RESEARCH ARTICLE

HOW STRATEGIC RESOURCES BECOME SUSTAINABLE CAPABILITIES: PARALLEL MEDIATION OF STRATEGIC FLEXIBILITY AND ORGANIZATIONAL PERFORMANCE IN NONPROFIT EDUCATION

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Abstract : This study examines how innovation integration, technology, and stakeholder collaboration contribute to organizational sustainability in nonprofit educational organizations, with strategic flexibility and organizational performance serving as parallel mediators. A cross-sectional survey was conducted among 202 educators and educational staff from a population of 409 employees across 24 educational units of Yayasan Al Abidin Surakarta, Indonesia. Data were collected using stratified random sampling and analyzed through partial least squares structural equation modeling (PLS-SEM) with 5,000 bootstrap resamples. The findings demonstrate that innovation integration and stakeholder collaboration positively influence strategic flexibility, organizational performance, and organizational sustainability. Technology has a significant direct effect on organizational sustainability but does not significantly affect strategic flexibility or organizational performance. Furthermore, strategic flexibility and organizational performance positively contribute to organizational sustainability and significantly mediate the relationships between innovation integration, stakeholder collaboration, and organizational sustainability. However, neither mediator significantly mediates the relationship between technology and organizational sustainability. These findings advance an Adaptive Organizational Sustainability Model (AOSM), positioning strategic flexibility and organizational performance as complementary mechanisms through which organizational resources are transformed into sustainability outcomes. The asymmetric role of technology suggests that digital resources may directly support sustainability, while their contribution to adaptive capability and performance requires complementary organizational conditions. The study highlights the importance of integrating technology with human capabilities, managerial processes, organizational routines, and stakeholder engagement. For nonprofit educational organizations, strengthening innovation integration and stakeholder collaboration, alongside capability development and process redesign, is essential for achieving long-term organizational sustainability.

Keyword: Innovation Integration; Technology; Stakeholder Collaboration; Strategic Flexibility; Organizational Performance; Organizational Sustainability

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Introduction

Organizational sustainability has become a critical concern for organizations operating in environments characterized by technological disruption, institutional change, increasing stakeholder expectations, and persistent uncertainty. Rather than referring merely to short-term organizational survival, sustainability reflects an organization's capacity to maintain relevance, create stakeholder value, adapt to environmental change, and sustain performance over time. This perspective is consistent with the Resource-Based View (RBV), which emphasizes the strategic value of organizational resources [1], and dynamic capability theory, which highlights organizations' abilities to sense environmental changes, seize emerging opportunities, and reconfigure resources in response to changing conditions [2]. More recent research also emphasizes the importance of dynamic capabilities in enabling sustainability-oriented innovation and organizational transformation [3], [4].

These challenges are particularly relevant to educational organizations. Educational institutions must simultaneously respond to digital transformation, changing learning models, regulatory developments, increasing service-quality expectations, and increasingly diverse stakeholder demands. Digital transformation can improve organizational processes and value creation, but technological resources alone do not necessarily generate sustainable outcomes. Their contribution depends on complementary organizational capabilities that enable technology to be integrated into processes, decision-making, and organizational transformation [5], [3]. Therefore, sustainability in nonprofit education should be understood not only as a resource-availability issue but also as an **organizational capability and resource-conversion problem**.

Existing research identifies innovation, technology, stakeholder relationships, dynamic capabilities, strategic flexibility, and organizational performance as important factors associated with long-term organizational outcomes. Innovation can strengthen organizations' ability to renew processes and services, while digital transformation can improve information processing, coordination, and organizational responsiveness [5], [3]. From a stakeholder perspective, relationships with relevant actors can provide information, legitimacy, trust, and access to external resources that support organizational continuity [6]. Strategic flexibility, meanwhile, enables organizations to reconfigure resources and strategic responses when environmental conditions change [7], [8]. Sustainability-oriented innovation research further suggests that innovation, collaborative networks, and dynamic capabilities need to be considered jointly in explaining organizational responses to sustainability challenges [4].

Despite these advances, **four important research gaps remain**. **First, there is a fragmented-determinants gap.** Innovation, technology, stakeholder collaboration, strategic capabilities, and organizational performance have frequently been examined through separate theoretical and empirical streams. Sustainability-oriented innovation research has begun to connect innovation, collaborative relationships, and dynamic capabilities, indicating that organizations require appropriate capabilities to transform strategic resources into sustainability-oriented activities [4]. Nevertheless, an integrated explanation of how multiple strategic resources jointly contribute to organizational sustainability remains underdeveloped. Consequently, it remains unclear whether different strategic resources follow similar or distinct pathways toward sustainability.

Second, there is a resource-conversion mechanism gap. RBV explains why valuable organizational resources can contribute to sustained competitive and organizational advantage [1], whereas dynamic capability theory emphasizes that resources must be integrated, developed, and reconfigured to remain valuable under changing environmental conditions [2]. Recent research on digital transformation similarly indicates that technology generates organizational value when it is accompanied by dynamic capabilities and organizational transformation processes [5], [3]. Thus, possessing innovation resources, technological infrastructure, or stakeholder relationships does not necessarily guarantee sustainable organizational outcomes. This leaves a central question insufficiently resolved: **how are heterogeneous strategic resources actually converted into organizational sustainability?**

Third, there is a parallel-mediation gap. Existing studies have examined dynamic capabilities, strategic flexibility, innovation, technology, and organizational performance through different direct and indirect relationships. Strategic flexibility represents an organization's ability to develop alternative strategic responses and reconfigure resources when environmental conditions change [7], [8]. Organizational performance, in contrast, represents the realized outcomes of resource utilization through effectiveness, efficiency, productivity, service quality, goal attainment, and stakeholder satisfaction. However, limited attention has been given to **strategic flexibility and organizational performance as two parallel but conceptually distinct conversion mechanisms** through which multiple strategic resources contribute to organizational sustainability. Examining these mechanisms simultaneously can provide a more complete explanation of how organizations transform resources into sustainable outcomes.

Fourth, there is a contextual gap. Much of the literature connecting strategic resources, dynamic capabilities, digital transformation, innovation, and sustainability has developed within business, industrial, and technology-oriented contexts [5], [3], [4]. Nonprofit educational organizations differ from commercial organizations because their sustainability cannot be evaluated solely through financial outcomes. Their continuity also depends on educational service quality, institutional legitimacy, stakeholder trust, social value

creation, and their ability to respond to changing educational needs. Accordingly, relationships established in commercial organizations cannot automatically be assumed to operate in the same manner within nonprofit educational institutions.

Yayasan Al Abidin Surakarta provides a relevant empirical setting for addressing these research gaps. The foundation manages educational services ranging from early childhood to senior secondary education. Its student population increased from 3,923 in 2020 to 6,753 in 2024, while the number of educational units expanded from 16 to 24. The organization has also developed differentiated programs in international education, information and communication technology, and Qur'anic education. These developments create an **explanatory rather than failure-based research problem**: what strategic resources and organizational mechanisms help explain the foundation's capacity to sustain and expand its educational services? Thus, this setting provides an opportunity to investigate sustainability as an adaptive organizational process rather than merely as a response to organizational decline.

To address these gaps, this study examines three strategic resource domains: **innovation integration, technology, and stakeholder collaboration**. Innovation integration reflects the organization-wide incorporation of new ideas, educational services, and process improvements. Technology represents the availability, adoption, and utilization of digital and information systems. Stakeholder collaboration captures communication, trust, participation, and partnerships with actors who influence or are influenced by the organization. Drawing on RBV [1], dynamic capability theory [2], stakeholder theory [6], technology acceptance logic [9], and strategic and organizational flexibility perspectives [7], [8], this study proposes that these strategic resources can contribute to organizational sustainability both directly and through **two parallel conversion mechanisms: strategic flexibility and organizational performance**.

This study makes **three principal contributions**. First, it addresses the fragmented-determinants and resource-conversion gaps by integrating innovation, technology, and stakeholder collaboration within a common **resource–conversion–sustainability framework**. This approach shifts the analytical focus from whether strategic resources matter to **how their value is converted into organizational sustainability**, thereby extending the resource-based and dynamic capability perspectives [1], [2]. Second, the study addresses the parallel-mediation gap by distinguishing **strategic flexibility as an adaptive conversion mechanism** from **organizational performance as an outcome-based conversion mechanism** and examining their simultaneous mediating roles. Third, by investigating these relationships in nonprofit education, the study extends organizational sustainability research beyond predominantly commercial contexts and proposes the **Adaptive Organizational Sustainability Model (AOSM)** as an empirically testable framework explaining how different strategic resources may be converted into sustainable organizational outcomes.

Accordingly, this study addresses three research questions: **(1)** How do innovation integration, technology, and stakeholder collaboration influence strategic flexibility, organizational performance, and organizational sustainability? **(2)** How do strategic flexibility and organizational performance contribute to organizational sustainability? **(3)** To what extent do strategic flexibility and organizational performance mediate the relationships between strategic resources and organizational sustainability? By addressing these questions, this study seeks to explain not merely whether strategic resources contribute to sustainability, but **how different strategic resources are converted into sustainable organizational outcomes in the nonprofit education context**.

Theoretical Framework And Hypotheses

The conceptual model integrates complementary theoretical perspectives to explain how strategic organizational resources are transformed into organizational sustainability. The Resource-Based View (RBV) explains why valuable organizational resources can become sources of sustained advantage [1], whereas dynamic capability theory emphasizes organizations' abilities to sense environmental changes, seize opportunities, and integrate and reconfigure resources under changing conditions [2]. Recent empirical evidence reinforces this resource-conversion perspective by showing that dynamic capabilities contribute to sustainability performance when organizations continuously develop and renew capabilities in response to environmental demands [10].

Stakeholder theory complements this perspective by explaining how relationships with stakeholders provide information, legitimacy, trust, and access to external resources [6]. Technology Acceptance Model (TAM) explains the acceptance and utilization of technology through perceived usefulness and ease of use [9], while recent digital-transformation research suggests that technological resources generate organizational value when supported by complementary dynamic capabilities and organizational transformation processes [3]. Finally, strategic flexibility theory emphasizes resource and coordination flexibility in responding to environmental change [7], whereas organizational flexibility provides a broader explanation of how organizations maintain alignment between internal capabilities and environmental turbulence [8]. Together, these perspectives provide the theoretical basis for explaining organizational sustainability as a resource-conversion process rather than merely an outcome of resource possession.

Innovation Integration and Organizational Outcomes

From the perspectives of RBV and dynamic capability theory, innovation becomes strategically valuable when new ideas, knowledge, services, and processes are integrated into organizational routines. Innovation integration therefore extends beyond generating new ideas; it reflects an organization's ability to embed innovation in decision-making, service delivery, operational processes, and resource allocation. This integration creates greater strategic response variety and enables organizations to reconfigure resources when environmental conditions change.

The underlying causal mechanism is one of resource recombination and organizational renewal. Innovation integration expands the range of strategic alternatives available to the organization, enabling faster adjustments to policies and processes. It can also improve service quality, efficiency, responsiveness, and organizational performance. Over time, these improvements can strengthen organizational relevance and the capacity to sustain operations under changing environmental conditions.

Recent research supports the connection between innovation capability, dynamic capabilities, and sustainability-oriented outcomes. [11] show that organizational readiness and dynamic capabilities are important for developing sustainability-oriented innovation activities. [10] demonstrate that the continuous evolution of dynamic capabilities contributes to business sustainability performance. Research on innovation capability and sustainability also indicates an increasingly close relationship between organizational innovation capabilities and sustainable organizational outcomes [12], [4].

Nevertheless, the literature remains fragmented. Much of the empirical evidence is derived from manufacturing, SMEs, and other profit-oriented settings, while innovation is frequently examined either as an outcome of dynamic capabilities or as a direct predictor of organizational performance. Less is known about whether **innovation integration simultaneously enhances strategic flexibility, organizational performance, and organizational sustainability**, particularly in nonprofit educational organizations. This contextual and mechanism gap leads to the following hypotheses:

H1. Innovation integration positively influences strategic flexibility.
H2. Innovation integration positively influences organizational performance.
H3. Innovation integration positively influences organizational sustainability.

Technology and Organizational Outcomes

TAM and dynamic capability theory provide complementary explanations of the organizational value of technology. TAM suggests that technology utilization depends on users' perceptions of usefulness and ease of use [9], whereas dynamic capability theory suggests that technological resources create strategic value when they are integrated into organizational processes and used to sense, seize, and respond to environmental change [2].

The causal mechanism operates through information accessibility, connectivity, process efficiency, coordination, and decision support. Technology can accelerate information flows, facilitate communication, improve data accessibility, support service continuity, and reduce process inefficiencies. These benefits should enable organizations to respond more rapidly to changing conditions, improve operational outcomes, and strengthen their long-term viability.

Recent empirical research, however, suggests that the relationship between technology and organizational outcomes is more complex than a simple technology–performance linkage. [3] identify dynamic capabilities as critical organizational mechanisms for sustainable digital transformation, indicating that digital technologies require complementary capabilities to generate sustainable organizational value. Research on organizational readiness for big-data analytics similarly emphasizes that technological potential depends on organizational readiness and supporting capabilities [13]. Studies of digital adaptability further indicate that organizations obtain sustainable performance benefits when technological resources are accompanied by the capacity to adapt and respond to changing environments [14].

These findings reveal an important inconsistency and mechanism gap. Technology acquisition or adoption does not necessarily create strategic flexibility or improve organizational performance automatically. Digital infrastructure may coexist with uneven employee competence, fragmented systems, limited process redesign, and weak managerial integration. Moreover, much of the empirical evidence comes from commercial organizations, while evidence from nonprofit educational institutions remains limited. It is therefore necessary to empirically test rather than assume the effects of technology on adaptive capability, performance, and sustainability.

H4. Technology positively influences strategic flexibility.
H5. Technology positively influences organizational performance.
H6. Technology positively influences organizational sustainability.

Stakeholder Collaboration and Organizational Outcomes

Stakeholder theory conceptualizes stakeholder relationships as strategic organizational assets because they provide information, legitimacy, trust, social support, and access to external resources [6]. Dynamic capability theory extends this argument by suggesting that external relationships can enhance organizational sensing and provide knowledge and resources required for adaptive responses [2].

The causal mechanism begins with stakeholder interaction and resource access. Continuous communication, participation, feedback, trust, and partnerships provide organizations with information about emerging needs and environmental changes. This information can improve strategic decision-making and facilitate adjustments to organizational policies and resource allocations. Stakeholder collaboration can simultaneously improve service quality, legitimacy, resource mobilization, and stakeholder satisfaction, thereby strengthening organizational performance and sustainability.

Recent research provides increasing support for this mechanism. [14] find that stakeholder engagement is relevant to sustainable MSME performance and highlight the role of digital adaptability in translating stakeholder-related resources into sustainable outcomes. [15] identify stakeholder integration as an important dimension in the development of dynamic capabilities for sustainability. [11] similarly connect collaboration and organizational readiness with the development of dynamic capabilities for sustainability-oriented innovation. More recent evidence also shows that stakeholder engagement can complement managerial capabilities in explaining sustainable competitive performance[16].

Despite these advances, most evidence continues to originate from business, manufacturing, and SME settings. The role of stakeholder collaboration may be particularly distinctive in nonprofit education because organizational legitimacy, service quality, resource support, and continuity depend heavily on relationships with employees, parents, communities, government, and institutional partners. However, relatively little empirical research simultaneously examines stakeholder collaboration as an antecedent of **strategic flexibility, organizational performance, and organizational sustainability** in this context. Therefore:

H7. Stakeholder collaboration positively influences strategic flexibility.

H8. Stakeholder collaboration positively influences organizational performance.

H9. Stakeholder collaboration positively influences organizational sustainability.

Strategic Flexibility, Organizational Performance, and Sustainability

Strategic flexibility refers to an organization's capacity to modify strategic choices, policies, processes, and resource configurations in response to environmental change. Strategic flexibility theory suggests that organizations possessing greater resource flexibility and coordination flexibility have a broader range of strategic responses and can reconfigure those responses more efficiently [7]. Organizational flexibility theory similarly emphasizes maintaining alignment between internal organizational capabilities and changing environmental demands [8].

The causal mechanism linking strategic flexibility to sustainability is adaptive alignment. Organizations that can rapidly change strategic priorities, resource deployments, and operating processes are less vulnerable to environmental mismatch. In nonprofit education, such flexibility may enable responses to regulatory changes, digital learning requirements, changing stakeholder expectations, and shifts in demand without compromising continuity of educational services.

Empirical evidence generally supports the strategic importance of flexibility. [17] using data from project-based organizations, find that strategic flexibility is positively associated with organizational performance and that innovation plays an important intermediary role. More recent sustainability research also links strategic flexibility with sustainability performance, although the mechanisms may involve other organizational capabilities and innovation processes [18], [19]. These findings are consistent with broader dynamic-capability evidence showing that adaptive organizational capabilities are important for sustainability performance [10].

Organizational performance represents a different but complementary mechanism. It captures realized outcomes from organizational resource utilization, including effectiveness, efficiency, productivity, service quality, goal attainment, and stakeholder satisfaction. Strong and sustained performance can enhance stakeholder trust, organizational legitimacy, resource continuity, and the organization's capacity to maintain its services over time.

Nevertheless, most strategic-flexibility research has focused on competitive or financial performance rather than organizational sustainability, while sustainability studies frequently treat performance as an ultimate outcome rather than a mechanism supporting longer-term organizational viability. Evidence is particularly limited in nonprofit education. This gap leads to the following hypotheses:

H10. Strategic flexibility positively influences organizational sustainability.

H11. Organizational performance positively influences organizational sustainability.

Parallel Mediation: Resource Conversion into Organizational Sustainability

The central theoretical argument of this study is that strategic resources do not necessarily produce organizational sustainability through direct effects alone. RBV explains the strategic potential of valuable resources [1], while dynamic capability theory emphasizes that resources must be integrated, reconfigured, and transformed into organizational capabilities to create value under changing conditions [2]. Recent evidence reinforces this conversion logic by demonstrating that sustainability outcomes depend on the development and renewal of organizational capabilities rather than simply on resource possession [10], [3], [15].

This study proposes two distinct but complementary conversion mechanisms. **Strategic flexibility represents an adaptive conversion mechanism** through which innovation, technology, and stakeholder resources enhance the organization's ability to modify strategies, policies, processes, and resource configurations. **Organizational performance represents an outcome-based conversion mechanism** through which those resources improve effectiveness, efficiency, productivity, service quality, goal attainment, and stakeholder satisfaction, thereby strengthening organizational viability.

Recent empirical research supports the broader logic of mediated resource conversion. [17] demonstrate that organizational capabilities and innovation can operate through indirect pathways rather than exclusively through direct effects. [10] show that different dynamic capabilities are interrelated in explaining sustainability performance. [14] demonstrate that digital adaptability helps explain how stakeholder engagement relates to sustainable performance. Similarly, [3] emphasize that technological resources require complementary dynamic capabilities for sustainable digital transformation.

However, existing studies generally examine a **single intermediary mechanism**, focus on one resource domain, or treat organizational performance as the final dependent variable. Limited empirical attention has been given to **strategic flexibility and organizational performance as two parallel conversion mechanisms linking multiple strategic resources to organizational sustainability**. This distinction is theoretically important because an organization may possess adaptive capacity without consistently converting it into performance, while strong current performance may not ensure sufficient adaptability under future environmental change. Sustainable organizations therefore require both adaptive capacity and realized organizational outcomes.

For innovation integration, the resource-conversion logic suggests that innovation can enhance sustainability by expanding the organization's strategic response options and by improving organizational performance. Accordingly:

H12. Strategic flexibility mediates the relationship between innovation integration and organizational sustainability.

H13. Organizational performance mediates the relationship between innovation integration and organizational sustainability.

For technology, digital resources may contribute to sustainability when they are converted into adaptive strategic capability or improved organizational outcomes. However, recent evidence suggests that this conversion depends on complementary organizational capabilities and readiness (Feroz et al., 2023; Arshad et al., 2024). Accordingly:

H14. Strategic flexibility mediates the relationship between technology and organizational sustainability.

H15. Organizational performance mediates the relationship between technology and organizational sustainability.

For stakeholder collaboration, the same dual-pathway logic applies: relational resources may enhance sustainability both by expanding the organization’s adaptive response repertoire and by improving realized organizational outcomes. Accordingly:

H16. Strategic flexibility mediates the relationship between stakeholder collaboration and organizational sustainability.

H17. Organizational performance mediates the relationship between stakeholder collaboration and organizational sustainability.

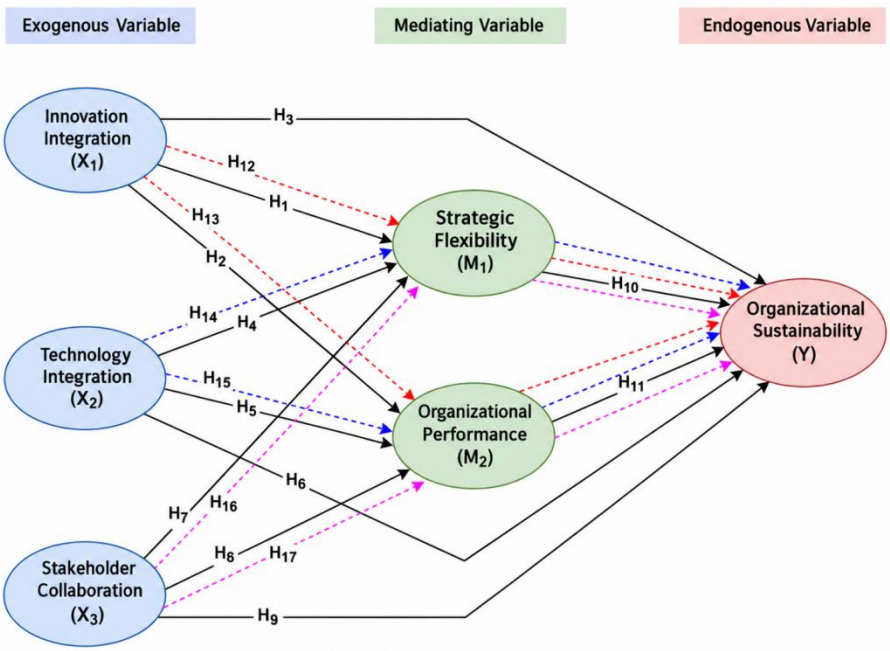


Figure 1. Conceptual Framework of the Adaptive Organizational Sustainability Model (AOSM)

Methode

This study employed a quantitative, cross-sectional survey design to examine the relationships among innovation integration, technology, stakeholder collaboration, strategic flexibility, organizational performance, and organizational sustainability. The empirical setting was Yayasan Al Abidin Surakarta, a nonprofit educational foundation in Indonesia operating 24 educational units ranging from early childhood to senior secondary education.The individual employee served as the unit of analysis because the focal constructs capture employees' perceptions of organizational resources, adaptive capabilities, organizational performance, and sustainability. Eligible respondents included employees who were directly involved in organizational activities and had sufficient knowledge of the foundation's policies, processes, technology use, stakeholder relationships, and organizational practices.Data were collected during 2025. A cross-sectional design was considered appropriate because the study aimed to examine theoretically specified relationships among multiple organizational constructs at a particular point in time rather than changes in those relationships longitudinally.

The target population consisted of 409 employees across the foundation's 24 educational units. The population included foundation leaders, heads of educational units, teachers, managerial and administrative staff, and other educational personnel involved in organizational planning, implementation, and evaluation.A minimum sample of 202 respondents was determined from the known population using a 5% margin-of-error criterion. To ensure proportional representation across heterogeneous organizational units, **stratified random sampling** was employed. Educational and work units served as the sampling strata, and the required number of respondents from each stratum was determined proportionally according to its share of the total employee population. For strata consisting of only one eligible employee, a take-all procedure was applied.

Measurement of Constructs

Data were collected using a structured questionnaire developed from established theoretical constructs and measurement indicators identified in the relevant literature. Six latent constructs were measured: **innovation integration, technology, stakeholder collaboration, strategic flexibility, organizational performance, and organizational sustainability**.All items were measured using a five-point Likert scale ranging from **1 = strongly disagree** to **5 = strongly agree**. Before the main survey, the questionnaire was subjected to expert review to assess item relevance, clarity, conceptual consistency, and contextual appropriateness for nonprofit educational organizations.For greater transparency and measurement replicability, the sources and number of measurement items should be reported as follows.

Table 1. Construct Measurement and Sources

Construct	Items	Main measurement sources
Innovation integration	5	[20], [21], [22], [23]
Technology	5	[5], [24], [25], [26], [20]
Stakeholder collaboration	5	[27], [28], [29], [30], [6]
Strategic flexibility	5	[7], [31], [17]
Organizational performance	5	[32], [33], [34], [35], [36]

Construct	Items	Main measurement sources
Organizational sustainability	5	[37], [38], [39], [40], [41]

Data Analysis

The data were analyzed using partial least squares structural equation modeling (PLS-SEM). PLS-SEM was selected because the proposed model contains multiple latent constructs, simultaneous direct and indirect relationships, and a prediction-oriented structural specification[42].

The analysis followed a two-stage procedure consisting of **measurement-model assessment** and **structural-model assessment**.

For the measurement model, internal consistency reliability was assessed using Cronbach's alpha, rho_A, and composite reliability. Convergent validity was evaluated through indicator loadings and average variance extracted (AVE). Discriminant validity was assessed using the **heterotrait–monotrait ratio (HTMT)**, supplemented by the Fornell–Larcker criterion and cross-loading assessment[43]. HTMT values below 0.85 or, under a more liberal criterion, below 0.90 indicate adequate discriminant validity [44].

For the structural model, collinearity was assessed using variance inflation factors (VIF). The explanatory power of the model was evaluated using the coefficient of determination (R^2), while effect sizes were examined using f^2. Structural relationships were assessed using standardized path coefficients (β), t-statistics, and p-values.

The significance of direct and indirect effects was evaluated through nonparametric bootstrapping with **5,000 bootstrap resamples**, each generated from the original sample of 202 observations. Mediation was assessed from the significance of the specific indirect effects.

Results

Respondent Characteristics

The final sample consisted of 202 respondents. Most respondents were relatively young employees, with 32.2% aged 20–25 years and 25.7% aged 25–30 years. Women represented 72.3% of the sample.These demographic characteristics provide contextual information about the study participants. However, because age and gender were not included as explanatory or control variables in the structural model, no causal interpretation was made regarding their relationships with innovation, technology, or other organizational constructs.

Measurement Model Assessment

The measurement model was evaluated in terms of internal consistency reliability, convergent validity, and discriminant validity. The results are presented in Table 2.

Table 2. Reliability and Convergent Validity

Construct	Cronbach's α	rho_A	Composite Reliability	AVE
Innovation integration	0.885	0.933	0.948	0.688
Organizational sustainability	0.931	0.887	0.917	0.786
Organizational performance	0.908	0.909	0.931	0.731
Stakeholder collaboration	0.937	0.938	0.952	0.799
Strategic flexibility	0.930	0.931	0.947	0.781
Technology	0.909	0.913	0.932	0.733

All constructs demonstrated satisfactory internal consistency reliability. Cronbach's alpha values ranged from 0.885 to 0.937, rho_A values ranged from 0.887 to 0.938, and composite reliability values ranged from 0.917 to 0.952. All values exceeded the recommended threshold of 0.70.

Convergent validity was also supported, as AVE values ranged from 0.688 to 0.799, well above the recommended threshold of 0.50. These findings indicate that the constructs captured a substantial proportion of variance in their respective indicators.

Discriminant validity was additionally assessed using the heterotrait–monotrait ratio (HTMT), presented in Table 2a. Two values slightly exceeded the conservative threshold of 0.90organizational sustainability with organizational performance (0.908) and innovation integration with technology (0.925) but both remained below the more permissive threshold of 0.95, which is considered acceptable for constructs that are conceptually proximate [44]. Taken together with the Fornell–Larcker criterion and cross-loading assessment, these results support adequate discriminant validity across the six constructs.

Table 2a. Heterotrait-Monotrait Ratio (HTMT)

Ç	Org. Sustainability	Innovation Integration	Org. Performance	Stakeholder Collaboration	Strategic Flexibility
Innovation integration	0.803				
Organizational	0.908	0.810			

Ç	Org. Sustainability	Innovation Integration	Org. Performance	Stakeholder Collaboration	Strategic Flexibility
performance					
Stakeholder collaboration	0.866	0.795	0.853		
Strategic flexibility	0.876	0.859	0.868	0.881	
Technology	0.722	0.925	0.756	0.752	0.770

Note: values represent HTMT ratios between construct pairs; ll values fall below the 0.95 threshold recommended for conceptually related constructs.

Structural Model Assessment

Before testing the structural relationships, collinearity was assessed using variance inflation factors (VIF). The maximum VIF values ranged from 2.505 to 4.782, remaining below the specified threshold of 5. These results indicate that critical collinearity was not evident in the model.

The explanatory power of the structural model was assessed using the coefficient of determination (R^2). The model explained 75.1% of the variance in strategic flexibility ($R^2 = 0.751$), 67.8% of the variance in organizational performance ($R^2 = 0.678$), and 76.0% of the variance in organizational sustainability ($R^2 = 0.760$). Overall, these results indicate substantial explanatory power for the endogenous constructs.

Table 3. Direct Structural Effects

Hypothesis	Structural Relationship	β	t	p	Decision
H1	Innovation integration → Strategic flexibility	0.368	4.305	<0.001	Supported
H2	Innovation integration → Organizational performance	0.264	2.809	0.005	Supported
H3	Innovation integration → Organizational sustainability	0.259	3.155	0.002	Supported
H4	Technology → Strategic flexibility	0.048	0.592	0.554	Not supported
H5	Technology → Organizational performance	0.136	1.744	0.082	Not supported
H6	Technology → Organizational sustainability	0.236	4.457	<0.001	Supported
H7	Stakeholder collaboration → Strategic flexibility	0.519	7.644	<0.001	Supported
H8	Stakeholder collaboration → Organizational performance	0.494	5.525	<0.001	Supported
H9	Stakeholder collaboration → Organizational sustainability	0.287	3.802	<0.001	Supported
H10	Strategic flexibility → Organizational sustainability	0.418	4.545	<0.001	Supported
H11	Organizational performance → Organizational sustainability	0.502	6.099	<0.001	Supported

Innovation integration had significant positive effects on strategic flexibility ($\beta = 0.368$, $p < 0.001$), organizational performance ($\beta = 0.264$, $p = 0.005$), and organizational sustainability ($\beta = 0.259$, $p = 0.002$). Accordingly, H1, H2, and H3 were supported.

Technology showed a different pattern. Its effects on strategic flexibility ($\beta = 0.048$, $p = 0.554$) and organizational performance ($\beta = 0.136$, $p = 0.082$) were not significant, leading to the rejection of H4 and H5. However, technology had a significant positive direct effect on organizational sustainability ($\beta = 0.236$, $p < 0.001$), supporting H6.

Stakeholder collaboration significantly influenced strategic flexibility ($\beta = 0.519$, $p < 0.001$), organizational performance ($\beta = 0.494$, $p < 0.001$), and organizational sustainability ($\beta = 0.287$, $p < 0.001$). Thus, H7, H8, and H9 were supported. Among the antecedents of the two mediating variables, stakeholder collaboration exhibited the strongest standardized effects.

Strategic flexibility ($\beta = 0.418$, $p < 0.001$) and organizational performance ($\beta = 0.502$, $p < 0.001$) both significantly enhanced organizational sustainability, supporting H10 and H11. Organizational performance exhibited the stronger direct effect on sustainability.

A particularly noteworthy result is the **asymmetric technology pattern**: technology directly contributed to organizational sustainability but did not significantly enhance strategic flexibility or organizational performance. This pattern suggests that the sustainability value of technology may operate through mechanisms other than the two mediators examined in the present model.

Effect Size Assessment

Effect size (f^2) was used to assess the substantive contribution of individual predictor constructs.

Stakeholder collaboration had a large effect on strategic flexibility ($f^2 = 0.473$). Its effect on organizational performance was also relatively strong ($f^2 = 0.332$) and approached the conventional threshold for a large effect. Organizational performance had a large effect on organizational sustainability ($f^2 = 0.388$), whereas strategic flexibility had a medium effect on sustainability ($f^2 = 0.268$).

Innovation integration showed smaller substantive effects, while technology demonstrated negligible effects on strategic flexibility ($f^2 = 0.003$) and organizational performance ($f^2 = 0.017$), consistent with the nonsignificant corresponding structural paths.

Accordingly, **$f^2 = 0.332$ should not be classified as a large effect** under the conventional thresholds of 0.02, 0.15, and 0.35. It is more appropriately described as a **relatively strong effect approaching the large-effect threshold**.

Mediation Analysis

The mediating roles of strategic flexibility and organizational performance were examined using bootstrapped specific indirect effects.

Table 4. Specific Indirect Effects

Hypothesis	Indirect Relationship	β	t	p	Decision
H12	Innovation integration → Strategic flexibility → Organizational sustainability	0.154	2.860	0.004	Supported
H13	Innovation integration → Organizational performance → Organizational sustainability	0.133	2.551	0.011	Supported
H14	Technology → Strategic flexibility → Organizational sustainability	0.020	0.591	0.555	Not supported
H15	Technology → Organizational performance → Organizational sustainability	0.068	1.835	0.067	Not supported
H16	Stakeholder collaboration → Strategic flexibility → Organizational sustainability	0.217	3.591	<0.001	Supported
H17	Stakeholder collaboration → Organizational performance → Organizational sustainability	0.248	3.499	<0.001	Supported

Innovation integration exerted significant indirect effects on organizational sustainability through both strategic flexibility ($\beta = 0.154$, $p = 0.004$) and organizational performance ($\beta = 0.133$, $p = 0.011$). Therefore, H12 and H13 were supported.Stakeholder collaboration also significantly influenced organizational sustainability through strategic flexibility ($\beta = 0.217$, $p < 0.001$) and organizational performance ($\beta = 0.248$, $p < 0.001$), supporting H16 and H17. The indirect effect through organizational performance was numerically larger than the indirect effect through strategic flexibility.

In contrast, technology did not have significant indirect effects on organizational sustainability through strategic flexibility ($\beta = 0.020$, $p = 0.555$) or organizational performance ($\beta = 0.068$, $p = 0.067$). Therefore, H14 and H15 were not supported.

Taken together, the mediation findings reveal **two distinct resource-conversion patterns**. Innovation integration and stakeholder collaboration contributed to organizational sustainability through both adaptive and performance-based mechanisms. Technology, however, followed a different pathway: although it had a significant direct effect on organizational sustainability, this effect was not transmitted through either strategic flexibility or organizational performance.

This result is particularly important because it indicates that technology should not be assumed to create sustainability through the same conversion mechanisms as innovation integration and stakeholder collaboration. Rather, other complementary organizational conditions or mechanisms may explain how technology contributes to sustainability.

Discussion

The findings provide support for the central proposition of this study that organizational sustainability is shaped not only by the availability of strategic resources but also by the organizational mechanisms through which those resources are converted into adaptive capability and performance. Innovation integration and stakeholder collaboration followed a relatively consistent resource-conversion pattern: both directly enhanced organizational sustainability and also operated indirectly through strategic flexibility and organizational performance. Technology, however, followed a markedly different pathway. This distinction suggests that strategic resources are heterogeneous in the mechanisms through which they generate sustainable organizational value.

Innovation Integration, Strategic Flexibility, Performance, and Sustainability

Innovation integration positively influenced strategic flexibility, organizational performance, and organizational sustainability. These findings are consistent with the Resource-Based View and dynamic capability perspective, which suggest that organizational resources create value when they are recombined, renewed, and embedded in organizational processes rather than merely possessed. Innovation therefore contributes to sustainability when new ideas, services, processes, and managerial practices expand the organization's strategic response options and improve its ability to respond to environmental change.

The findings are broadly consistent with empirical evidence showing that innovation contributes to organizational performance and long-term organizational outcomes. [17] for example, found that innovation positively contributes to organizational performance and operates together with strategic flexibility in explaining organizational outcomes. Their findings indicate that organizations benefit when flexibility and innovation are combined rather than treated as independent organizational capabilities. More recent evidence likewise suggests that innovation capabilities can improve sustainability-related outcomes. Research on exporting firms shows that organizational readiness and green innovation performance contribute to sustainability performance, while studies of SMEs demonstrate that sustainable innovation capability can transmit the benefits of digital transformation to sustainable organizational performance.

The present study extends this evidence in an important way. Whereas previous research has frequently treated innovation as an antecedent of performance or sustainability, the mediation results show that innovation integration can reach sustainability through **two parallel mechanisms**. The first is strategic flexibility, which converts innovation into adaptive strategic responses; the second is organizational performance, which converts innovation into realized organizational outcomes. Both indirect effects were significant.

This result is particularly meaningful in the nonprofit educational setting. Innovation at Yayasan Al Abidin is not limited to the introduction of new services but is embedded in educational programs, administrative processes, organizational routines, and service development. Consequently, innovation can simultaneously enlarge the organization's capacity to adapt and improve its ability to deliver educational outcomes. The theoretical implication is that innovation should be regarded not merely as an organizational output, but as a **resource-renewal capability whose sustainability value depends partly on its conversion into adaptive and performance-based outcomes**.

Stakeholder Collaboration as a Strategic Resource for Sustainability

Stakeholder collaboration emerged as the strongest upstream predictor of both strategic flexibility and organizational performance. It also had a significant direct effect on organizational sustainability, while both indirect effects through strategic flexibility and organizational performance were significant. Thus, stakeholder collaboration appears to perform multiple organizational functions simultaneously.

These findings are consistent with stakeholder theory, which emphasizes that organizational relationships with relevant stakeholders provide legitimacy, information, trust, and access to resources. They are also compatible with dynamic capability theory because stakeholder relationships can improve organizational sensing by supplying information about environmental changes, stakeholder expectations, service needs, and emerging opportunities.

Recent empirical evidence supports this broader interpretation of stakeholder-oriented resources. Research examining corporate social responsibility toward internal and external stakeholders has shown that stakeholder-oriented practices can strengthen green dynamic capabilities and subsequently contribute to innovation and sustainability-related performance. Evidence from higher education also indicates that stakeholder-related and employee-engagement mechanisms are important for institutional sustainability performance, highlighting that sustainability in educational settings depends on organizational and stakeholder processes rather than financial considerations alone. At the organizational level, recent international evidence further indicates that stakeholder engagement is positively associated with firms' sustainability-related disclosure practices.

The present findings advance this literature by suggesting that stakeholder collaboration should not be viewed merely as a legitimacy mechanism. In the focal nonprofit educational organization, stakeholder relationships appear to function as an **external sensing and resource-mobilization infrastructure**. Parents, employees, communities, government institutions, alumni, and organizational partners potentially provide information, knowledge, social support, legitimacy, and other resources that facilitate strategic adjustment and service improvement.

This interpretation is particularly relevant for nonprofit education because organizational sustainability depends heavily on stakeholder confidence and continued participation. Unlike purely commercial organizations, nonprofit educational institutions cannot assess sustainability solely through financial performance. Their long-term viability also depends on educational quality, legitimacy, public trust, stakeholder commitment, and continuity of service.

The theoretical meaning of this finding is therefore twofold. First, it extends stakeholder theory by positioning stakeholder collaboration as a **capability-building resource**, rather than simply a source of external legitimacy. Second, it connects stakeholder theory with dynamic capability theory by showing how relational resources may be converted into both adaptive capacity and realized organizational performance.

The Asymmetric Role of Technology: Evidence of a Technology-Capability Gap

The most theoretically distinctive finding of this study concerns technology. Technology had a significant positive direct effect on organizational sustainability, yet its effects on strategic flexibility and organizational performance were not statistically significant. Moreover, neither strategic flexibility nor organizational performance significantly mediated the relationship between technology and organizational sustainability. This

pattern indicates that technological resources may contribute to organizational sustainability through a pathway that differs from those of innovation integration and stakeholder collaboration.

This finding contrasts with a substantial body of empirical research reporting positive organizational consequences of digital transformation and technological capability. **[45]** found that digital transformation enhances firm performance by improving operating efficiency, reducing operating costs, and strengthening innovation outcomes. Similarly, **[46]** demonstrated that digital technology use enhances strategic flexibility and that strategic flexibility serves as an important mechanism linking digital technology use to business model innovation. **[47]**further showed that technological capability and strategic flexibility jointly contribute to successful organizational transformation in the context of Industry 4.0. Taken together, these studies suggest that technological resources can strengthen both organizational performance and adaptive capability when they are sufficiently integrated into organizational processes.

However, the empirical evidence is not entirely consistent.**[48]**reported that digital transformation may negatively affect operational flexibility under certain organizational conditions, suggesting that digitalization can also generate rigidity, adjustment costs, or coordination complexity. This contrasting evidence is important because it demonstrates that technology adoption and technology-enabled organizational capability are conceptually distinct. The organizational value of technology therefore cannot be assumed to emerge automatically from investment, infrastructure availability, or routine technology use.

The present findings can consequently be interpreted as evidence of a potential **technology-capability gap**. In the context of Yayasan Al Abidin Surakarta, technological resources may already facilitate educational-service continuity, digital learning, information access, communication, and administrative efficiency, thereby contributing directly to organizational sustainability. However, these resources may not be sufficiently embedded in strategic decision-making, cross-unit coordination, process redesign, performance management, and resource-reconfiguration routines to generate measurable improvements in strategic flexibility or organizational performance.

This interpretation is consistent with dynamic capability logic. Technology becomes strategically valuable when it is integrated with complementary organizational capabilities rather than functioning as an isolated technical resource. Technological infrastructure must be accompanied by digital competence, managerial integration, organizational learning, data-informed decision-making, and process redesign before it can systematically influence organizational adaptability and performance. Therefore, the nonsignificant effects of technology on strategic flexibility and organizational performance should not be interpreted as evidence that technology is unimportant. Instead, they indicate that **technology may function as an enabling resource whose organizational value depends on the capabilities through which it is mobilized and transformed**.

The finding also refines the explanatory role of the Technology Acceptance Model (TAM). TAM is useful for explaining technology acceptance and usage, but acceptance alone does not explain whether technology becomes an organizational-level strategic capability. Dynamic capability theory therefore complements TAM by explaining how technological resources must be incorporated into sensing, seizing, learning, decision-making, and transformation processes before they can systematically influence adaptive capability.

The theoretical significance of H4, H5, H14, and H15 therefore lies in demonstrating that the relationship between technology and organizational sustainability is **not necessarily mediated by the same mechanisms that convert innovation integration and stakeholder collaboration into sustainability**. This asymmetric technology pathway constitutes an important empirical foundation for the proposed Adaptive Organizational Sustainability Model (AOSM).

Strategic Flexibility and Organizational Performance as Parallel Sustainability Mechanisms

Both strategic flexibility and organizational performance had significant positive effects on organizational sustainability, although organizational performance exhibited the larger standardized coefficient. These findings indicate that sustainability depends on two complementary organizational capacities: the ability to adapt to environmental change and the ability to translate resources into consistently strong organizational outcomes.

The positive effect of strategic flexibility is consistent with**[17],** who demonstrated that strategic flexibility contributes positively to organizational performance and interacts with innovation in explaining organizational outcomes. Their findings indicate that organizations with greater flexibility are better able to modify strategic responses, redeploy resources, and adapt operating arrangements when environmental conditions change. This is particularly important in environments characterized by uncertainty, where rigid strategic configurations may reduce an organization's capacity to respond effectively.

The present finding is also consistent with broader sustainability-oriented dynamic capability research. **[10]** demonstrate that the development and evolution of dynamic capabilities contribute positively to business sustainability performance. Their findings support the argument that sustainable performance requires organizations to continuously renew and reconfigure capabilities rather than rely exclusively on existing resources. Similarly, [18] show that strategic flexibility plays an important role in explaining sustainable business performance, particularly when organizations must balance different strategic orientations and respond to changing competitive conditions.

Taken together, these studies support the interpretation of strategic flexibility as an **adaptive sustainability mechanism**. In the nonprofit educational context, strategic flexibility enables the organization to adjust policies, programs, resource allocations, work processes, and strategic priorities in response to regulatory developments, technological change, stakeholder expectations, and changing demand for educational services. Such adaptability reduces the risk of strategic misalignment and strengthens the organization's ability to preserve relevance over time.

Nevertheless, the relationship between flexibility and organizational outcomes should not be interpreted as universally positive or automatic. As noted by **[17]**, previous research has produced positive, negative, and nonsignificant relationships between strategic flexibility and performance. Excessive or poorly coordinated flexibility may generate inconsistency, resource dispersion, or implementation costs. The effectiveness of strategic flexibility therefore depends on complementary organizational capabilities and on the organization's ability to translate adaptive responses into concrete outcomes.

This consideration helps explain why organizational performance had a larger direct effect on organizational sustainability than strategic flexibility in the present study. Strategic flexibility represents **adaptive potential**, whereas organizational performance reflects **realized organizational outcomes**. An organization may possess the ability to adapt but still fail to achieve sustainable results if adaptation does not improve effectiveness, productivity, service quality, stakeholder satisfaction, or goal attainment. Conversely, strong current performance may become vulnerable over time if the organization lacks sufficient flexibility to respond to future environmental changes.

The findings therefore suggest that strategic flexibility and organizational performance should be viewed as **parallel and complementary rather than substitutive mechanisms**. Strategic flexibility enables the organization to respond to change, while organizational performance demonstrates whether strategic resources and adaptive responses have been translated into meaningful results. Sustainable organizations require both capacities: the ability to **adapt** and the ability to **perform**.

From a theoretical perspective, this finding strengthens the resource-conversion logic underlying AOSM. Strategic resources do not contribute to sustainability through a single organizational pathway. Instead, they may generate long-term value through an **adaptive pathway represented by strategic flexibility** and an **outcome-based pathway represented by organizational performance**. The simultaneous significance of both mechanisms provides empirical support for treating adaptation and realized performance as distinct but interconnected foundations of organizational sustainability.

Parallel Mediation and the Resource-Conversion Logic

The mediation results provide further support for the study's central resource-conversion argument. Innovation integration significantly influenced organizational sustainability through both strategic flexibility and organizational performance. Stakeholder collaboration followed the same pattern, with both indirect pathways proving significant. In contrast, neither strategic flexibility nor organizational performance significantly mediated the relationship between technology and organizational sustainability. These findings indicate that strategic resources do not necessarily generate sustainability through identical organizational mechanisms.

Recent empirical evidence supports the view that sustainability outcomes are generated through intermediate organizational capabilities rather than through resource possession alone. **[10]**show that dynamic capabilities contribute to sustainability performance through continuous capability renewal and organizational adaptation. Similarly, **[17]** demonstrate that strategic flexibility and innovation interact in explaining organizational performance, indicating that resource value is often realized through intermediate adaptive mechanisms. **[18]** further show that strategic flexibility contributes to sustainable business performance, reinforcing the importance of adaptive organizational mechanisms in translating strategic orientations into longer-term outcomes.

The present study extends this line of research by identifying **two simultaneous and conceptually distinct conversion mechanisms**. Strategic flexibility represents an **adaptive conversion mechanism**, through which strategic resources enhance the organization's capacity to modify strategies, policies, processes, and resource configurations in response to environmental change. Organizational performance represents an **outcome-based conversion mechanism**, through which strategic resources are transformed into realized outcomes such as effectiveness, productivity, service quality, goal attainment, and stakeholder satisfaction. The significance of both pathways indicates that adaptation and performance constitute complementary routes to organizational sustainability rather than interchangeable mechanisms.

The mediation pattern for innovation integration illustrates this dual-conversion logic. Innovation does not contribute to sustainability only through the introduction of new ideas or practices. Its sustainability value is also realized when innovation expands the organization's strategic response options and when it improves organizational outcomes. Thus, innovation integration contributes to sustainability by simultaneously strengthening the organization's capacity to **adapt** and its capacity to **perform**.

A similar but even stronger conversion pattern is observed for stakeholder collaboration. Stakeholder relationships provide information, legitimacy, trust, knowledge, and access to external resources. These

relational resources can be converted into sustainability through strategic flexibility by improving organizational sensing and responsiveness, and through organizational performance by strengthening service quality, resource utilization, and stakeholder satisfaction. The significance of both indirect effects therefore supports the interpretation of stakeholder collaboration as a **capability-building resource** rather than merely a source of external legitimacy.

Technology, however, does not follow the same mediation pattern. Although technology has a significant direct effect on organizational sustainability, neither the strategic-flexibility pathway nor the organizational-performance pathway is significant. This result reinforces the argument developed in the preceding section regarding a potential **technology–capability gap**. Technological resources may support organizational sustainability directly through service continuity, information access, digital learning, communication, or administrative efficiency without necessarily being transformed into broader strategic flexibility or organization-wide performance improvements.

The contrast among the three strategic resources is theoretically important. It suggests that **resource-conversion mechanisms are resource-specific rather than universal**. Innovation integration and stakeholder collaboration activate both adaptive and performance-based conversion mechanisms, whereas technology does notsignificantly operate through either mechanism in the present organizational context. This heterogeneity challenges the assumption that all valuable resources should influence sustainability through the same organizational pathway.

From the perspective of RBV and dynamic capability theory, the findings therefore suggest that resource value depends not only on whether a resource is valuable, but also on **how effectively it is mobilized through organizational conversion mechanisms**. Strategic flexibility captures the organization's adaptive ability to reconfigure responses, while organizational performance captures the realized results of resource utilization. Sustainable organizational outcomes emerge when strategic resources are successfully translated through one or both of these mechanisms.

Overall, the parallel mediation findings provide empirical support for the **Adaptive Organizational Sustainability Model (AOSM)**. AOSM does not assume a uniform resource-to-sustainability process. Instead, it conceptualizes sustainability as a heterogeneous **resource–conversion–outcome process** in which different strategic resources may follow different pathways. The model therefore advances existing sustainability research by showing that organizational sustainability depends not only on the availability of resources, but also on **which conversion mechanisms are activated and how effectively those mechanisms transform resources into adaptive capability and organizational outcomes**.

Toward the Adaptive Organizational Sustainability Model (AOSM)

Taken together, the findings provide empirical support for the proposed **Adaptive Organizational Sustainability Model (AOSM)**, which conceptualizes organizational sustainability as a **resource–conversion–outcome process** rather than as a direct consequence of resource possession. Within this framework, innovation integration, technology, and stakeholder collaboration constitute strategic resource domains; strategic flexibility and organizational performance represent two parallel conversion mechanisms; and organizational sustainability represents the long-term organizational outcome.

The distinctive feature of AOSM lies in its recognition that **strategic resources do not follow uniform pathways to sustainability**. Innovation integration and stakeholder collaboration contribute to sustainability both directly and indirectly through strategic flexibility and organizational performance. Technology, in contrast, contributes directly to sustainability but does not significantly operate through either conversion mechanism examined in this study. Thus, the model is adaptive not because all resources activate the same capabilities, but because sustainability emerges from **heterogeneous and resource-specific conversion pathways**.

This pattern extends the **Resource-Based View (RBV)** by refining the relationship between resource possession and sustainable organizational value. RBV emphasizes the strategic importance of valuable organizational resources [1] but the present findings indicate that possessing strategically relevant resources does not necessarily determine how those resources generate sustainability. AOSM therefore introduces a conversion perspective: the sustainability value of resources depends partly on **whether and through which organizational mechanisms they are mobilized and transformed into adaptive capacity and realized outcomes**.

AOSM also extends **dynamic capability theory** by distinguishing between two forms of resource conversion. Strategic flexibility represents an **adaptive conversion mechanism**, enabling organizations to reconfigure strategies, policies, processes, and resource allocations in response to environmental change. Organizational performance represents an **outcome-based conversion mechanism**, reflecting the realized effectiveness of resource utilization through service quality, productivity, goal attainment, and stakeholder satisfaction. This distinction complements the dynamic capability argument that organizations must continually renew and reconfigure resources to sustain performance under changing conditions [2], [10].

The model further extends **stakeholder theory** by positioning stakeholder collaboration as more than a legitimacy-generating relationship. Its strong effects on both strategic flexibility and organizational performance indicate that stakeholder collaboration can function as a **capability-building resource** by providing information, knowledge, trust, legitimacy, and access to external resources. In this sense, AOSM connects stakeholder theory with dynamic capability theory by conceptualizing stakeholder relationships as part of the organization's external sensing and resource-mobilization infrastructure.

The asymmetric technology pathway adds an additional theoretical boundary to the model. Existing research frequently associates digital transformation and technological capability with improved performance and organizational flexibility [45], [46], [47]. However, the present findings show that technology can contribute directly to sustainability without significantly enhancing either strategic flexibility or organizational performance. This pattern reinforces the distinction between **technology use and technology-enabled organizational capability** and suggests that technological resources may require complementary capabilitiesor may operate through alternative mechanisms not captured in the present modelto generate broader adaptive and performance effects.

Accordingly, AOSM does not propose that every strategic resource must pass through strategic flexibility and organizational performance to generate sustainability. Instead, it proposes that **different resources may create sustainable organizational value through different combinations of direct and indirect pathways**. This resource-specific conversion logic distinguishes AOSM from a simple linear mediation model and provides a more nuanced explanation of how organizational sustainability emerges.

The central theoretical proposition of AOSM can therefore be stated as follows:

Organizational sustainability depends not only on what strategic resources an organization possesses, but on whether, how, and through which organizational mechanisms those resources are converted into adaptive capability and realized organizational outcomes.

This proposition integrates the study's major findings into a unified theoretical explanation. Innovation integration and stakeholder collaboration demonstrate successful dual conversion through adaptation and performance, whereas technology reveals the boundary of this conversion logic by following a predominantly direct sustainability pathway in the present context. AOSM therefore conceptualizes organizational sustainability as a **heterogeneous, capability-dependent, and resource-specific conversion process**, rather than as an automatic outcome of strategic resource possession.

Conclusion

This study demonstrates that organizational sustainability in nonprofit education depends not merely on the possession of strategic resources, but on whether and how those resources are converted into adaptive capability and organizational performance. This resource-conversion perspective provides the central insight of the study.

Innovation integration and stakeholder collaboration exhibit consistent pathways to organizational sustainability. Both contribute directly to sustainability and indirectly through strategic flexibility and organizational performance, indicating that their organizational value is realized through both adaptive and performance-based conversion mechanisms. Stakeholder collaboration is particularly important because it strongly supports both mechanisms, highlighting the strategic role of relational resources in nonprofit educational organizations.

Technology follows a different pathway. Although technology contributes directly to organizational sustainability, its effects on strategic flexibility and organizational performance are not significant, and neither mechanism significantly mediates the technology–sustainability relationship. This asymmetric pattern indicates that technology use should not be equated with technology-enabled organizational capability. Rather, technological resources may contribute to sustainability through other organizational mechanisms or complementary conditions not captured by the present model.

These findings support the proposed Adaptive Organizational Sustainability Model (AOSM), which conceptualizes sustainability as a resource–conversion–outcome process in which strategic resources may follow different pathways toward long-term organizational viability. By distinguishing strategic flexibility as an adaptive conversion mechanism and organizational performance as an outcome-based conversion mechanism, AOSM provides a more differentiated explanation of how organizational resources contribute to sustainability.

The central message is therefore straightforward: organizational sustainability depends not only on what resources an organization possesses, but on whether and through which mechanisms those resources are converted into adaptive capability and organizational performance. For nonprofit educational organizations, sustainable development consequently requires more than investment in innovation, technology, and stakeholder relationships; it requires organizational capabilities, managerial processes, and performance systems that enable these resources to generate enduring organizational value.

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