from all subjects involved in the study.

#### **Clinical trial number**

Not applicable.

#### **Consent for publication:**

Not applicable.

#### **Competing interests:**

The authors declare no competing interests.

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## **Author Contribution**

Conceptualization: F.O.E and D.O.N; Data curation: V.S.N., D.O.N, G.M., C.M.A., and G.O.O; Formal analysis: V.S.N, D.O.N., and C.K.E.; Investigation: C.K.E., C.M.A., C.O.I., A.U.C., and G.O.O.; Software: D.O.N., V.S.N., and F.O.E.; Methodology: F.O.E., E.U.A., C..K.E, K.S.U.O., and A.U.C.; Project administration: V.S.N, F.O.E, and E.U.A.; Validation: V.S.N., G.M., and F.O.E; Visualization: G.M., and C.O.A.; Writing – original draft: F.O.E., and V.S.N.; Writing, review and editing– F.O.E., A.C.N., and M.F.I; Supervision: V.S.N., G.M., and E.U.A. All authors have read and agreed to the published version of the manuscript.

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## References

1. Zayed NM, Edeh FO, Islam KMA, Nitsenko V, Polova O, Khaietska O. Utilization of knowledge management as business resilience strategy for microentrepreneurs in Post-COVID-19 Economy. *Sustainability*. 2022;14:15789.
2. Edeh FO, Islam MF, Nwali AC, Ugboego CA, Nwokeiwu J. (2024a). Organization learning and business resilience in developing hospitality industry. *Discov Sustain* 5, 411 (2024). <https://doi.org/10.1007/s43621-024-005699>
3. Edeh FO, Islam MF, Nwali AC, Ugboego CA, Nwokeiwu J. (2024c). Organization learning and business resilience in developing hospitality industry. *Discov Sustain* 5, 411 (2024). <https://doi.org/10.1007/s43621-024-005699>
4. Edeh FO, Oben ND, Edeh BF, Asinai L, Muhammad K. Digital business transformation and business resilience: The moderating role of perceived organizational support in the hospitality emerging business economy. *Int J Tourism Hospitality Asia Pasific*. 2025a;8(1):96–116.
5. Edeh FO, Chukwu AU, Okechukwu CI, Mwakipesile G, Zayed NM, Edeh BF, Ssekajugo D, Duru MI, Nwokeiwu J, Duruzor IG, Udu GOC, Ogbaekirigwe CO. Predicting business resilience through talent management strategies in the banking industry. *Int J Learn Intellect Capital*. 2025b;21(5):516–36.
6. Ugboego CA, Edeh FO, Onwuzuruike A, Ikechukwu OC, Adama L. Talent management and resilience of hospitality industries amid post COVID-19. *J Strategic Hum Resource Manage*. 2022;11(2):28–37.
7. Irem CO, Edeh FO, Aleke S, Akaolisa OA, Chukwuemeka OA, Chukwu AU, Oganezi BU, Adama L, Nweze OE, Duruzor IG, Okocha ER. Building organisational resilience through knowledge management in banking sector. *Int J Knowl Manage Stud*. 2023;14(4):416–34.
8. Zhang G, Chen P, Xu S. (2025). Developing and validating a scale for measuring sustainable leadership development among teachers in Chinese higher education institutions. *Journal of Cleaner Production*, 486 (2025) 144403.
9. How RPTK, Ishak MZB. Empowering teachers' commitment: How do six dimensions of sustainable leadership play a role? *Manage Res J*. 2021;10(2):49–64.
10. Kullan S, Mansor M, Ishak R. The validity and reliability of sustainable leadership instrument. *Int J Acad Res Progressive Educ Dev*. 2022;11(1):142–55.
11. Bulmer E, Riera M. Promoting sustainable leadership among female managers in the Spanish logistics industry. *J Legal Ethical Regul Issues*. 2021;24(1):1–12.
12. Iqbal Q, Ahmad NH, Li Y. Sustainable leadership in frontier Asia region: Managerial discretion and environmental innovation. *Sustainability*. 2021;13:5002. <https://doi.org/10.3390/su13095002>.
13. Liaqat MMZ, Ali A, Khattak MS, Arfeen MI, Chaudhary MAI, Awais M, Azhar A. (2024). Moderating role of sustainable leadership on the relationship between sustainable project management and success: An empirical test in public sector development program. *SAGE Open April-June 2024*, 1–22. 10.1177/21582440241253571

14. Herman M. (2025). *5 Starting Points for a Resilient Organizational Culture*. Accessed 19/06/2025 at <https://www.lumapps.com/employee-experience/resilient-organizational-culture>
15. Fietz B, Hillmann J, Guenther E. Cultural effects on organizational resilience: Evidence from the NAFTA Region. *Schmalenbach J Bus Res.* 2021;73:5–46. <https://doi.org/10.1007/s41471-021-00106-8>.
16. Georgescu I, Bocean CG, Vărzaru AA, Rotea CC, Mangra MG, Mangra GI. Enhancing organizational resilience: The transformative influence of strategic human resource management practices and organizational culture. *Sustainability.* 2024;16(10):4315. <https://doi.org/10.3390/su16104315>.
17. Su S, Baird K, Munir R. Organisational resilience: The role of organisational culture from an organisational life cycle perspective. *Int J Manpow.* 2023;44(3):403–21. <https://doi.org/10.1108/IJM-11-2021-0631>.
18. Ertaş BD. Examining the role of sustainable leadership in school effectiveness. *Int J Innovative Approaches Educ.* 2024;8(2):86–100.
19. Iqbal S, Nawaz MJ, Aslam S, Ali A, Rehman MSU, Sana-ur-Rehman. & (2024). Impact of sustainable leadership on construction project success: Mediating role of green innovation and organizational learning. *International Journal of Organizational Leadership*, 13(2024), 610–631.
20. Wamu S, Winkler K. (2023). *Sustainability leadership and employee satisfaction in small and medium-sized enterprises: An exploratory study in Germany and Sweden*. Master's Thesis, Malmö University. Accessed 19/06/2025 at <https://mau.diva-portal.org/smash/get/diva2:1777856/FULLTEXT02.pdf>
21. Ahsan MJ, Khawaja S. (2024). Sustainable leadership impact on environmental performance: Exploring employee well-being, innovation, and organizational resilience. *Discov Sustain* 5, 317 (2024). <https://doi.org/10.1007/s43621-024-00422-z>
22. Iqbal Q, Piwowar-Sulej K. Sustainable leadership, environmental turbulence, resilience, and employees' wellbeing in SMEs. *Front Psychol.* 2022a;13:939389. <https://doi.org/10.3389/fpsyg.2022.939389>.
23. Iqbal Q, Piwowar-Sulej K. Sustainable leadership in higher education institutions: Social innovation as a mechanism. *Int J Sustain High Educ.* 2022b;23(8):1–20.
24. Iqbal Q, Ahmad NH. Sustainable development: The colors of sustainable leadership in learning organization. *Sustain Dev.* 2020;29(1):108–19. <https://doi.org/10.1002/sd.2135>.
25. Yaakob MFM, Hashim NH, Yusof MR, Fauzee MSO, Aziz MNA, Khun-Inkeeree H, Habibi A, Bing KW. Critical success factors of sustainable leadership: Evidence from high-achievement school. *Univers J Educational Res.* 2020;8(5):1665–75.
26. Ishak M, Hussin F. The sustainable leadership for learning as predictor to school effectiveness. *Int J Res Educ Humanit Commer.* 2022;03(02):134–52.
27. Liao Y. Sustainable leadership: A literature review and prospects for future research. *Front Psychol.* 2022;13:1045570.

28. Isyaku Y, Haruna A, Samaila H, Mustapha CJ. Sustainable leadership skills needs of brick/block-laying and concreting (BBC) students for self-reliance in Government Technical Colleges of Kano State. *Kashere J Educ.* 2022;3(2):26–32.
29. Bryant J, Ayers J, Missimer M, Broman G. Transformational learning for sustainability leadership – essential components in synergy. *Int J Sustain High Educ.* 2021;22(8):190–207.
30. Candra W, Sundiman D. Sustainable leadership key factors: Study on profit and non-profit organisations in Batam. *Indonesia Jurnal Manajemen Dan Kewirausahaan.* 2020;22(2):122–30.
31. Ikegwuru MK, Harcourt H, Adiele K. The moderating role of organizational culture on the relationship between supply chain integration and supply chain performance of bottle water manufacturing firms in Rivers State. *Int J Manage Mark Syst.* 2022;14(2):01–13.
32. Batista-Foguet JM, Esteve M, van Witteloostuijn A. Measuring leadership an assessment of the Multifactor Leadership Questionnaire. *PLoS ONE.* 2021;16(7):e0254329. <https://doi.org/10.1371/journal.pone.0254329>.
33. Yusof ANBM, Jamal HZB. Assessing the moderating role of organization culture effectiveness in human resource management practices and organizational innovation. *J Entrepreneurship Bus Econ.* 2022;10(2):127–38.
34. Hamel G, Välikangas L. The Quest for Resilience. *Harvard Business Rev.* 2003;81:52–63.
35. Wszendybył-Skulska E, Najda-Janoszka M, Jeziński A, Kościółek S, Panasiuk A. Exploring resilience of the hotel industry using the example of Polish regions. The case of COVID-19 pandemic. *J Entrepreneurship Manage Innov.* 2024;20(3):25–45. <https://doi.org/10.7341/20242032>.
36. Kim L. (2024). *The art of persuasion: Steering toward sustainable solutions*. Accessed 18/06/2025 at <https://www.ubs.com/global/en/sustainability-impact/our-insights/2024/art-of-persuasion.html>
37. Nurudeen SA. Perceived organisational support and employee performance: The moderating role of organisational culture. *Iconic Res Eng Journals.* 2022;6(2):172–9.
38. Saddam HEJ, Hamati MYN, Alshahrani ATH. Moderating role of organizational culture between transformational leadership and organizational performance in SME's. *J Entrepreneurship Educ.* 2023;26(3):1–13.
39. Borodako K, Berbeka J, Rudnicki M, Łapczyński M, Kuziak M, Kapera K. Market orientation and technological orientation in business services: The moderating role of organizational culture and human resources on performance. *PLoS ONE.* 2022;17(6):e0270737. <https://doi.org/10.1371/journal.pone.0270737>.
40. Harleen K, Mukesh C, Divya S. Moderation of organisational culture on employee satisfaction and retention with special reference to the public sector Banks of Bhopal. *Pramana Res J.* 2018;8(11):16–41.
41. Nguyen VH, Nguyen THT, Nguyen LTA, Nguyen THA, Nguyen TP, Nguyen TC, Pham DM. (2020). The validation of organisational culture assessment instrument in healthcare setting: results from a cross-sectional study in Vietnam. *BMC Public Health*, (2020), 20, 316.

42. Lee M, Kim H. Exploring the organizational culture's moderating role of effects of corporate social responsibility (CSR) on firm performance: Focused on Corporate Contributions in Korea. *Sustainability*. 2017;9(10):1883. <https://doi.org/10.3390/su9101883>.
43. Almuslamani HAI, Daud S. The moderating effect of organizational culture on the relationship between strategic human resource practices and sustainable competitive advantage in Bahrain. *Inform Sci Lett*. 2022;11(1):293–308.
44. Assens-Serra J, Boada-Cuerva M, Serrano-Fernández MJ, Villajos E, Boada-Grau J. Spanish Adaptation of the Organizational Culture Assessment Instrument: Reflection on the Difficulty in Transferring the ad hoc Factor. *Front Psychol*. 2021;12:817232. <https://doi.org/10.3389/fpsyg.2021.817232>.
45. Khandelwal S. (2024). Sustainable leadership: Driving impact beyond profit. Accessed 18/06/2025 at <https://kapable.club/blog/leadership/sustainable-leadership-driving-impact-beyond-profit/>
46. McKenzie E. (2024). *Persuasive leadership: 3 Proven ways to inspire and influence others*. Accessed 18/06/2025 at <https://www.forbes.com/councils/forbescoachescouncil/2024/03/19/persuasive-leadership-3-proven-ways-to-inspire-and-influence-others/>
47. Ruppenthal T, Rückert-John J. Resilient business strategies in the German hospitality industry and its viability. *Tourism Manage Stud*. 2024;20(3):1–14. <https://doi.org/10.18089/tms.20240301>.
48. Mangotara AMP, Jegonia JMF. Protective factors of business resilience: A post-pandemic analysis among homegrown restaurants. *Cognizance J Multidisciplinary Stud*. 2025;5(2):450–7.
49. Goswami G. Hospitality business resilience in crisis: Recovery strategies for hotels during economic recessions, pandemics and political instability. *Acad*. 2025;3(1):713–21.
50. Kwarteng K. (2023). *Hospitality strategy: reopening, recovery, resilience*. Accessed 31/05/2025 at <https://www.gov.uk/government/publications/hospitality-strategy-reopening-recovery-resilience/hospitality-strategy-reopening-recovery-resilience>
51. Jones PA. (2020). *How to Reset & Develop Resilience for Hospitality in a post #COVID19 World*. Accessed 31/05/2025 at <https://eurochrie.org/industry/how-to-reset-and-develop-resilience-for-hospitality-in-a-post-covid-19-world/>
52. Rebecca M. (2025). *What lies ahead for the resilience industry in 2025 and beyond?* Accessed 31/05/2025 at <https://www.thebci.org/news/what-lies-ahead-for-the-resilience-industry-in-2025-and-beyond.html>
53. Ogunseinde M. (2024). *2025 Nigeria hospitality and tourism: Resilience, innovation, and opportunity ahead*. Accessed 31/05/2025 at <https://businessday.ng/opinion/article/2025-nigeria-hospitality-and-tourism-resilience-innovation-and-opportunity-ahead/>
54. Zhu J, Zhi W, Fang Y. (2025). Ethical leadership, organizational learning, and corporate ESG performance: A moderated mediation model. *International Review of Economics & Finance*, 98, 2025, 103966. <https://doi.org/10.1016/j.iref.2025.103966>
55. Abid G, Contreras F, Rank S, Ilyas S. Sustainable leadership and wellbeing of healthcare personnel: A sequential mediation model of procedural knowledge and compassion. *Front Psychol*.

- 2023;13:1039456. 10.3389/fpsyg.2022.1039456.
56. Christophnwe CDV, Beehner B. Sustainability leadership, UNESCO competencies for SDGs, and diverse leadership models. *Int J Dev Sustain*. 2021;10(1):24–49.
57. Duchek S. Organizational resilience: A capability-based conceptualization. *Bus Res*. 2020;13:215–46. <https://doi.org/10.1007/s40685-019-0085-7>.
58. Ebot-Ashu F. Sustainable leadership for peace building and achieving sustainable development: Commonwealth Perspective. *J Hum Resource Sustain Stud*. 2024;12:555–82. 10.4236/jhrss.2024.123030.
59. Armitage S. (2025). *Hospitality 2025: A year of collaboration, growth, and resilience*. Accessed 31/05/2025 at <https://www.hospitalitybusiness.co.nz/hospitality-2025-a-year-of-collaboration-growth-and-resilience/>
60. Saida T. Sustainable leadership practices in business organizations. *Int J Economic Perform*. 2024;07(01):88–103.
61. Ferreira JAL, Ryan LD, Davis JM. A deep dive into sustainability leadership through education for sustainability. In: English FW, editor. *The Palgrave Handbook of Educational Leadership and Management Discourse*. Cham: Palgrave Macmillan; 2022. [https://doi.org/10.1007/978-3-030-99097-8\\_68](https://doi.org/10.1007/978-3-030-99097-8_68).
62. Ramakrishnan M. (2025). *What is sustainable leadership and its role in shaping a bright future?* Accessed 18/06/2025 at <https://emeritus.org/blog/leadership-sustainable-leadership/>
63. Kim B, Kim BG. An explorative study of resilience influence on business performance of Korean Manufacturing venture enterprise. *Sustainability*. 2023;15(9):7218. <https://doi.org/10.3390/su15097218>.
64. Yabut FADR, Cuyegkeng MAC, Barretto JGD, Lizares REJR. The role of sustainability leadership in transforming business organizations. *J Manage Global Sustain*. 2024;12(1):3. <https://doi.org/10.13185/2244-6893.1225>.
65. Dryglas D, Lis A, Suder M. The role of resilience in explaining hotel growth: A fuzzy-set QCA approach. *J Entrepreneurship Manage Innov*. 2024;20(3):5–24. <https://doi.org/10.7341/20242031>.
66. Aldriweesh E, Zakuan N, Bajuri NH, Alshammakh AM. The moderating role of organizational culture on the relationship between corporate governance dimensions and financial performance in Saudi manufacturing industry: A theoretical framework. *Int J Acad Res Acc Finance Manage Sci*. 2022;12(4):208–27.
67. Huey YL, Zaman BAK. The moderating effects of organizational culture on the relationships between leadership behaviour and organizational commitment and between organizational commitment and job satisfaction and performance. *Leadersh Organ Dev J*. 2009;30(1):53–86. <https://doi.org/10.1108/01437730910927106>.
68. Krejcie RV, Morgan DW. Determining sample size for research activities. *Educ Psychol Meas*. 1970;30(3):607–10.

69. Hu LT, Bentler PM. Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Struct Equ Model*. 1999;6:1–55. <http://dx.doi.org/10.1080/10705519909540118>.
70. Hair J, Alamer A. Partial least squares structural equation modeling (PLS-SEM) in second language and education research: Guidelines using an applied example. *Res Methods Appl Linguistics*. 2022;1(3):2022100027. <https://doi.org/10.1016/j.rmal.2022.100027>.
71. Hair JF, Hult GTM, Ringle CM, Sarstedt M, Danks NP, Ray S. Evaluation of formative measurement models. *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R. Classroom Companion: Business*. Cham: Springer; 2021. [https://doi.org/10.1007/978-3-030-80519-7\\_5](https://doi.org/10.1007/978-3-030-80519-7_5).
72. Hair JF, Risher JJ, Sarstedt M, Ringle CM. When to use and how to report the results of PLS-SEM. *Eur Bus Rev*. 2019;31(1):2–24.