



## Using the Stimulus-Organism-Response model to explain green entrepreneurial behavior among university students in Vietnam

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### ABSTRACT

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This study uses the Stimulus-Organism-Response (SOR) framework to clarify the mechanism by which external factors (university entrepreneurial support, external institutional support, and social support) influence students' entrepreneurship self-efficacy, green cognition, and financial support and explain students' green entrepreneurial intentions in the context of university students in developing countries like Vietnam. The hypotheses in the proposed research model were tested using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with a convenience survey sample of 1,220 students. The results indicate that university entrepreneurial support (UES) positively impacts students' entrepreneurship self-efficacy (ESE) and green cognition (GC). External institutional support (EIS) and social support (SS) positively influence financial support (FS). Entrepreneurship self-efficacy (ESE), financial support (FS), and green cognition (GC) positively affect students' green entrepreneurial intentions (GEI), and environmental values positively moderate the relationship between green cognition (GC) and students' green entrepreneurial intentions (GEI). Additionally, the study offers practical insights for promoting sustainable entrepreneurship through the role of university education, community support, and the development of student ability. It also provides a multidimensional perspective on how individuals develop green entrepreneurial intentions—not only from a psychological standpoint but also in terms of outside resource mobilization and external environmental influences.

**Contribution/Originality:** The study enhances awareness of sustainable entrepreneurship theory by applying the SOR framework to analyze the impact of stimulus factors (EIS, UES, and SS) on organisms (GC, FS, and ESE) in shaping responses (GEI), with the moderating role of environmental values in the context of university students in developing countries such as Vietnam.

## 1. INTRODUCTION

Industrial development brings benefits and opportunities for people but also leaves severe environmental consequences. The large amount of waste generated by factories and enterprises contributes to climate change and environmental pollution, impacting sustainable development (Somerville, 2014). The rapid increase in greenhouse gases threatens the environment and life on Earth (Hameed & Khan, 2020). Therefore, the orientation toward "greening" industries, energy, and forestry as well as transitioning to green businesses and advancing toward a green economy is necessary and urgent (Amankwah & Harun, 2021). Green entrepreneurship is considered a

sustainable solution for environmental protection. Green entrepreneurship is considered an approach to solving environmental and ecological issues (Demirel, Li, Rentocchini, & Tamvada, 2019; Yi, 2021). Green entrepreneurship can be viewed as the evolution of social and environmental concerns among the growing trend of sustainable development orientation (Alain, Liñán, & Moriano, 2014).

Yi (2021) delves into the university's contribution to fostering green entrepreneurship. Entrepreneurial education affects the students' creative capacity and intention to engage in entrepreneurship (Teo, Zhou, Fan, & Huang, 2019). The spirit of entrepreneurship is influenced by education and training in entrepreneurship. Studies confirmed that self-efficacy positively influences entrepreneurial intentions (Cabana-Villca et al., 2024; González-Prida et al., 2024). Family situations and business rivalry affect students' entrepreneurial aspirations in China. showed that business knowledge and abilities, drive and achievement impact students' entrepreneurial intentions. Students' intentions to engage in eco-entrepreneurship are greatly influenced by environmental awareness (Gültekin, 2024). Support in business development, idea generation, and academic training strengthens institutional support, which enhances self-efficacy and green entrepreneurial intention (Cabana-Villca et al., 2024) based on caring economics to strengthen the spirit and intention of entrepreneurship. In addition, technological advancement affects both self-efficacy and intention to entrepreneur (Alfarizi & Herdiansyah, 2024).

The Theory of Planned Behavior (TPB) has been applied to account for the green entrepreneurial intentions of university students (Fatoki, 2024; Li, Murad, & Ashraf, 2023; Lyu, Al Mamun, Yang, & Aziz, 2024; Martins, Shahzad, & Xu, 2023). The Social Cognitive Theory (SCT) stresses the development of behavior through self-efficacy and observational learning. When an individual is supported by a university, institution or society with successful entrepreneurial models providing practical information and experience it becomes easier. This learning process develops entrepreneurial self-efficacy and green cognition. Green cognition is important in green entrepreneurial intention formation.

According to Barney (1991), the Resource-Based View (RBV) posits that an organization or individual's unique resources and capabilities are key determinants in achieving sustainable competitive advantage. Financial support is a crucial resource that motivates individuals to pursue green entrepreneurship in the context of green entrepreneurship. In addition, green cognition allows individuals to discover and take advantage of environmentally friendly business opportunities faster and more effectively. With strong green cognition, they more frequently consider green entrepreneurship a possibility rather than a danger, further encouraging their green entrepreneurial intention.

The literature review indicates that the Stimulus-Organism-Response (SOR) framework has not been widely applied in previous studies although there has been much research on entrepreneurship and the factors that influence entrepreneurial intention. The SOR model has been widely used in consumer behavior and psychology. Many studies have been done looking at the application of this model to explain the reasons behind the green entrepreneurship intention. The SOR framework is adopted in this research which allows one to look at the overall view of how the psychological processes are affected by external factors, therefore inducing green entrepreneurial intentions. There is not much research to verify this relationship in the context of green entrepreneurship although there is evidence that environmental value can influence entrepreneurial behavior. To address this research gap, the following research question (RQ) needs to be answered:

RQ1: Do external institutional support, university entrepreneurial support, and social support impact students' entrepreneurial self-efficacy, financial support, and green cognition?

RQ2: Do students' entrepreneurial self-efficacy, financial support, and green cognition affect their green entrepreneurship intentions?

RQ3: Do environmental values moderate the relationship between green cognition and green entrepreneurship intentions?

This study focuses on the impact of external factors (external institutional support, university entrepreneurial

support, and social support) on students' entrepreneurial self-efficacy, financial support, and green cognition with the moderating role of environmental values and explaining their green entrepreneurship intentions at universities in Vietnam to answer three research questions. After the introduction, this study will include a literature review, methods, results and discussion, and conclusion.

## 2. LITERATURE REVIEW

### 2.1. SOR Framework

In this study, the SOR framework is applied to explain how external support (S) affects an individual's psychological and cognitive factors (O), thereby fostering green entrepreneurial intention (R) with environmental values acting as a moderator. Stimulus (S) includes external institutional support, university entrepreneurial support, and social support—these external factors shape an individual's perception of entrepreneurial capability. Organism (O) consists of entrepreneurial self-efficacy (ESE), financial support, and green cognition, influencing green entrepreneurial intention. These psychological and cognitive factors mediate how individuals respond to external stimuli. Response (R) represents green entrepreneurial intention, the behavioral outcome after an individual processes and evaluates green entrepreneurship opportunities with the moderating role of environmental values.

### 2.2. Hypotheses Development

Sustainable economic development is becoming a global trend with active participation from research institutes and support centers. These organizations play a crucial role in providing financial support through green investment funds, funding opportunities and connections with venture capitalists to promote green projects (Bhattacharjee, 2024; Phani, Bhaskar, Bigliardi, & Venturini, 2024; Yi, 2021). Students can leverage government startup policies to access preferential funding through banks or major financial institutions. In Kazakhstan, state support mechanisms such as loan guarantees and interest subsidies have varying impacts on technological entrepreneurship (Ibyzhanova, Rustenova, Sultanova, Talapbayeva, & Yerniyazova, 2023). Institutional support plays a key role in enhancing students' green entrepreneurial behavior (Li et al., 2023).

*H: External institutional support is positively related to financial support.*

Awareness is an essential component of green education. Universities have integrated environmental education into their curricula to enhance environmental awareness and encourage students' environmentally responsible behavior (Bonilla-Jurado et al., 2024; Shafait & Huang, 2024; Anzorova et al., 2021). The communication of green knowledge, especially from universities helps students become aware of environmental issues and encourages their involvement in implementing sustainable business measures (Li et al., 2023). Universities are key players in building a circular green business approach to tackle future environmental problems (de las Mercedes Anderson-Seminario & Alvarez-Risco, 2023).

*H: University entrepreneurial support is positively related to green cognition.*

University training programs facilitate the development of entrepreneurial self-efficacy (ESE). Entrepreneurship-centered education enriches individuals' competencies, eventually leading to a rise in students' beliefs in their entrepreneurship skills (Molino, Dolce, Cortese, & Ghislieri, 2018). Support from the university is of great importance in enhancing students' confidence in entrepreneurship (Huang, Wang, & Su, 2024). Furthermore, offering autonomy support is also one method of increasing ESE, a proven method for improving student and social self-efficacy (Ito, Umamoto, & Nakaya, 2024). Personality traits are also suggested by to be factors that affect the self-efficacy and the entrepreneurial intentions of students in private colleges.

*H: University entrepreneurial support is positively related to entrepreneurial self-efficacy (ESE).*

Social support systems are financially assisting students, thus becoming a trend in sustainable economies (Ghodbane & Alwehabe, 2023; Hoogstraaten, Frenken, & Boon, 2020). Apart from helping with physical needs,

social support also boosts students' confidence and empowers them to fight their way through the challenges of starting their businesses (Prabowo, Yuniarty, & Ikhsan, 2022). According to Jones and Karsten (2008), the financing gained through social support is more independent and promotes a sense of success than previously known financial means, like banks (Riaz, Wang, Ishaq, Raza, & Siddiqi, 2024). Financial resources provided through social support usually have associated higher expectations, thus pushing students to make rational decisions (Yasir, Babar, Mehmood, Xie, & Guo, 2023). Moreover, social networks assist students in finding external funding resources (Sahban, Ramalu, & Syahputra 2016). Besides ensuring financial safety, social support is instrumental in creating a risk-free environment for students to experiment with their ideas in an entrepreneurial way (Ghodbane & Alwehabie, 2023).

*H<sub>1</sub>: Social support is positively related to financial support.*

Green cognition is an important factor that enhances green entrepreneurial intention. It is of utmost importance for students first to have a background on environmental issues and provide them with the required skills and knowledge using education and through the real world and identify the opportunities, e.g., develop a sustainable entrepreneurial mindset (Cai, Hussain, & Zhang, 2022). González-López, Pérez-López, and Rodríguez-Ariza (2021) proved that a detailed perception of environmental problems empowers students to shift from being entrepreneurs to action. Those individuals who have a powerful green cognition and who are committed to environmentalism have a greater chance to face and solve difficulties and to intensify their green entrepreneurial intents (Ghodbane & Alwehabie, 2023; Wang, Wang, Pan, & Mata, 2024).

*H<sub>2</sub>: Green cognition is positively related to green entrepreneurial intentions.*

The green entrepreneurial intentions of the students are developed mainly through financial support. Financial support is treated as the solution to the problem of insufficient capital. It also encourages students to think and work innovatively (Cai et al., 2022). Maisaroh, Sawitri, Sunaryo, and Hendarsjah (2024) pointed out that creating a higher level of green entrepreneurial behavior is possible by providing financial support, training, and networking opportunities. It is possible to improve students' self-efficacy and intentions to engage in green entrepreneurship with the aid of government financial support and the implementation of eco-friendly policies (Megawati, Machmud, Herdiansyah, & Alfarizi, 2024). Financial assistance from universities through scholarships or grants is also essential in encouraging green entrepreneurial intentions (Pusparini et al., 2025).

*H<sub>3</sub>: Financial support is positively related to green entrepreneurial intentions.*

Entrepreneurial self-efficacy (ESE) is a significant determinant of the intention of green entrepreneurship (Molino et al., 2018). ESE is more than just a motivational force but also a significant driver for students to adopt green entrepreneurial activities (Williams & Rhodes, 2016). Pennetta, Anglani, and Mathews (2024) suggest that the skills related to entrepreneurship involve learning, risk-taking, and strategic and opportunity identification. ESE is an important element in the sustainable development of entrepreneurs (Wang et al., 2024). Furthermore, social norms and environmental factors also impact ESE leading to changes in entrepreneurial intentions (Ho, Man, & Chiu, 2025).

*H<sub>4</sub>: Entrepreneurial self-efficacy (ESE) is positively related to green entrepreneurial intentions.*

The environmental values mediate the relationship between controlling the perception of green issues and intention toward green entrepreneurship (Mambali, Kapipi, & Changalima, 2024). The aforementioned environmental protection and sustainable development values embody beliefs for other people about the world and stand as the dominant factors in the change of the process of cognition to action (Arin, De Iudicibus, Sayour, & Spagnolo, 2024; Bhardwaj, Agarwal, & Tripathi, 2024). Environmental values increase the sensitivity to green issues. Therefore, they motivate people to act sustainably. Environmental values promote positive attitudes and perceived behavioral control leading to green entrepreneurial intention (Fatoki, 2024). Oreg and Katz-Gerro (2006) argue that environmental values shape cognition and drive concrete actions. Individuals with strong environmental values tend to develop a positive attitude toward sustainable entrepreneurship, enhance perceived behavioral

control, and increase their intention to engage in green entrepreneurship (Peng, Li, Zhou, & Sadowski, 2021; Yasir et al., 2023).

*H<sub>8</sub>: Environmental values moderates the relationship between green cognition and green entrepreneurial intention.*

Based on the above argument, the research model is shown in Figure 1.

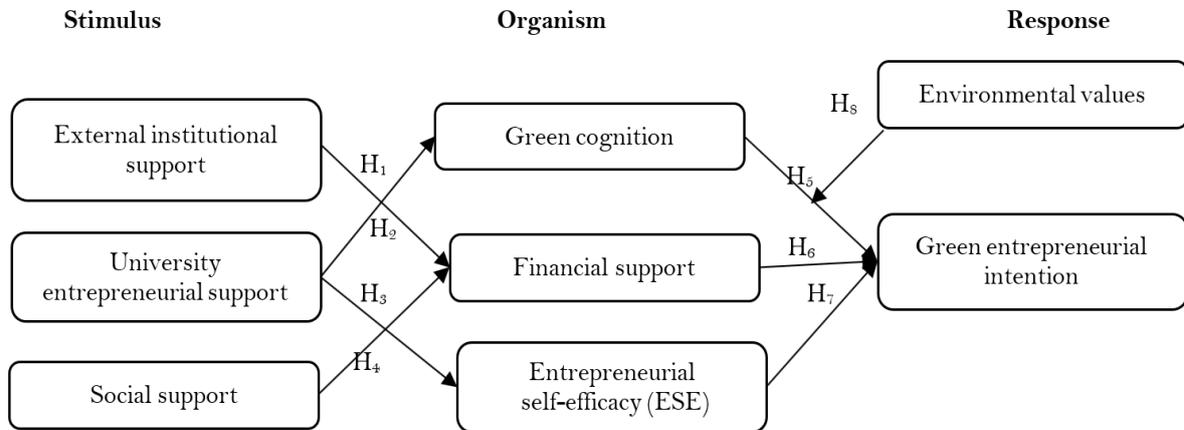


Figure 1. Proposed research model.

### 3. METHODS

#### 3.1. Data

The study employs a non-probability (convenience) sampling method to collect data from 1,220 university students in Vietnam. This method was chosen to ensure feasibility in accessing the target respondents while maintaining representativeness regarding students' green entrepreneurial intentions. The data was collected through an online survey with 750 students (61.5%) and an offline survey with 470 students (38.5%). 1220 students participated in the survey from universities in Vietnam (Industrial University of Ho Chi Minh City, University of Economics Ho Chi Minh City, Van Hien University, Ba Ria – Vung Tau University and Van Lang University). The study tests the research model using Partial Least Squares Structural Equation Modeling (PLS-SEM) which includes assessing the measurement model to examine the convergent and discriminant validity of the constructs through Cronbach's alpha, composite reliability (CR), and Average Variance Extracted (AVE). The evaluation of the structural model, which is the leading research hypothesis is used for this study. Moreover, the structural model evaluation through bootstrapping with N = 5000 was used to test the research hypothesis and the quality of the research model through the determination of the coefficient (R<sup>2</sup>), the effect size (f<sup>2</sup>), and the prediction of the model (Q<sup>2</sup>). The rationale behind using PLS-SEM is its capability to manage small datasets without the issue of normal data distribution (Hair Jr, Sarstedt, Hopkins, & Kuppelwieser, 2014).

#### 3.2. Measurement

The six items of the green entrepreneurial intention (GEI) scale are adapted (Wang, Chang, Yao, & Liang, 2016). The university entrepreneurial support (UES) and external institutional support (EIS) scales have four observed variables (Yi, 2021). The social support (SS) scale was developed through three observed variables (Molino et al., 2018). Entrepreneurial self-efficacy (ESE) is measured through four items inherited from Shook and Bratianu (2010). The financial support (FS) and green cognition (GC) scales include four and six observed variables adapted from Wu and Mao (2020) and Jiang, Wang, Wang, and Li (2020). The questionnaire used a 5-point Likert scale to measure research variables ranging from 1 (strongly disagree) to 5 (strongly agree).

#### 3.3. Common Method Bias

Common Method Bias (CMB) often occurs during data collection (Podsakoff, MacKenzie, Podsakoff, & Lee,

2003). This study employed variance inflation factors (VIFs) to examine the presence of CMB. The VIF values were all below the threshold of 3.3 (Kock, 2015) (see Table 1). Therefore, the study concludes that it is not affected by CMB.

**Table 1.** VIF values.

Paths	VIF
EIS -> FS	1.705
ESE -> GEI	1.772
EV -> GEI	1.469
GC -> GEI	1.712
FS -> GEI	1.730
SS -> FS	1.258
UES -> ESE	1.000
UES -> GC	1.000
UES -> FS	1.592
EV x GC -> GEI	1.025

**Table 2.** Characteristics of the survey participants.

Category	Sub-category	Frequency	Percentage (%)
Gender	Male	609	49.9
	Female	611	50.1
Age	18-20 years old	397	32.5
	20 - 22 years old	401	32.9
	Above 22 years old	422	34.6
Education level	Undergraduate	439	36.0
	Bachelor's degree	626	51.3
	Postgraduate	155	12.7
Majors	Production and processing	86	7.0
	Architecture and construction	102	8.4
	Business	163	13.4
	Technology and information	107	8.8
	Law and humanities	90	7.4
	Arts, aesthetics, and graphics	95	7.8
	Journalism, science, and society	104	8.5
	Basic sciences	88	7.2
	Education	95	7.8
	Agriculture, forestry, and fisheries	97	8.0
Others	193	15.8	

## 4. RESULTS

### 4.1. Sample Characteristics

The official research sample consists of 1,220 observations with surveyed participants being third- and fourth-year university students currently studying and working in Ho Chi Minh City (see Table 2). The gender distribution of the surveyed students is nearly balanced with 609 male students accounting for 49.9% of the sample, while 611 female students make up 50.1%. The age distribution of the surveyed students shows a relatively even spread across different age groups. 397 students (32.5%) are between 18 and 20 years old, 401 students (32.9%) fall within the 20 to 22 age range, and 422 students (34.6%) are above 22 years old. The distribution of students across different majors reflects a diverse academic background. Among the surveyed students, 86 (7.0%) are in production and processing, 102 (8.4%) in architecture and construction, and 163 (13.4%) in business. Additionally, 107 students (8.8%) are in technology and information, 90 (7.4%) in law and humanities, and 95 (7.8%) in arts, aesthetics, and graphics. The journalism, science, and society field include 104 students (8.5%) while 88 (7.2%) are in basic sciences, 95 (7.8%) in education, and 97 (8.0%) in agriculture, forestry, and fisheries. Lastly, 193 students (15.8%) belong to

other academic disciplines. Regarding educational levels, 626 students (51.3%) are at the undergraduate level, 439 students (36.0%) are at the college level, and 155 students (12.7%) are at the postgraduate level.

4.2. Measurement Model Assessment

Table 3 presents the reliability assessment results using Cronbach’s alpha and composite reliability (CR). All measurement scales have Cronbach’s alpha ( $\alpha$ ) values exceeding the minimum acceptable threshold, specifically  $\alpha_{ESE} = 0.639$ ;  $\alpha_{UES} = 0.665$ ;  $\alpha_{FS} = 0.648$ ;  $\alpha_{SS} = 0.622$ ,  $\alpha_{EIS} = 0.611$ ;  $\alpha_{GC} = 0.673$ ;  $\alpha_{EV} = 0.654$  and  $\alpha_{GEI} = 0.756$ , all greater than 0.6. Similarly, all measurement scales’ composite reliability (CR) values are above 0.7. According to Hair, Hult, Ringle, and Sarstedt (2021), since both Cronbach’s alpha and composite reliability meet the acceptable thresholds, the measurement scales ensure internal consistency reliability.

Table 3. Statistical indicators of measurement scales.

Constructs	Mean	SD	$\chi$	CA	CR	AVE
Entrepreneurial self-efficacy (ESE)				0.639	0.786	0.581
ESE1: “I can tolerate unexpected changes in business conditions.”	3.765	1.070	0.737			
ESE2: “I can react quickly to take advantage of business opportunities.”	3.802	1.042	0.714			
ESE3: “I can originate new business ideas and products.”	3.837	1.014	0.730			
ESE4: “I can create products that fulfill customers’ unmet needs.”	3.820	0.977	0.780			
University entrepreneurial support (UES)				0.665	0.799	0.599
UES1: “My university offers courses on green entrepreneurship.”	3.587	1.247	0.707			
UES2: “My university motivates students to start a green business.”	3.682	1.263	0.786			
UES3: “My university offers project work focused on green entrepreneurship.”	3.575	1.254	0.754			
UES4: “My university provides students with the financial and policy means to start a new business.”	3.635	1.238	0.776			
Financial support (FS)				0.648	0.791	0.586
FS1: “There are alternative finance sources for student entrepreneurs.”	3.784	1.015	0.702			
FS2: “Low-interest loans offered by banks are accessible.”	3.700	1.120	0.798			
FS3: “Start-up funds offered by the school/ government are accessible.”	3.803	1.046	0.775			
FS4: “A variety of loan guarantee options are available.”	3.736	1.137	0.714			
Social support (SS)				0.622	0.759	0.514
SS1: “My family members have always thought I should choose an entrepreneurial career.”	3.937	1.088	0.773			
SS2: “My friends think that I should choose an entrepreneurial career.”	3.820	1.099	0.752			
SS3: “People who are important to me think that I should choose an entrepreneurial career.”	3.542	1.268	0.617			
External institutional support (EIS)				0.611	0.773	0.561
EIS1: “Implemented policies and programs that have been beneficial to your start-up activities.”	3.670	1.207	0.789			
EIS2: “Provided needed technology information and technical support to your start-up activities.”	3.618	1.229	0.780			
EIS3: “Played a significant role in providing financial support for your start-up activities.”	3.602	1.239	0.706			
EIS4: “Helped your firm (start-up activities) to obtain licenses for imports of technology, manufacturing, and other equipment.”	3.720	1.165	0.739			
Green cognition (GC)				0.673	0.801	0.502
GC1: “I can recognize new venture opportunities in environmental protection industries.”	3.765	1.071	0.727			

Constructs	Mean	SD	$\chi$	CA	CR	AVE
GC2: "I frequently identify ideas that can be converted into new products or services in environmental protection industries."	3.693	1.121	0.734			
GC3: "I generally lack green ideas that may materialize into profitable enterprises" (reverse).	3.802	1.042	0.737			
GC4: "I frequently identify opportunities to start up new businesses in environmental protection industries."	3.837	1.014	0.732			
GC5: "I enjoy thinking about new ways of doing green businesses."	3.886	0.954	0.791			
GC6: "I thought of many ideas for new green activities in the past month."	3.820	0.978	0.783			
Environmental values (EV)				0.654	0.782	0.519
EV1: "I feel a personal obligation to do whatever I can to prevent environmental degradation."	3.574	1.226	0.792			
EV2: "People important to me thought that I should prevent environmental degradation."	3.583	1.179	0.713			
EV3: "If I start green work, most people who are important to me would encourage me."	3.726	1.142	0.793			
EV4: "If I prevent environmental degradation, it will help me to make my interpersonal relationship closer."	3.914	1.023	0.746			
EV5: "It would make a good impression on other people."	3.968	1.086	0.787			
Green entrepreneurial intention (GEI)				0.756	0.831	0.551
GEI1: "I will do anything to become a green entrepreneur."	3.748	1.156	0.876			
GEI2: "My professional goal is to become a green entrepreneur."	3.706	1.190	0.708			
GEI3: "I will make every effort to establish and operate my own green business."	3.778	1.108	0.741			
GEI4: "I am seriously considering starting a green business."	3.761	1.117	0.792			
GEI5: "I am determined to become a professional green business manager."	3.747	1.115	0.784			
GEI6: "I am committed to developing my green business into a high-growth enterprise."	3.760	1.115	0.726			

Note: Cronbach's alpha (CA), composite reliability (CR), average variance extracted (AVE);  $\chi$ : Outer loadings.

Additionally, the results presented in Table 3 indicate that the outer loadings of all observed variables are greater than 0.7 (Hair et al., 2021). Moreover, the measurement scales' average variance extracted (AVE) exceeds 0.5. Therefore, the convergent validity of the measurement scales meets the acceptable criteria (Hulland, 1999).

Table 4. Discriminant validity test (Fornell-Larcker criterion).

Constructs	1	2	3	4	5	6	7	8
1. EV	0.720							
2. EIS	0.555	0.749						
3. UES	0.434	0.599	0.774					
4. FS	0.504	0.450	0.401	0.766				
5. SS	0.487	0.435	0.363	0.442	0.717			
6. GC	0.532	0.449	0.400	0.539	0.470	0.709		
7. ESE	0.537	0.495	0.458	0.573	0.488	0.546	0.762	
8. GEI	0.517	0.579	0.568	0.446	0.437	0.459	0.491	0.742

Table 4 presents the results of the discriminant validity test for the latent variables in the model based on the Fornell and Larcker's (1981) criterion. The square root of the AVE for each construct is greater than the correlation coefficients between that construct and the others in the model (Hair et al., 2021). Therefore, the measurement scales in the model achieve discriminant validity.

Table 5. Hypothesis testing results.

Hypotheses	Paths	$\beta$	B	SD	t-value	CI	p-value	VIF	Conclusion
Indirect effects									
H1	EIS → FS	0.230***	0.232	0.034	6.728	0.164;0.298	0.000	1.705	Accepted
H2	UES → GC	0.400***	0.402	0.026	15.584	0.352;0.453	0.000	1.000	Accepted
H3	UES→ ESE	0.458***	0.460	0.022	20.778	0.416;0.502	0.000	1.000	Accepted
H4	SS → FS	0.284***	0.285	0.030	9.317	0.224;0.343	0.000	1.258	Accepted
H5	GC → GEI	0.169***	0.153	0.032	4.707	0.089;0.215	0.000	1.737	Accepted
H6	FS → GEI	0.125***	0.106	0.035	3.066	0.039;0.173	0.002	1.746	Accepted
H7	ESE → GEI	0.234***	0.203	0.035	5.857	0.135;0.272	0.000	1.812	Accepted
Moderating effect									
H8	EVxGC→GEI	0.074	0.076	0.029	3.421	0.054;0.175	0.001	1.031	Accepted
$R^2_{GEI}$		0.370							
$f^2$		$f^2_{EV \rightarrow GEI} = 0.080$ ; $f^2_{EIS \rightarrow FS} = 0.044$ ; $f^2_{UES \rightarrow GC} = 0.191$ ; $f^2_{UES \rightarrow ESE} = 0.266$ ; $f^2_{FS \rightarrow GEI} = 0.010$ ; $f^2_{SS \rightarrow FS} = 0.091$ ; $f^2_{GC \rightarrow GEI} = 0.021$ ; $f^2_{ESE \rightarrow GEI} = 0.036$							
Stone-Geisser's $Q^2$		$Q^2_{EIS} = 0.113$ ; $Q^2_{UES} = 0.176$ ; $Q^2_{FS} = 0.153$ ; $Q^2_{SS} = 0.069$ ; $Q^2_{GC} = 0.182$ ; $Q^2_{ESE} = 0.151$ ; $Q^2_{GEI} = 0.231$ ;							

Note: \*\*\* p < 0.01; Confidence intervals: CI.

The test results indicate that all hypotheses are statistically significant with a p-value < 0.01(see Table 5). University entrepreneurial support (UES) has a positive relationship with financial support (FS), so hypothesis H1 is accepted ( $H_1: \beta_1 = 0.230$  and  $p = 0.000 < 0.01$ ). Next, university entrepreneurial support (UES) has a positive impact on green cognition (GC) and entrepreneurial self-efficacy (ESE), so hypotheses H2 and H3 are both accepted ( $H_2: \beta_2 = 0.400$  and  $p = 0.000 < 0.01$ ;  $H_3: \beta_3 = 0.458$  and  $p = 0.000 < 0.01$ ). Additionally, social support (SS) has a positive influence on financial support (FS), so hypothesis H4 is accepted ( $H_4: \beta_4 = 0.284$  and  $p = 0.000 < 0.01$ ). Green cognition (GC) has a positive impact on green entrepreneurial intention (GEI), so hypothesis H5 is accepted ( $H_5: \beta_5 = 0.169$  and  $p = 0.000 < 0.01$ ). Financial support (FS) also has a positive effect on green entrepreneurial intention (GEI), so hypothesis H6 is accepted ( $H_6: \beta_6 = 0.125$  and  $p = 0.002 < 0.01$ ). Entrepreneurial self-efficacy (ESE) positively influences green entrepreneurial intention (GEI), so hypothesis H7 is accepted ( $H_7: \beta_7 = 0.234$  and  $p = 0.000 < 0.01$ ) ( see Figure 2).

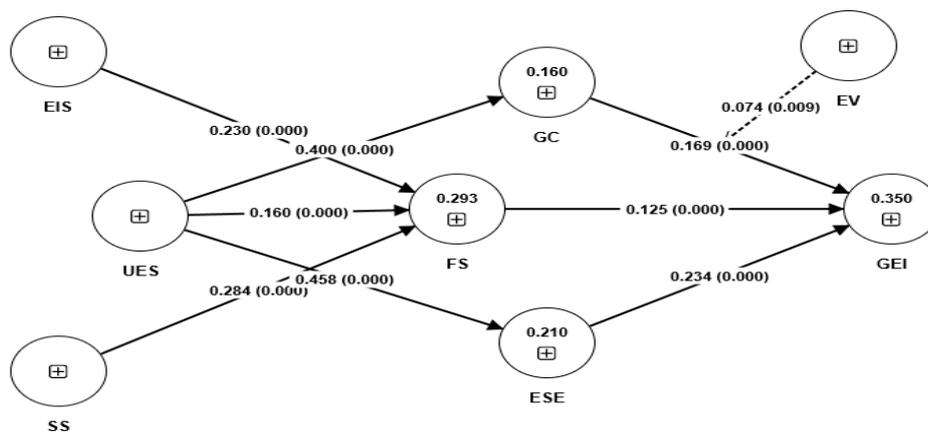


Figure 2. PLS-SEM results

Figure 3 shows that when environmental value (EV) is low. The relationship between green cognitive (GC) and green entrepreneurial intention (GEI) has a lower regression coefficient (0.19). However, when EV is high, this relationship strengthens with a higher regression coefficient (0.486). The interaction term ( $EV \times GC \rightarrow GEI$ ) has a coefficient of  $\beta = 0.074$  and  $p = 0.001 < 0.01$ , indicating that the moderating effect of EV is statistically significant. The bootstrapping confidence interval  $[0.054, 0.175]$  does not contain zero, confirming the reliability of the moderating effect (see Table 5). Thus, EV plays a positive moderating role, enhancing the impact of green cognition (GC) on green entrepreneurial intention (GEI). This means that for individuals with high EV, their green awareness strongly influences their entrepreneurial intentions.

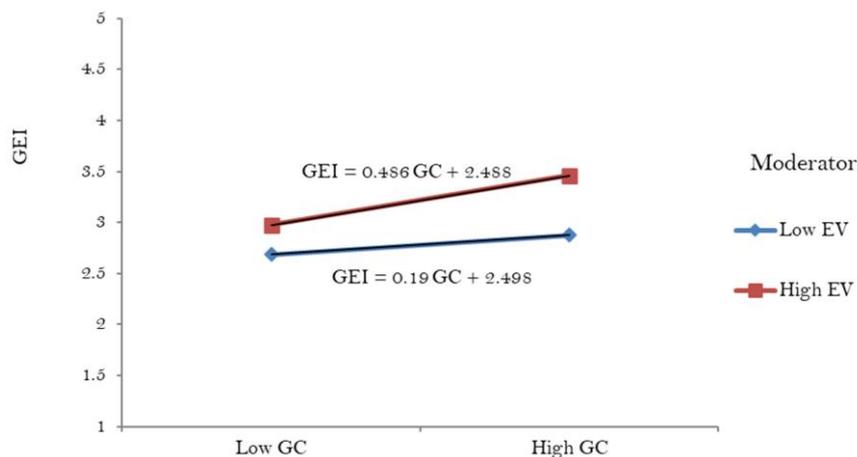


Figure 3. The moderating role of EV in the GC- GEI relationship.

The quality of the proposed model was evaluated using  $R^2$  values and the Stone-Geisser  $Q^2$  index. The findings demonstrate that  $R^2$  for GEI is 0.370 below the 50% cut-off point. As per the criteria for evaluation set out by Hair et al. (2021) this shows that the model's power to predict is moderately weak. Besides, the Stone-Geisser predictive relevance values (Stone, 1974) were all found to be higher than zero, which means that all the exogenous constructs provided an acceptable level of predictive relevance for the endogenous constructs in the proposed research model (Hair et al., 2021). Cohen (2013) also stated that the effect size of each predictor is determined by the formula  $f^2$  with a threshold value of 0.35 (large), 0.15 (moderate), and 0.02 (small). As seen in Table 5, all  $f^2$  values lie between 0.02 and 0.35, which indicates that the effect sizes are moderate. In addition, the variance inflation factor (VIF) values for all correlations are less than 3 and are in the range of 1.000 and 1.812. Hair, Risher, Sarstedt, and Ringle (2019) argued that this finding means there are no multicollinearity problems among the variables in the model.

## 5. DISCUSSION

External institutional support (EIS) and social support (SS) positively impact financial support (FS). This means that help from outside institutions and society is essential for providing financial aid in the first place. The study's results correspond with previous studies. For instance, in Malaysia, government agencies assist organizations, especially with funding which is seen as a considerable factor contributing to the success of entrepreneurs (Daisy Mui Hung, Yusmani Mohd, & Sabai, 2019).

The recent research results evidence that university entrepreneurial support (UES) has a considerable and positive influence on entrepreneurial self-efficacy (ESE) and green cognition (GC). This emphasizes the significant contribution of the university in enabling the students to develop confidence in their learning to build their skills and green progress. These findings are coherent with earlier studies, thus again reinforcing the role of university support in developing entrepreneurial self-efficacy and green cognition. Another study that mentions the influence of university support on students' entrepreneurial self-efficacy (ESE) is done by Saeed, Yousafzai, Yani-De-Soriano, and Muffatto (2015). The discoveries derive from the common points of the research by Alvarez-Risco, Mlodzianowska, García-Ibarra, Rosen, and Del-Aguila-Arcentales (2021) indicating that providing education is a move toward increasing individual capacities. The research results confirm that entrepreneurial self-efficacy (ESE), green cognition (GC), and financial support (FS) all positively influence green entrepreneurial intention (GEI). This means that belief in entrepreneurial skills, environmentally friendly thinking, and access to finance are fundamental to developing green business ideas. However, these conclusions also support previous works and additionally emphasize the merits of these factors in the facilitation of green entrepreneurship. For example, the research conducted by Luc (2020) revealed a positive relationship between ESE and social entrepreneurial intention. Similarly, ESE impacts GEI in current research. Furthermore, environmental green cognition is also a driver of green entrepreneurial intention (Qazi, Qureshi, Raza, Khan, & Qureshi, 2021). The study conducted by Cai et al. (2022) stated that the most determining factor of students' green entrepreneurial intention is not financial support.

Green cognition and environmental values are the two most important factors that constitute green entrepreneurial intention (GEI). Earlier research demonstrated that environmental values could have both direct and indirect consequences on the intention of being a sustainable entrepreneur (Yasir et al., 2023). Environmental values are the main reason for the occurrence of green entrepreneurial intention (GEI) because they operate the way of business aimed at sustainability along with personal beliefs (Al-Azab & Zaki, 2024). Thus, the environmental values were intended as a moderating variable influencing the relationship between green cognition and green entrepreneurial intention throughout the study. The greater the environmental value awareness an individual has, the more likely they are to have a higher intention to achieve green entrepreneurship.

### 5.1. Theoretical Contributions

The research enhances the knowledge of green entrepreneurial intention (GEI). The Stimulus-Organism-

Response (SOR) theory supports the clarification of the way external support factors such as external institutional support (EIS), university entrepreneurial support (UES), and social support (SS) indirectly affect GEI through intermediary factors like entrepreneurial self-efficacy (ESE), financial support (FS), and green cognition (GC). The proposed model suggests that green entrepreneurial intentions are derived from the effects of external factors besides intrinsic factors. On the other hand, this is the aspect of the theory of sustainable entrepreneurship that points out that the combination of organizational support and individual cognition cultivates green entrepreneurial intentions with the moderating role of environmental values.

### *5.2. Practical Contributions*

University support is the key element in improving students' self-efficacy, financial capability, and green cognition. The findings of this research have brought to light the great significance of university support in these issues. Universities can promote green entrepreneurship by nurturing it with the help of sustainable entrepreneurship programs, green startup competitions, and financial support for student-led projects. The financial support provided by external institutions has a positive impact, which points out the role of government policies and social organizations in promoting green entrepreneurship, which should be considered. Thus, funding programs, tax breaks or student loan assistance may be ways governmental bodies can help the latter create green startup projects.

Environmental cognition, self-efficacy, and financial support positively affect the intention to engage in green entrepreneurship. The above conclusion points to the idea that developing a green business mindset among students could be accomplished through information about environmental protection and sustainable development. Programs aimed at education could incorporate subjects related to the circular economy, sustainable business models, and corporate social responsibility to enlarge students' knowledge and readiness for green entrepreneurship.

The research findings thus point out that environmental values are the positive moderators of the relationship between green cognition and green entrepreneurial intention. In other words, students with many environmental values are more likely to enter the green entrepreneurship area as soon as they recognize environmental problems. As a result, educational institutions and governments should ensure proper environmental awareness promotions for the students to see green entrepreneurship as a personal project, thus increasing their mission in sustainable business ventures.

The research findings suggest that universities, governments, and support organizations should start developing suitable policies and training programs. The research findings suggest that universities, governments, and support organizations should start developing suitable policies and training programs. This allows students to become more capable and improve their environmental awareness and makes them more sustainable entrepreneurs.

## **6. CONCLUSION**

The SOR framework explains how external factors impact students' cognition and capability and explains their green entrepreneurial intention (GEI) in developing countries like Vietnam. The study empirically confirmed the hypotheses through the PLS-SEM on a sample of 1,220 university students in Vietnam. The research results indicate that university support positively affects students' financial support and green cognition. Moreover, external institutional support (EIS) and social support (SS) positively affect students' financial support. The study shows that self-efficacy, financial support, and green cognition positively impact students' green entrepreneurial intention. Interestingly, environmental value (EV) is the positive moderator, strengthening the connection between green cognition and entrepreneurial intention. These findings render strong empirical evidence on how the factors that support students can lead them to sustainable entrepreneurship. In addition, the study adds to proposals and recommendations for making university-led entrepreneurship support programs more effective by helping decision-

makers and institutions to better fund, train, and provide awareness avenues to green entrepreneurship.

Some limitations still should be taken into account in the research to be conducted in the future despite the notable achievements of this study. As past research shows, entrepreneurial self-efficacy (ESE) has been identified as a mediator in the relationship between entrepreneurship education and green entrepreneurial intention (GEI) (Mambali et al., 2024). The exploration of the mediation role of entrepreneurial self-efficacy (ESE) in the relationships between university entrepreneurial support (UES), external institutional support (EIS), and social support (SS) will be the primary focus of future research. Moreover, even though this study investigated the moderating role of environmental values (EV), other factors like culture, legal regulations, or personal motivations could be essential in developing green entrepreneurial intention (GEI). Future studies could incorporate these additional moderating factors to expand the analysis involved.

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