

THE INFLUENCE OF ENTREPRENEURIAL CAPABILITY AND INSTITUTIONAL ENVIRONMENT ON SUSTAINABLE ORGANIZATIONAL PERFORMANCE OF ENTREPRENEURIAL ENTERPRISE IN VIET NAM: ROLE OF INNOVATION CAPABILITY

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ABSTRACT

This study examines the influence of entrepreneurial capability and institutional environment on the sustainable organizational performance of entrepreneurial enterprises in Vietnam, while elucidating the mediating role of innovation capability in these relationships. Drawing on dynamic capability theory and institutional theory, the study proposes that both entrepreneurial capability and a conducive institutional environment not only directly foster sustainable organizational performance but also exert indirect effects by enhancing the innovation capability of entrepreneurial enterprises. Data were collected through a survey of managers and founding members of entrepreneurial enterprises across Vietnam and analyzed using partial least squares structural equation modeling (PLS-SEM). The findings demonstrate that entrepreneurial capability and institutional environment each exert a significant positive effect on sustainable organizational performance, with innovation capability serving as a critical mediating mechanism that converts internal competencies and institutional advantages into measurable sustainable outcomes. This study contributes empirical evidence on the value-creation pathways underlying sustainable performance in entrepreneurial enterprises operating within an emerging market context, and offers policy implications aimed at strengthening the institutional environment, developing entrepreneurial capability, and promoting innovation to enhance the sustainability of entrepreneurial enterprises in Vietnam.

Keywords: Entrepreneurial capability, institutional environment, sustainable organizational performance, innovation capability.

1. INTRODUCTION

Entrepreneurship and innovative entrepreneurship are receiving considerable attention in Vietnam, particularly within the context of strong national economic integration and rapid technological landscape changes. Entrepreneurship is expected to generate economic growth, contribute positively to socio-economic development, meet the increasingly diverse needs of society, and create employment opportunities for communities and society. After 7 years of implementing the National Innovative Entrepreneurship Support Plan until 2025, Vietnam's startup ecosystem has undergone several stages: activation, globalization, attraction, and integration, marking a record of investment receipts reaching USD 1.4 billion in 2021. To date, Vietnam has over 3,000 entrepreneurial enterprises, more than 140 universities and research institutes conducting entrepreneurship and innovative activities with incubators, centers, and startup support clubs. Simultaneously, 2025 has witnessed changes in state management

thinking, with an open approach to “risk-accepting” policies and plans to increase investment in innovation centers at national and local levels, venture funds using public budgets, and accompanying entrepreneurship promotion programs. All of this demonstrates the increasingly clear role of the State in leading and activating the innovative market.

Although topics related to entrepreneurship have attracted the attention of scholars both domestically and internationally, empirical research on the sustainable performance effectiveness of entrepreneurial enterprises in Vietnam remains modest.

Empirical investigations conducted by Somwethee et al. (2023) and Poli (2024) have substantiated the positive effects of entrepreneurial capability and innovation capability on sustainable organizational performance. Moreover, these studies have examined and established the mediating role of innovation capability, the mechanism by which entrepreneurial capability exerts its influence on sustainable organizational performance [1], [2]. Fernando and colleagues (2019), Salameh and colleagues (2023), and Ranjan and Rai (2026), universally recognize innovation as a critical element in enhancing sustainable organizational performance [3], [4], [5]. Though Teruel-Sánchez and colleagues (2021) have offered valuable insights into how entrepreneurial capability influences sustainable performance through the mediating effect of sustainable environment, and have also investigated the impact of institutional environment on sustainable organizational performance, their research notably omits the integration of innovation capability as a mediating variable—a gap that the present study addresses [6]. Lang and colleagues (2025) applied resource-based view theory (RBV) to analyze the impact of social capital on sustainable entrepreneurship activities in agriculture. Therefore, an important research gap persists that requires attention. While prior studies have confirmed the relationship between entrepreneurial capability and sustainable organizational performance, these works have failed to provide comprehensive empirical evidence concerning the mediating role of institutional environment in facilitating entrepreneurial activities. This issue becomes particularly significant in emerging markets like Vietnam, where entrepreneurial activities are experiencing significant transformation and development.

To address this gap, the current study focuses on examining the role of innovation capability as a mediating mechanism to clarify how entrepreneurial capability and factors from the institutional environment affect the sustainable organizational performance of entrepreneurial enterprises in Vietnam. By integrating these factors into a unified research model, the authors expect to provide a more comprehensive understanding of enterprise development pathways in the context of a transforming economy. Simultaneously, this paper integrates two theoretical frameworks with Dynamic Capabilities Theory and Institutional Theory to construct a comprehensive theoretical framework that elucidates the operational mechanisms of these relationships, while simultaneously examining the mediating role of innovation capability. The research findings not only contribute theoretically to the entrepreneurship management framework but also propose practical policy implications to help managers maximize internal resources and adapt to external institutional environments to achieve sustainable growth.

To achieve these objectives and address the identified research gap, this study seeks to answer the following research questions:

RQ1: How do entrepreneurial capability and the institutional environment directly influence the sustainable organizational performance of entrepreneurial enterprises in Vietnam?

RQ2: To what extent does entrepreneurial capability affect the innovation capability of these enterprises?

RQ3: What is the impact of innovation capability on sustainable organizational performance?

RQ4: How does innovation capability mediate the relationship between entrepreneurial capability and sustainable organizational performance?

2. LITERATURE REVIEW

2.1 Theoretical background

Institutional Theory

DiMaggio and Powell (1983) noted that institutional theory seeks to explain why organizations behave similarly to one another [7]. According to these authors, institutional pressures lead to more homogeneous organizational structures within institutional environments. In Scott's (2001) definition, institutions are regulations, norms, and cognitive activities aimed at providing stability and meaning to social behavior [8]. These factors may include laws, regulations, cultural norms, and professional standards. As Deegan (2009) pointed out, institutional theory plays an important role in explaining why companies seek to balance sustainable commitments. Institutional Theory is employed in this paper to explain the role of the external environment, which comprises regulations, norms, and social rules that create favorable (or unfavorable) conditions for entrepreneurial enterprises.

Dynamic capabilities theory

Dynamic capabilities (DC) theory emerged as an alternative approach to address certain weaknesses of the resource-based view theory (RBV) [9]. Dynamic capabilities are processes of using resources to create new resources with the potential to create market change [10]. DC theory presents path-dependent processes that allow firms to adapt to rapidly changing environments by building, integrating, and reconfiguring their resource and capability portfolios [11]. Dynamic Capabilities Theory is a theory that explains how firms use existing resources to create new resources with the potential to generate market change. Specifically, this theory posits that firms have the capacity to rapidly adapt to fast-changing business environments through the processes of building, integrating, and reconfiguring their resource and capability portfolios.

Sustainable organizational performance

According to Schaltegger and Wagner (2006), sustainable organizational performance is defined as the results of a company's operations across all aspects and for all factors driving sustainability. This concept is not limited purely to economic efficiency but extends to other organizational values [12]. Most authors have classified organizational sustainability across three dimensions: economic, environmental, and social [2], [13]. Given awareness of the harmful impacts on the environment and society, companies must find the best ways to ensure that their production activities meet sustainability requirements. Two factors need to be prioritized when defining sustainable business performance.

First, business sustainability refers to the company's ability to generate profits to ensure long-term survival. Second, business sustainability also connects with the organization's ability to provide products or services based on processes or technologies that do not harm the environment or the overall health of society [4].

Sustainable business practices are a primary concern of all current and future stakeholders because these practices help ensure the health and long-term existence of businesses as well as related economic, social, and environmental systems [14]. These are performance indicators that should be considered as key results of business sustainability. First is financial sustainability, which refers to the organization's ability to meet its current and future needs. Second is social sustainability, which includes developing and meeting human needs as well

as maintaining social relationships that will develop strongly in the long term. Third is environmental sustainability, which refers to protecting and regenerating the biosphere for current and future generations [15]. Scholars have argued that all three factors are equally important to a business [13].

In this study, the authors define sustainable organizational performance as the results of organizational activities using resources to achieve accomplishments in: economic performance (higher profits, increased sales, cost management, and investment), social performance (quality of work life, corporate social responsibility, and business networks), and environmental performance (environmental friendliness, value transfer, and customer satisfaction).

2.2. Empirical research

2.2.1. Relationship between Institutional Environment and Sustainable Organizational Performance

Institutional theory suggests that organizations are not only driven by rationality but are also influenced by social and cultural contexts, operating within an institutional framework shaped by social norms and rules [16]. Institutions, often called “rules of the game,” establish boundaries within which businesses operate [17]. These institutions include formal regulations, informal practices, norms, standards, and roles that guide the behavior of organizations and individuals in organizational environments [18]. These rules can be classified into three pillars: regulatory, normative, and cultural-cognitive, each contributing to the stability and meaning of social interactions and organizational activities [19].

The regulatory pillar within the institutional framework primarily includes regulations and laws that empower social actors through licenses, privileges, or incentives [17]. This aspect of institutions includes the ability to establish rules and monitor compliance with them [20]. In turn, companies adjust their operations according to these regulations to gain benefits or avoid penalties. On the other hand, the normative pillar of institutions focuses on practical rules, professional standards, and educational frameworks that shape organizational behavior through social norms and expectations [8]. Individuals acquire values, ideals, and behavioral norms through education and social interaction, contributing to establishing common standards in a specific environment [21]. Finally, the cultural-cognitive pillar includes symbols, language, cultural rules, and structures through which meaning is created. They describe professional practices and habits that experts develop heuristics, skills, and expertise, while guiding organizations to imitate operating models with strong cultural support [19].

Rosenbusch et al. (2019) suggested that a favorable institutional environment not only enhances resource utilization effectiveness but also mediates the effects of factors such as offshoring innovation activities on firms' innovation performance. These findings together emphasize the important role of the institutional environment in shaping strategic decisions, innovation capabilities, and overall business performance [22].

Support from the institutional environment should promote entrepreneurial behavior approaching values regarding social responsibility and environmental protection, thereby increasing their credibility and reputation [23]. An appropriate institutional environment for entrepreneurship would be one that helps new entrepreneurs start businesses more easily and at lower costs. In this sense, the institutional environment plays a crucial role in explaining entrepreneurship activities [24], configured as a factor creating motivation for enterprise capability development [3]. Institutional Theory provides a vital framework for explaining how the external environment shapes and drives sustainable organizational performance. According to this theory, enterprises do not operate in a vacuum but are profoundly governed by the rules of the game within the institutional environment, which comprises regulative, normative, and cognitive pillars. Specifically, the institutional environment exerts

isomorphic pressures, including coercive pressure from legal regulations, normative pressure from societal expectations, and mimetic pressure from industry best practices, forcing firms to integrate sustainable values into their core strategies. Compliance with these pressures enables organizations to achieve legitimacy, which in turn facilitates access to scarce resources, strengthens brand reputation, and mitigates legal risks. Consequently, the institutional environment acts as a catalyst, guiding corporate social responsibility and environmental protection behaviors, while transforming external pressures into drivers for firms to optimize their long-term sustainable performance. Therefore, the authors propose the following hypothesis:

H₁: Institutional environment has a positive effect on sustainable organizational performance.

2.2.2. Relationship between Entrepreneurial Capability, Innovation Capability, and Sustainable Organizational Performance

Entrepreneurial capability (EC) refers to the skills, experience, and knowledge necessary to identify and exploit business opportunities [25], [26] including technological, technical, and strategic aspects, as well as integration and coordination capabilities within organizations. Entrepreneurial capability, defined as the special skills or experience of entrepreneurs, helps them capture business opportunities, lead teams, and create business value to achieve successful entrepreneurship objectives [27], [28].

Regarding the measurement of entrepreneurial capability, existing literature primarily assesses it through proxies such as organizational and strategic capabilities, relying heavily on subjective indicators; objective measures to directly assess this capability remain scarce [29]. This dependence on subjective assessment, however, presents a critical limitation: subjective self-evaluation of entrepreneurial capability tends to overstate its actual contribution to entrepreneurial intention [30]. Consequently, a comprehensive understanding of entrepreneurial capability requires recognizing its multidimensional nature, encompassing various underlying dimensions such as achievement motivation, risk tolerance, self-confidence, and adaptive capacity [31].

The concept of entrepreneurial capability (EC) is closely linked to innovation, which is a core issue for dynamic capability [32] and connected with expanding thinking from a holistic perspective [33]. In this process, entrepreneurs play the role of driver or impetus. Entrepreneurial spirit is the embodiment of innovation and plays a crucial role in economic development by promoting change and transformation in a refined manner [34]. In an economic context, entrepreneurs with creative ideas will innovate in ways of resource allocation and approach organizational capabilities [35], [36]. In a dynamic competitive organization, entrepreneurs are recognized as having the ability to transform their organizations and build ecosystems through strategic actions that are not outside conventional practices or meet the need to create new practices [37].

Previous research has shown that entrepreneurial capability has a direct impact on sustainable organizational performance; if the organization has a higher foundation of traditional knowledge, the greater the sustainable performance [38]. These diverse entrepreneurial capabilities and attributes play an important role in promoting innovation [39], [40]. Among these, entrepreneurial capability is seen as the most important predictor of growth and sustainable performance of small and medium enterprises (SMEs) [41], [42]. In the research of Somwethee and colleagues (2025), entrepreneurial capability plays a strong role in promoting innovation capability and sustainable organizational performance [2].

Dynamic Capabilities Theory provides a profound theoretical foundation to explain how internal resources are transformed into superior outputs in volatile business environments. In this model, entrepreneurial capability is viewed as a dynamic capability, serving as a prerequisite for enterprises to identify market opportunities and mobilize necessary resources. However, this theory emphasizes that possessing resources or opportunities is insufficient; enterprises need innovation capability as an implementation mechanism to continuously restructure and renew those resources. As a mediating variable, innovation capability explains how enterprises transform entrepreneurial vision into breakthrough processes, products, and services. It is precisely this ability to continuously adapt and innovate that helps enterprises not only maintain competitive advantage but also achieve sustainable organizational performance, balancing profit objectives with environmental and social responsibilities in the long term. Therefore, the authors propose the following hypotheses:

H₂: Entrepreneurial capability has a positive effect on innovation capability.

H₃: Entrepreneurial capability has a positive effect on sustainable organizational performance.

2.3.3. Relationship between Innovation Capability and Sustainable Organizational Performance

Organizational innovation capability refers to the abilities that organizations need to gain competitive advantage in the market. They serve as tools that entrepreneurs can leverage to lead their organizations to success. The development of new products and services through innovation serves as a growth driver, leading to increased sales, profits, and market position [2]. Innovation capability is seen as an optimal strategy for companies to gain competitive advantage and overcome main competitors. It allows businesses to better meet consumer needs, stay ahead of competitors, and adjust their strengths to match market opportunities [43]. The competitive nature of the business context [44] is directly related to enhancing organizational capability [45].

Therefore, innovation capability includes processes and organization of new ideas for products and services, leading to unprecedented growth dynamics in the national economy, increasing employment, and creating profits for innovative enterprises [46]. Research has proven that organizations with innovation capability.

In this study, the term innovation capability (IC) is defined as a process that includes generating new ideas and management potential to create competitive advantage for the organization. It includes decision-making processes aimed at achieving innovation objectives in process potential and technology potential for sustainable organizational performance. Previous research has shown that innovation affects the sustainable performance of enterprises and all components of it (environment, economy, and society). Innovation is a distinguishing characteristic in improving organizational performance through focusing on continuous development activities and increasing the productivity of production factors [46], [47].

Notably, innovation plays a partial mediating role in the relationship between entrepreneurial capability and sustainable organizational performance [2]. Based on these foundations, the following hypotheses are proposed.

H₄: Innovation capability has a positive effect on sustainable organizational performance.

H₅: Innovation capability mediates the relationship between entrepreneurial capability and sustainable organizational performance.

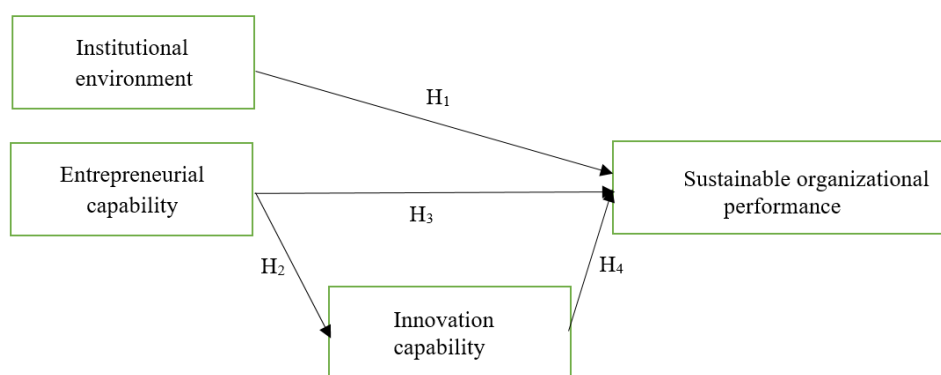


Figure 1. Conceptual Research Framework.

3. METHODOLOGY

3.1. Sampling method and sample description

To test research hypotheses regarding the influence of Entrepreneurial Capability (EC) and Institutional Environment (IE) on Sustainable Organizational Performance (SP) through Innovation Capability (IC) in entrepreneurial enterprises in Vietnam, the study uses stratified random sampling. This method ensures that the sample represents different groups within the population (by hierarchy, function, enterprise size), thereby increasing the external validity of the research. In particular, this method ensures that participants possess knowledge directly related to and roles connected with management activities, innovation, and sustainable development at the organization.

The study distributed 350 questionnaires at entrepreneurial enterprises nationwide, and after data checking, cleaning, and removal of questionnaires with missing important information, 345 valid responses were obtained, corresponding to a 98.6% response rate. Among the 345 participants, gender composition included 204 males (59.1%) and 141 females (40.9%). By age group, 42.0% were 25-34 years old, 38.3% were 35-44 years old, and 19.7% were over 45 years old. Regarding work experience in the entrepreneurial enterprise field, 28.7% had 1-5 years, 45.8% had 6-10 years, and 25.5% had over 10 years. By job position, 44.1% were managers at various levels, and 55.9% were employees performing administrative, production, or service work.

Table 1. Demographic Characteristics of Respondents (N=345)

Demographic Variable	Frequency	Percentage
Gender		
Male	204	59.1%
Female	141	40.9%
Age group		
25-34 years	145	42.0%
35-44 years	132	38.3%
45+ years	68	19.7%
Work experience		
1-5 years	99	28.7%

6-10 years	158	45.8%
10+ years	88	25.5%
Job position		
Manager	152	44.1%
Employee	193	55.9%
TOTAL	345	100.0%

Source: Authors' data analysis (2026)

3.2. Data collection process and timeline

Data were collected through questionnaires distributed directly at entrepreneurial enterprises in various regions of Vietnam. The data collection process took place continuously over a 3-month period (from January to March 2026). Each participant was provided with a pre-printed questionnaire along with clear usage instructions and had 20-30 minutes to complete the entire form. After completion, the questionnaires were collected directly by the research team or authorized representatives, helping to ensure a high response rate and data quality control at the point of collection.

3.3. Variable measurement scale

The study uses a 5-point Likert scale to measure the degree of agreement of participants with statements about variables in the model: 1 = “Completely disagree”; 2 = “Disagree”; 3 = “Neutral”; 4 = “Agree”; 5 = “Completely agree”. The measurement scale was developed based on existing literature and previous research findings, then adjusted to suit the specific context of entrepreneurial enterprises in Vietnam

Entrepreneurial Capability (EC) is measured through 6 indicators, including:

(EC1) We are among the first ones to implement progressive and innovative production processes and practices in the marketplace

(EC2) The management of our company supports projects associated with risks with expectations for returns higher than average

(EC3) We actively observe and adopt best practices in our industry

(EC4) We recognize early technological changes affecting our business and have the capability to capture unexpected opportunities

(EC5) We continuously search for new practices in the market

(EC6) In uncertain decision-making situations, we choose to take bold action to exploit every opportunity

Institutional Environment (IE) is measured by 4 indicators related to support from government and social organizations:

(IE1) Training courses, workshops, and internships are provided

(IE2) Subsidies or financial support for equipment purchases

(IE3) Social subsidies, such as childcare support

(IE4) Support for product marketing and international integration

Innovation Capability (IC) is measured by 5 detailed indicators:

(IC1) Our organization regularly introduces new or improved services

(IC2) We frequently implement new processes to improve efficiency

(IC3) Employees are encouraged to generate and share innovative ideas

(IC4) We effectively adopt and adapt new technologies from suppliers

Sustainable Organizational Performance (SP) is measured through 11 indicators related to three aspects: economic, social, and environmental:

(SP1) Improving community quality of life by creating jobs and employment

(SP2) Increasing community income and creating a circular economy

(SP3) Using community resources efficiently and creating added economic value

(SP4) Building a business network

(SP5) Creating good quality of life for members within the organization

(SP6) Providing good value to customers, creating satisfaction

(SP7) Managing resources efficiently and minimizing losses

(SP8) Having systematic and safe plans for controlling product standards and work safety

(SP9) Being recognized or certified for environmental standards

(SP10) Operating environmentally friendly businesses without causing negative social impacts

(SP11) Participating with society based on social responsibility.

3.4. Data analysis method

Data was entered and processed using SmartPLS 4.0 software using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method. To assess the reliability of the measurement scale, the study uses three indicators: Cronbach's Alpha (must be > 0.7), Composite Reliability (CR) (must be > 0.7), and outer loading coefficient (must be > 0.6). To assess convergent validity, the authors use Average Variance Extracted (AVE) (must be > 0.5) along with outer loadings. To assess discriminant validity, the authors use two criteria: the Fornell-Larcker criterion (square root of AVE must be greater than correlations with other constructs) and the Heterotrait-Monotrait Ratio (HTMT) (must be < 0.9).

Furthermore, to ensure the empirical validity of the survey-based data and address potential bias arising from single-source informants, a Rotated Component Matrix analysis is performed using Principal Component Analysis. Theoretically, if a single factor accounts for more than 50% of the total variance, it indicates that the data may suffer from common method bias, which could threaten the validity of the findings. By extracting multiple distinct components with eigenvalues greater than 1 and ensuring that items load strongly onto their intended factors without significant cross-loadings, the study confirms that no single factor dominates the variance. This rigorous separation of constructs indicates high data validity and ensures that the measurement model is robust.

To assess the structural model, sequential steps are performed: assessing multicollinearity ($VIF \leq 5$), the coefficient of determination R^2 , the effect size f^2 , and the predictive relevance Q^2 . This comprehensive analysis method ensures the robustness of the findings and the validity of the conclusions drawn from the data.

4. RESULTS AND DISCUSSION

4.1. Analysis results

4.1.1. Results of reliability testing and convergent validity assessment

The reliability of the measurement scale is assessed through Cronbach's Alpha, Composite Reliability (CR), and outer loading coefficients. According to general standards,

Composite Reliability and Cronbach's Alpha must be greater than 0.7 for the scale to be considered reliable. Based on actual data from SmartPLS, all measurement scales have Cronbach's Alpha and CR coefficients greater than 0.85, and the outer loading values of all observed variables far exceed the 0.70 threshold. Therefore, the measurement scales in the model have very high reliability.

To assess convergent validity, outer loading and Average Variance Extracted (AVE) coefficients are used. Outer loading values should be at least 0.6. Based on the results in Table 1, all observed variables have outer loading values greater than 0.70 (exceeding the minimum standard), and all AVE values are greater than 0.5 with the lowest being 0.689 (SP) and the highest being 0.807 (IC). Therefore, the proposed measurement scale meets convergent validity requirements.

Additionally, a Rotated Component Matrix analysis was performed using Principal Component Analysis to ensure data validity. The results extracted four distinct components explaining 76.304% of the total variance, with no single factor dominating the variance. All items loaded strongly (> 0.70) onto their respective factors (SP, EC, IE, and IC), indicating high empirical separation and robustness of the survey data.

Table 2. Results of reliability and convergent validity measurement

Constructs/Items	Outer Loadings	Cronbach's Alpha	Composite Reliability	AVE
Entrepreneurial Capability (EC)		0.954	0.955	0.813
EC1	0.907			
EC2	0.911			
EC3	0.894			
EC4	0.913			
EC5	0.874			
EC6	0.911			
Institutional Environment (IE)		0.920	0.922	0.807
IE1	0.903			
IE2	0.902			
IE3	0.884			
IE4	0.904			
Innovation Capability (IC)		0.932	0.932	0.807
IC1	0.910			
IC2	0.915			
IC3	0.915			
IC4	0.903			
Sustainable Organizational Performance (SP)		0.955	0.955	0.689
SP1	0.849			
SP2	0.829			
SP3	0.812			
SP4	0.828			
SP5	0.809			

SP6	0.852			
SP7	0.831			
SP8	0.837			
SP9	0.824			
SP10	0.832			
SP11	0.824			

Source: Authors' data analysis results (2026)

4.1.2. Results of discriminant validity testing

Based on the analysis results, the research model comprising four conceptual constructs (EC, IC, IE, SP) has completely satisfied discriminant validity requirements through both testing criteria. Specifically, according to the Fornell-Larcker Criterion (Table 3), the values on the main diagonal (representing the square root of extracted variance - AVE) of variables EC (0.902), IC (0.911), IE (0.898), and SP (0.830) are all greater than all cross-correlation coefficients of that variable with other conceptual constructs in the same row and column. This result is further reinforced through the Heterotrait-Monotrait Ratio - HTMT Criterion (Table 3). All HTMT indices between concept pairs range from a minimum of 0.228 (between IE and IC) to a maximum of 0.733 (between SP and IC). All these values are below the stringent standard threshold of 0.85 (or the relaxed threshold of 0.90).

In summary, both tables confirm that observed variables measure the concepts they represent correctly and are not confused or overlapped with other concepts in the model.

Table 3. Fornell-Larcker Criterion

	EC	IC	IE	SP
EC	0.902			
IC	0.637	0.911		
IE	0.275	0.212	0.898	
SP	0.645	0.692	0.471	0.830

Source: Authors' data analysis results (2026)

Table 4. Heterotrait-Monotrait Ratio (HTMT)

	EC	IC	IE	SP
EC				
IC	0.674			
IE	0.293	0.228		
SP	0.675	0.733	0.501	

Source: Authors' data analysis results (2026)

4.1.3. Structural model and hypothesis testing

4.1.3.1. Multicollinearity assessment

The structural model includes four main pathways; therefore, the variance inflation factor (VIF) index must be calculated for each relationship. According to Hair et al. (2019),

multicollinearity does not exist when $VIF \leq 5$. Based on the results in the analysis, all exogenous variables have VIF values below 5, indicating the model is within acceptable ranges [48].

4.1.3.2. Coefficient of determination R^2 assessment

R^2 analysis is used to assess the explanatory power of the structural model. Based on analysis results, the R^2 values of endogenous variables in the model are respectively: Innovation Capability (IC) = 0.406 and Sustainable Performance (SP) = 0.632. These values show that the model explains 40.6% of variance in Innovation Capability (IC) through the influence of Entrepreneurial Capability. Simultaneously, the model also explains 63.2% of variance in Sustainable Performance (SP) through the effects of variables EC, IE, and IC (Figure 2).

Additionally, when considering adjusted R^2 (R Square Adjusted) values of 0.404 for IC and 0.629 for SP, the difference compared to the original R^2 is very small. These R^2 , R Square Adjusted values suggest considerable explanatory power of the model.

Table 5. R Square and R Square Adjusted

	R Square	R Square Adjusted
IC	0.406	0.404
SP	0.632	0.629

Source: Authors' data analysis results (2026)

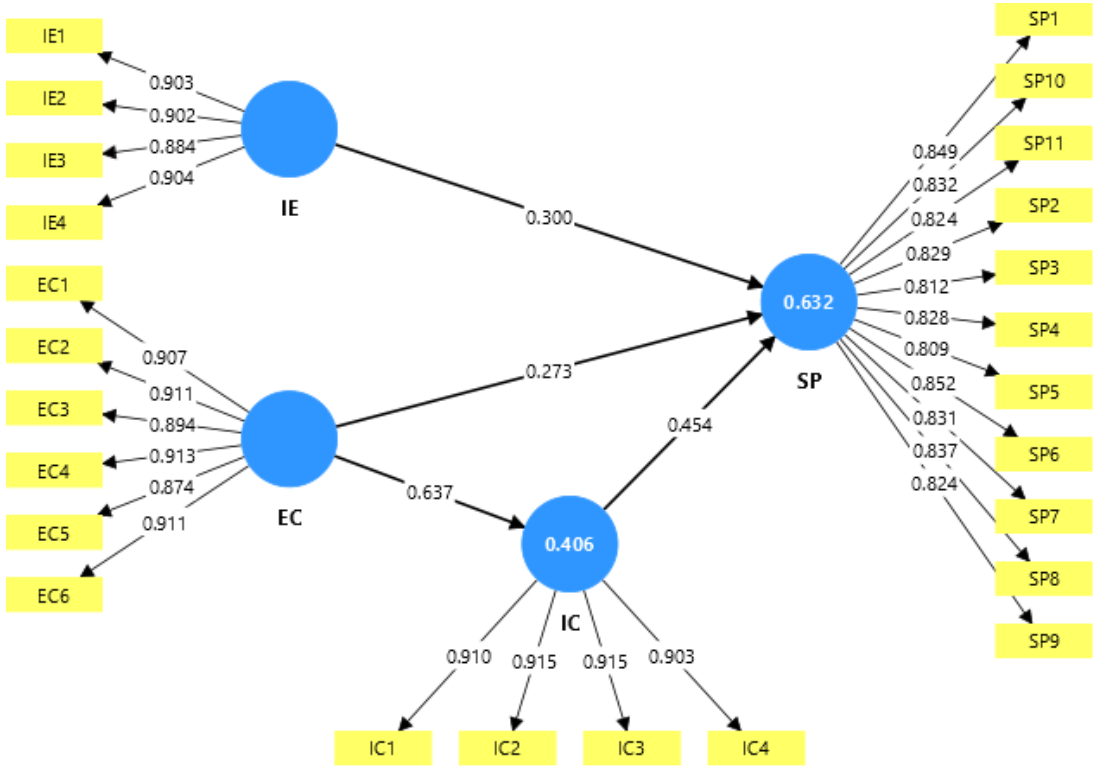


Figure 2. Model Evaluation Results

Source: Synthesized from research results

The results reveal values of 0.035 for IC and 0.431 for SP. According to Cohen (1988), these values indicate small and large predictive relevance, respectively [49]. Since all values exceed zero, the model demonstrates adequate predictive relevance, supporting its robustness in explaining the development of entrepreneurial enterprises in Vietnam

Table 6. Q Square Adjusted

Construct	SSO	SSE	Q ² (=1-SSE/SSO)
EC	2070.000	2070.000	
IC	1380.000	1331.527	0.035
IE	1380.000	1380.000	
SP	3795.000	2160.375	0.431

Source: Authors' data analysis results (2026)

4.1.3.3. Effect size f^2 assessment

Hair et al. (2019) use the f^2 coefficient to assess the magnitude of influence [54]. According to the rule: $f^2 \geq 0.35$ is large effect, 0.15-0.34 is medium, 0.02-0.14 is small.

Table 7. Effect size f^2 results

Relationship	f^2 value	Effect size
EC → IC	0.682	Large
EC → SP	0.117	Small
IE → SP	0.226	Medium
IC → SP	0.333	Medium

4.1.3.4. Fit assessment of direct relationships

Results in Table 8 show that at the 5% significance level ($t > 1.96$), all four relationships in the model are statistically significant ($p < 0.05$), confirming that all hypotheses are statistically supported. Specifically: (1) H1: EC → SP has a pathway coefficient of 0.273, showing that Entrepreneurial Capability directly positively affects Sustainable Performance; (2) H2: EC → IC has a pathway coefficient of 0.637, the strongest influence, showing that Entrepreneurial Capability strongly affects Innovation Capability; (3) H3: IC → SP has a pathway coefficient of 0.454, showing that Innovation Capability has a medium effect on Sustainable Performance; (4) H4: IE → SP has a pathway coefficient of 0.300, showing that Institutional Environment positively affects Sustainable Performance.

Table 8. Direct effect relationship results

Path coefficient	Original sample	T Statistics	P-value	Result
H1: EC → SP	0.273	6.215	0.000	Significant ***
H2: EC → IC	0.637	19.304	0.000	Significant ***
H3: IC → SP	0.454	11.113	0.000	Significant ***
H4: IE → SP	0.300	8.581	0.001	Significant ***

*Note: *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$*

The study performed a mediation analysis of IC using the Variance Accounted For (VAF) index. The structural model analysis reveals that the direct effect of EC on SP is 0.273. Concurrently, the indirect effect of EC on SP through the mediator IC is 0.289 (calculated as the product of path coefficients for EC → IC at 0.637 and IC → SP at 0.454). The total effect of EC on SP is 0.562, resulting in a VAF value of 51.4%. Since the VAF index falls within the range of 20% to 80%, the study confirms that IC plays a partial mediating role in this relationship. This finding demonstrates that the internal resources of entrepreneurial enterprises must be transformed through innovation capability to achieve optimal sustainable outcomes.

4.1.3.5. Conclusions on research hypotheses

As illustrated in Table 9, the empirical results reveal that all four proposed research hypotheses (H₁ to H₄) are statistically supported and accepted. The path coefficients for all relationships are positive and highly significant at the $p < 0.001$ level, confirming the hypothesized positive directions. Remarkably, the relationship between the two internal capabilities (H₂) exhibits the highest path coefficient in the entire structural model (0.637). This indicates that Entrepreneurial Capability has an exceptionally strong and positive impact on Innovation Capability. This finding implies that while entrepreneurial capability directly enhances sustainable performance, it also serves as a vital catalyst that significantly drives innovation capability, thereby creating a powerful indirect mechanism to achieve long-term organizational sustainability.

Table 9. Conclusion on research hypotheses

Hypothesis	Statement	Coefficient	Conclusion
H1	Entrepreneurial Capability has a positive effect on Sustainable Organizational Performance	0.273***	Accepted
H2	Entrepreneurial Capability has a positive effect on Innovation Capability	0.637***	Accepted
H3	Innovation Capability has a positive effect on Sustainable Organizational Performance	0.454***	Accepted
H4	Institutional Environment has a positive effect on Sustainable Organizational Performance	0.300***	Accepted

Source: Synthesized from research results

4.2. Discussion

4.2.1. Results discussion

The empirical results underscore that EC stands as the primary driver for the SP of startups in Vietnam, exerting both a significant direct effect ($\beta = 0.273$, $p < 0.001$) and a robust indirect effect via IC ($\beta_{\text{indirect}} = 0.289$, $p < 0.001$; derived from 0.637×0.454). These findings suggest that the ability of new ventures to identify market opportunities, tolerate risks, and proactively adopt industry best practices not only strengthens internal management but also provides a resilient foundation for long-term organizational sustainability. This is highly consistent with the studies of Permatasari et al. (2023) and Somwethee et al. (2025), which emphasize that internal strategic competencies are essential for survival in competitive globalized markets.

Furthermore, the institutional environment (IE) acts as a critical external catalyst, with a direct impact on SP ($\beta = 0.300$) that marginally exceeds the direct effect of EC. In the specific context of Vietnam, where emerging firms often grapple with financial constraints and limited management expertise, state-led support mechanisms such as technical training, financial subsidies, and marketing assistance (aligned with the National Support Plan 844) are vital for

enabling firms to meet economic, social, and environmental standards. The model's high predictive relevance is further evidenced by a Q^2 value of 0.431 for SP, which, according to Cohen (1988), indicates a substantial predictive capability.

4.2.2. Theoretical implications

Theoretically, this study enriches Dynamic Capabilities Theory and Institutional Theory by elucidating the integrated value-creation pathway within an emerging economy. By identifying the partial mediating role of innovation capability (IC)-supported by a VAF index of 51.4%-the research clarifies the logical chain through which internal proactiveness (EC) and external support (IE) are transformed into measurable sustainable outcomes through innovative processes.

Additionally, this study addresses previous methodological inconsistencies by confirming that despite the use of self-reported data (5-point Likert scale), the measurement model remains robust. The Rotated Component Matrix analysis successfully extracted four distinct constructs explaining 76.304% of the total variance, confirming high empirical separation and ensuring the findings are not significantly threatened by common method bias (CMB).

4.2.3. Practical implications

For managers of new ventures, the results suggest that cultivating “entrepreneurial human capital” is paramount. Organizations should foster a culture that encourages “controlled failure” and creative thinking, allowing employees the autonomy to implement green initiatives and resource-efficient processes that lead to social and environmental value.

For policymakers in Vietnam, the findings imply that institutional support should pivot from generic financial aid toward targeted “capacity-building” programs. Support packages should be redesigned for greater flexibility, combining financial subsidies with professional mentorship and consultancy on technology pilots. By linking public resources directly to an enterprise's internal innovation mechanisms, the state can more effectively activate the pathways that lead to long-term sustainable growth.

5. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

5.1. Conclusion

This study concludes that achieving sustainable performance requires a synergistic combination of internal strategic capabilities (EC and IC) and external institutional support (IE). While entrepreneurial capability acts as the primary prerequisite for innovation, the institutional environment remains a crucial “rule of the game” that encourages new ventures to invest in sustainable practices. These findings offer a comprehensive framework for understanding how startups in Vietnam can navigate economic transitions to achieve long-term social, environmental, and economic value.

5.2. Limitations and Future Research

Despite its contributions, several limitations must be acknowledged. First, the study utilizes a cross-sectional design, which limits the ability to confirm long-term causal relationships; future research should employ longitudinal methods to track performance over time. Second, the sample is restricted to emerging firms in Vietnam, suggesting that international or inter-sectoral comparative studies would be beneficial to enhance generalizability. Finally, this model does not account for potential moderating variables such as firm size, age, or leadership traits, which could significantly alter the strength of the

relationships between EC, IC, and SP. Future scholars are encouraged to integrate these factors for a more nuanced understanding of entrepreneurial sustainability.

CONFLICT OF INTEREST STATEMENT

The authors commit to declaring that there are no conflicts of interest related to the publication of this article.

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