



Factors affecting the entrepreneurial intention of university students in Ho Chi Minh City, Vietnam

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ABSTRACT

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Entrepreneurship has increasingly played an important role in economic development and innovation in the 4.0 Industrial Revolution. However, students' entrepreneurial intentions remain below expectations. Integrating the Theory of Planned Behavior and the entrepreneurial ecosystem model, this study examines the impact of personal competencies, subjective norms, educational environment, attitudes, and opportunities from Industry 4.0 on students' entrepreneurial intentions in Ho Chi Minh City. The research employs a quantitative approach, analyzing 425 valid survey responses and validating the model using SPSS and SmartPLS. The demographic profile of respondents includes students from multiple universities in Ho Chi Minh City, across various majors and years of study, providing a comprehensive view of the student population. The findings indicate that all the examined factors positively influence entrepreneurial intention, with technological opportunities emerging as the strongest determinant, followed by personal competencies and the educational environment. Beyond its theoretical contribution to entrepreneurial intention research, this study offers practical implications for universities and policymakers in enhancing entrepreneurship education, strengthening financial support, and fostering technology adoption to cultivate students' entrepreneurial spirit. Integration of major theories, including the Resource-Based View and Opportunity Creation Theory, also helps provide a multidimensional understanding of entrepreneurial intention within the framework of a developing nation like Vietnam.

Contribution/Originality: This study integrates relevant theories to explain university students' entrepreneurial intentions within the context of a developing country such as Vietnam. It provides novel insights, supported by empirical evidence, into how personal competencies, subjective norms, the educational environment, entrepreneurial attitudes, and Industry 4.0 opportunities influence students' intentions to pursue entrepreneurship.

1. INTRODUCTION

Entrepreneurship is a creative process with significant social value, in addition to being an economic phenomenon. According to earlier research, entrepreneurship plays a major role in fostering innovation, job creation, and economic growth (Acs, Szerb, & Autio, 2015) and Bosma, Hessels, Schutjens, Van Praag, and Verheul (2012). Academic research and policy practice are paying more attention to factors influencing entrepreneurial inclinations in light of the integration and the robust development of Industry 4.0 (Fayolle, Liñán, & Moriano, 2014). In Vietnam, the government has implemented a number of initiatives to assist new businesses in fostering the knowledge economy and creating innovative enterprises. As the nation's largest economic hub, Ho Chi Minh

City is investing significant resources in developing a startup ecosystem, particularly for youth and students. However, the actual rate of student entrepreneurship has not reached the expected level, raising questions about the factors influencing students' entrepreneurial intentions. According to earlier research, a variety of factors, including personal traits, the learning environment, and outside influences, affect students' entrepreneurial inclinations (Ajzen, 1991) and Stam (2015). In particular, students' entrepreneurial decisions can be greatly influenced by a number of elements, including their own abilities, subjective norms, the educational environment at university, their entrepreneurial mentality, and opportunities presented by the 4.0 industrial revolution (Bosma et al., 2012). However, the level of influence of each factor in Vietnam has not been extensively studied, leading to gaps in both the theory and practice of student entrepreneurship.

There are some noteworthy new findings in this study when compared to earlier research. To evaluate the impact of entrepreneurial opportunities from the Industry 4.0 revolution on students' entrepreneurial intentions, the first factor identified is "Technology 4.0," which has rarely been included in previous studies on factors influencing entrepreneurial intentions. This element is significant but has received little attention in the context of Vietnam's efforts to promote digital transformation. To provide a comprehensive understanding of the factors influencing students' aspirations to start their own businesses, especially in emerging nations like Vietnam where technology and education are increasingly important, the study incorporates background theories including: Theory of Planned Behavior (TPB) by Ajzen (1991) Resource-Based View (RBV) by Barney (1991), Entrepreneurial Ecosystem Theory by Stam (2015) and Opportunity Creation Theory by Alvarez and Barney (2007). Technology 4.0 has the greatest influence on Vietnamese students' entrepreneurial intentions, according to research conducted within the Vietnamese context. Additionally, by utilizing survey data from 425 university students in Ho Chi Minh City, this study provides new empirical support. It verified the theoretical model using quantitative analytical techniques with SPSS and Smart-PLS, ensuring highly reliable results. These findings complement the study's theoretical foundations of entrepreneurial ambition while also contributing to the development of policies aimed at supporting Vietnamese student entrepreneurs. Therefore, the study assessed the extent to which the aforementioned factors influenced university students in Ho Chi Minh City in their desire to start their own businesses. In addition, the study also provided practical implications to support universities, policymakers, and students in developing entrepreneurial capacity, optimizing the educational environment, and taking advantage of opportunities brought by the 4.0 industrial revolution. This article contributes to the field of entrepreneurial research by providing a more comprehensive approach to the factors affecting students' entrepreneurial intentions in the specific socio-economic context of Vietnam. Furthermore, the study also offers high application value, supporting educational institutions and the government in building a sustainable entrepreneurial development strategy for the future.

2. THEORETICAL BASIS AND RESEARCH HYPOTHESIS DEVELOPMENT

2.1. *Background Theory*

2.1.1. *Theory of Planned Behavior (TPB)*

This theory was developed by Ajzen (1991). Subjective norms, attitude toward the behavior, and perceived behavioral control are the three main factors that influence behavioral intention. Students' intentions to start their own businesses are directly affected by their views on entrepreneurship, family support, and perceived control. Numerous studies on entrepreneurship have used the Theory of Planned Behavior to demonstrate how social support and trust can encourage entrepreneurial intentions (Krueger Jr & Carsrud, 1993). TPB emphasizes social and psychological aspects.

According to this study, TPB helps explain why students might choose to start a business based on their convictions, peer pressure, and perceptions of self-control.

2.1.2. Resource-Based View (RBV)

In order to create competitive advantages and entrepreneurial ambitions, this theory highlights the significance of personal resources, including knowledge, skills, relationships, and experience (Barney, 1991). Additionally, previous studies have shown the importance of innovation and management abilities in the process of entrepreneurship (Davidsson & Honig, 2003). RBV emphasizes the significance of personal resources.

2.1.3. Entrepreneurial Ecosystem Theory

According to this theory, human entrepreneurial goals and actions are influenced by elements in the company environment in addition to personal capabilities. Numerous auxiliary elements comprise an efficient entrepreneurial ecosystem, which aids in the growth of businesses. This theory helps explain the role of the educational environment and external support factors in promoting students' entrepreneurial intentions: higher education environment, support network (from lecturers, mentors, and entrepreneurs), policy, and finance.

2.1.4. Opportunity Creation Theory

This theory suggests that opportunities are not simply discovered but can also be created through creative thinking, innovation, and technology (Alvarez & Barney, 2007). In the context of the 4.0 industrial revolution, technology plays an important role in creating new business opportunities. Shane and Venkataraman (2000) study also emphasized that the ability to exploit information and use technology will help students create breakthrough business models. Opportunity Creation Theory emphasizes creative thinking and 4.0 technology in creating entrepreneurial opportunities.

2.2. Developing Research Hypotheses

2.2.1. Relationship between Personal Competency and Entrepreneurial Intention

Three main aspects determine behavioral intention: perceived control over behavior, attitude toward the conduct, and subjective norms. According to the study by Baron and Ensley (2006), it was also emphasized that individuals with creative thinking and management skills are more likely to start a business. Barney (1991) Resource-Based View (RBV) also emphasizes that personal resources, including knowledge, skills, and experience, are crucial factors that help individuals identify and take advantage of business opportunities. According to Davidsson and Honig (2003) study, students with high personal competence tend to proactively seek opportunities, minimize risks, and increase the chances of launching a successful business. Therefore, hypothesis H1 is proposed as follows:

H₁: Personal competence has a positive impact on students' entrepreneurial intentions.

2.2.2. The Relationship Between Subjective Norms and Entrepreneurial Intention

Ajzen's Theory of Planned Behavior (TPB) (Ajzen, 1991) suggests that subjective norms, i.e., perceptions of expectations and pressures from others, have a significant impact on the desire to engage in a behavior. In the context of Vietnam, where collectivist culture plays an important role, research by Liñán and Chen (2009) has shown that support from family, friends, and society can promote entrepreneurial intention. Therefore, hypothesis H2 is proposed as follows:

H₂: Subjective norms have a positive impact on students' entrepreneurial intention.

2.2.3. The Relationship Between University Education Environment and Entrepreneurial Intention

Students' entrepreneurial intentions are significantly influenced by their business education. According to Ambad and Damit (2016), curricula, courses, seminars, and extracurricular activities can provide students with the knowledge and skills necessary to pursue an entrepreneurial path. Stam (2015)'s Entrepreneurial Ecosystem Theory

emphasizes that higher education plays a crucial role in fostering an entrepreneurial attitude through practical opportunities, facilities, and training programs. Fayolle and Gailly (2015) argued that the educational environment can help students acquire the networks, abilities, and information required for entrepreneurship. Therefore, hypothesis H3 is proposed as follows:

H₃: The educational environment has a positive impact on students' entrepreneurial intention.

2.2.4. Relationship between Attitude and Entrepreneurial Intention

According to the Theory of Planned Behavior (TPB) by Ajzen (1991) individual's attitude toward an action has a considerable impact on their intention to engage in that conduct. Studies by Kusumojanto, Wibowo, Kustiandi, and Narmaditya (2021) and Krueger Jr, Reilly, and Carsrud (2000) have shown that people who have a positive attitude toward entrepreneurship are more likely to take chances and act to make their business ideas a reality. Therefore, hypothesis H4 is proposed as follows:

H₄: Attitude has a positive impact on students' entrepreneurial intention.

2.2.5. Relationship between Entrepreneurial Opportunities from the 4.0 Industrial Revolution and Entrepreneurial Intention

For startups, the 4.0 Industrial Revolution has opened up a lot of new prospects. Studies by Acs et al. (2015) and Fayolle et al. (2014) highlighted how technology enhances market access, lowers obstacles to entrepreneurship, and boosts operational effectiveness. The Opportunity Creation Theory of Alvarez and Barney (2007) also argues that opportunities are not only discovered but can also be created through innovation and application of technology. In the context of the 4.0 industrial revolution, Shane and Venkataraman (2000) emphasized that technology helps reduce barriers to entrepreneurship and create many new business models. Therefore, hypothesis H5 is proposed as follows:

H₅: Entrepreneurial opportunities from 4.0 technology networks have a positive impact on students' entrepreneurial intentions.

Drawing from the theoretical underpinnings of the elements that impact entrepreneurial intention and combining the findings and constraints of earlier research, the author proposes a new research model (Figure 1) to examine the relationship between factors: personal capacity, subjective standards, educational environment, attitude, and 4.0 technology on students' entrepreneurial intention.

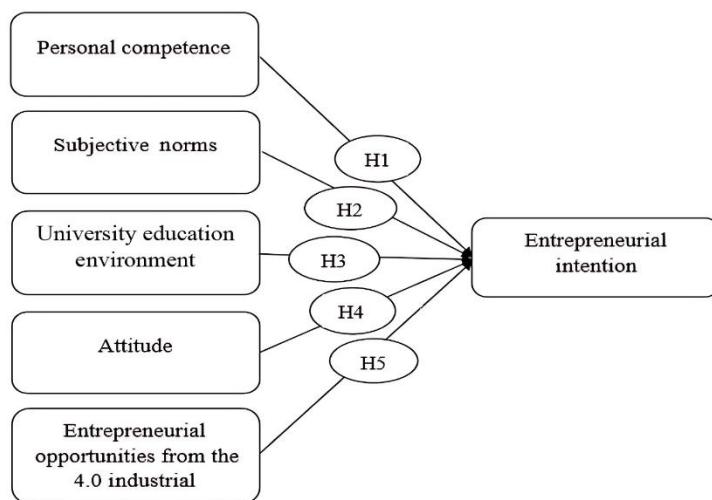


Figure 1. Proposed research model.

3. RESEARCH METHODOLOGY

The study employed quantitative analysis methods, including a sample of 425 students in Ho Chi Minh City. Validated scales (Cronbach's alpha ranging from 0.805 to 0.915) served as the basis for designing the survey

questionnaire. SPSS software was used for data analysis to test models and hypotheses. According to Hair Jr, Black, Babin, and Anderson (2010), to ensure reliability in structural equation modeling (SEM) analysis, the sample size should be at least 5 to 10 times the number of observed variables. With 40 observed variables in the study, the minimum required sample size is 200; therefore, the sample size of 425 exceeds the representativeness requirement. A 5-point Likert scale, with 1 indicating total disagreement and 5 indicating total agreement, was used to measure each variable. To ensure diversity in terms of training environment and educational background, participants were selected from six of Ho Chi Minh City's leading institutions. Students from the University of Economics Ho Chi Minh City (UEH, 23%), Van Lang University (VLU, 19%), Industrial University Ho Chi Minh City (IUH, 18%), Van Hien University (VHU, 11%), and Saigon International University (SIU, 10%) participated. The remaining 18% of respondents came from other institutions, such as the University of Finance and Marketing (UFM), Ho Chi Minh City University of Technology (HUTECH), and Hoa Sen University. This distribution enhances the generalizability of the research findings across various university types and majors. The scale is inherited from previous studies; the author translated it into Vietnamese and adjusted the scale so that the semantics are suitable for the current culture and research context. The scale of the components in the model is presented in Table 1.

Table 1. Official research scale.

Observed variables	Adjusted measurement scale
Personal Competence Scale (PC) inherited from the original scale of Barney (1991)	
PC1	I am certain that I possess the abilities needed to launch a company.
PC2	I can identify and seize business opportunities.
PC3	I believe I possess the abilities needed to successfully run a business.
PC4	I can effectively establish and maintain important business relationships.
PC5	I consider myself creative in developing business ideas.
Subjective norms scale (SN) inherited from the original scale of Ajzen (1991)	
SN1	My family encourages me to start a business.
SN2	My friends and colleagues think I should start a business.
SN3	I believe society values successful entrepreneurs.
SN4	I feel social pressure to start a business.
SN5	People around me believe that an entrepreneurial spirit leads to success.
Educational environment scale (EE) inherited from the original scale of Ambad and Damit (2016)	
EE1	Business courses at university help me better understand entrepreneurship.
EE2	Extracurricular business activities at university improve my business skills.
EE3	My university provides a supportive environment for developing entrepreneurial intentions.
EE4	Lecturers encourage students to participate in business projects.
EE5	University entrepreneurship support programs provide resources to realize business ideas.
Attitude scale (ATT) inherited from the original scale of Ajzen (1991)	
ATT1	I believe entrepreneurship is a worthwhile endeavor.
ATT2	I think entrepreneurship offers opportunities to achieve personal goals.
ATT3	I am willing to take risks in entrepreneurship.
Entrepreneurial opportunities from industry 4.0 scale (4IR) inherited from the original scale of Ajzen (1991)	
4IR1	I believe the fourth industrial revolution is creating many opportunities for entrepreneurship.
4IR2	I think new technologies help reduce barriers to entrepreneurship.
4IR3	Do you believe you can leverage technology to develop entrepreneurial ideas?

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Table 2 provides specifics about the survey sample's demographics. The findings indicate that, with 53% of respondents being female and 47% being male, the percentage of female respondents is higher than that of male respondents. This reflects the great interest of women in the topic of entrepreneurship, possibly due to the increasing trend of women participating in business and innovation activities.

The research sample focuses on the Gen Z generation (18-23 years old), with the age group of 21-22 years old accounting for the highest proportion at 47%, followed by the 18-20-year-old group at 35%, and those over 23 years old at 18%. In terms of academic year, third-year students accounted for the highest proportion at 39%, followed by fourth-year students (24%), second-year students (20%), and first-year students (18%). This indicates that students in the middle and final years of university tend to be more interested and prepared for entrepreneurship, as they have a foundation of knowledge and practical experience, whereas first- and second-year students may not have accumulated enough knowledge and motivation to pursue this path. Regarding majors, students majoring in economics made up 28%, followed by information technology (18%), engineering (18%), social sciences (11%), and other majors (25%). This suggests that students majoring in economics are most interested in entrepreneurship, as their curriculum is directly related to business management and development. However, the significant proportion from engineering and information technology majors also reflects the impact of Industry 4.0 on entrepreneurial thinking. The survey sample included students from many universities in Ho Chi Minh City, with students from UEH (23%) representing the highest proportion, followed by VLU (19%), IUH (18%), VHU (11%), SIU (10%), and other schools (18%). This shows that students from schools with strengths in economics and technology tend to be more interested in startups.

Table 2. Descriptive statistics on the demographics of the survey sample.

Characteristics	Description	Quantity	Percentage (%)
Gender	Male	200	47%
	Female	225	53%
Age	18 - 20	150	35%
	21 - 22	200	47%
	> 23	75	18%
Student age	Freshman	75	18%
	Sophomore	85	20%
	Junior	165	39%
	Senior	100	24%
Major	Economics	120	28%
	Engineering	75	18%
	IT	76	18%
	Social	46	11%
	Other	108	25%
University name	UEH	98	23%
	IUH	78	18%
	VHU	47	11%
	VLU	81	19%
	SIU	43	10%
	Other	78	18%

4.2. Evaluation of the Measurement Model

Discriminant and convergent validity, as well as scale reliability, were evaluated as part of the study's assessment of the measurement model.

The study employed Cronbach's Alpha and Composite Reliability (CR) to assess the scale's dependability. According to the test results, the scale exhibited good reliability because all of the model's factors had Cronbach's

Alpha > 0.7 and CR > 0.7. The factor loading coefficient (Outer Loading) was then examined to test convergent validity. According to Hair Jr et al. (2010) the factor loading coefficient must reach at least 0.708 to ensure convergence. According to Table 3 findings, the observed variables' factor loading coefficients ranged between 0.732 and 0.870, satisfying the requirement for excellent convergence. To ensure accuracy, a few observed variables were eliminated from the model because they did not meet the criteria. This guarantees the representativeness of the study topics and enhances the applicability of the measurement model. Overall, the test results demonstrate that the measurement model is highly reliable, has a good convergence value, and can serve as a foundation for further analysis of the study's structural model.

Table 3. Outer loading test results.

Observed variables	PC	SN	EE	ATT	4IR
PC1	0.822				
PC2	0.732				
PC3	0.765				
PC4	0.844				
PC5	0.758				
SN1		0.811			
SN2		0.849			
SN3		0.843			
SN4		0.870			
SN5		0.847			
EE1			0.776		
EE2			0.783		
EE3			0.814		
EE4			0.767		
EE5					
ATT1				0.804	
ATT2				0.821	
ATT3				0.791	
4IR1					0.851
4IR2					0.820
4IR3					0.794

The Cronbach's alpha coefficients for the scale, which range from 0.805 to 0.915 in Table 4, are all greater than 0.7 according to the criteria of Hair Jr et al. (2010). Furthermore, since all results exceed 0.7, the composite reliability (CR) values, ranging from 0.847 to 0.925, are considered acceptable. Both coefficients indicate that the scales demonstrate high reliability.

To verify the scale's convergence value, the study examined the average variance extracted (AVE). The model meets the good convergence criterion since all observed variables have an average variance extracted greater than 0.5, as shown in Table 4 (Hair Jr et al., 2010).

Table 4. Results of Cronbach's alpha, CR, and AVE coefficient testing.

Scale	Cronbach's Alpha	CR	AVE
PC	0.882	0.889	0.622
SN	0.915	0.925	0.631
EE	0.805	0.865	0.615
ATT	0.844	0.847	0.648
4IR	0.837	0.862	0.641

The average extracted square root index is assessed using the Heterotrait-Monotrait Ratio (HTMT) coefficient and the Fornell-Larcker criterion to test discriminant validity. The average extracted square root value of each

variable is greater than the correlation between that latent variable and other variables, as indicated by the correlation between observed variables in Table 5. Therefore, the variables in the model all achieve discriminant validity according to Fornell and Larcker (1981).

Table 5. Fornell-Larcker Discriminant Validity Test Results

Scale	PC	SN	EE	ATT	4IR
PC	0.789				
SN	0.313	0.794			
EE	0.398	0.242	0.784		
ATT	0.374	0.278	0.488	0.805	
4IR	0.514	0.180	0.200	0.205	0.801

In addition, Table 6 presents the results of the HTMT coefficient test, showing that the values ranging from 0.180 - 0.514 are all smaller than the threshold of 0.9, thus ensuring the distinction between the structures in the model according to the criteria of Henseler, Ringle, and Sarstedt (2015).

In general, the outcomes of the measuring model evaluation, including the reliability of the scale, convergence, and discriminant validity, show that the observed variables in the model all meet the requirements. After the measurement model evaluation was accepted, the author continued to evaluate the structural model.

Table 6. HTMT discriminant validity test results.

Scale	PC	SN	EE	ATT	4IR
PC		0.313	0.398	0.374	0.514
SN	0.313		0.242	0.278	0.180
EE	0.398	0.242		0.488	0.200
ATT	0.374	0.278	0.488		0.205
4IR	0.514	0.180	0.200	0.205	

4.3. Evaluation of the Structural Model

The author examined multicollinearity among the research topics before assessing the linkages in the research model. The observed variables' VIF test results, which ranged from 1.482 to 2.673, were all below the 3 threshold suggested by Hair Jr et al. (2010). Therefore, the research model did not encounter multicollinearity problems. Next, the degree to which the independent variables in the model explained the dependent variable was measured using the R^2 coefficient. The results showed that the adjusted R^2 value for Entrepreneurial Intention (EI) reached 0.412, indicating that the independent variables in the model explained 41.2% of the variation in EI.

According to Cohen (2013), the following evaluation thresholds are applied to determine the significance of the effect of the independent variable on the dependent variable using the f^2 value: an impact is considered very minimal or nonexistent if f^2 is less than 0.02; weak if f^2 is between 0.02 and 0.15; medium if f^2 falls between 0.15 and 0.35; and strong when $f^2 \geq 0.35$.

In this study, the f^2 test results are as follows: Personal Competence (PC) → Entrepreneurial Intention (EI): $f^2 = 0.284$, indicating an average impact. Subjective Norm (SN) → Entrepreneurial Intention (EI): $f^2 = 0.189$, indicating an average impact. Educational Environment (EE) → Entrepreneurial Intention (EI): $f^2 = 0.412$, showing a strong impact. Attitude (ATT) → Entrepreneurial Intention (EI): $f^2 = 0.127$, showing a weak impact. Technology 4.0 (4IR) → Entrepreneurial Intention (EI): $f^2 = 0.256$, showing a medium impact.

The model's predictive value is assessed using the Q^2 index; a standard $Q^2 > 0$ indicates that the model has strong predictive value. According to the test findings, $Q^2 = 0.38$ indicates that the model can accurately predict students' intentions to start their own business. The study evaluated the hypothesis by estimating the route coefficient and running the bootstrapping procedure with 5000 iterations on the SmartPLS 4.0 platform after confirming that the scale was reliable and that the measurement data satisfied the requirements. The results of

assessing the structural relationships are presented in Table 7 and illustrated in detail in Figure 1.

Table 7. Hypothesis testing results.

Hypothesis	Relationship	Coefficient β	t-value	p-value	Result
H1	PC \rightarrow EI	0.278	6.462	0.000	Accept
H2	SN \rightarrow EI	0.119	2.773	0.006	Accept
H3	EE \rightarrow EI	0.213	4.031	0.000	Accept
H4	ATT \rightarrow EI	0.096	2.131	0.034	Accept
H5	4IR \rightarrow EI	0.384	9.629	0.000	Accept

The results of assessing the relationships with direct impacts in the research model are all accepted with a significance level of $p < 0.01$, and positive β values reflect positive relationships. Therefore, hypotheses H1, H2, H3, and H5 are all accepted. Entrepreneurial attitude towards entrepreneurial intention is confirmed with a $\beta = 0.096$ and $p < 0.05$. Therefore, hypothesis H4 is accepted. The hypotheses with a p-value < 0.01 (H1, H2, H3, H5) have higher reliability than H4.

4.4. Discussion of Research Results

Factors with the greatest influence: Opportunities from Technology 4.0 ($\beta = 0.384$, $p < 0.01$), proving that technology is the main driving force for students to start a business. Students tend to take advantage of technology platforms to launch their ventures. Personal competence ($\beta = 0.278$, $p < 0.01$) has a strong impact, confirming the results of Vodă and Florea (2019). Confirming that students with good skills and knowledge have higher intentions to start a business. Educational environment ($\beta = 0.213$, $p < 0.01$) has an important influence, consistent with the study of Fayolle and Gailly (2015). Support from the university helps students develop an entrepreneurial mindset. Entrepreneurial attitude ($\beta = 0.096$, $p < 0.05$) has the lowest impact but is still a crucial factor.

Thereby, it can be seen that Vietnamese culture affects entrepreneurial spirit. Compared with the study of Krueger Jr et al. (2000), students in developed economies have a more positive attitude due to a stronger supportive environment. In Vietnam, 4.0 technology is the strongest influencing factor, different from the study of Shane and Venkataraman (2000) where the educational factor plays a more important role, and Schwarz, Wdowiak, Almer-Jarz, and Breitenecker (2009) an Austrian perspective, the social environment has a stronger impact than technology, demonstrating the difference in economic context and the influence of attitudes and perceived environmental factors on students' intentions to start their own businesses. The research results show that all factors personal competence, subjective norms, the university education environment, entrepreneurial attitude, and opportunities from 4.0 technology have a positive and significant impact on students' entrepreneurial intentions. The results indicate that the policy factor supporting entrepreneurship ($\beta = 0.384$) has the strongest impact on entrepreneurial intention, followed by personal capacity ($\beta = 0.278$) and the educational environment ($\beta = 0.213$). This emphasizes the key role of entrepreneurship opportunities from Industry 4.0 technology in promoting students' entrepreneurial spirit. These findings not only provide a solid theoretical foundation but also support managers and universities in developing effective entrepreneurship support programs. This underscores the importance of entrepreneurship.

5. CONCLUSION

5.1. Theoretical Contributions

Provide empirical evidence on the role of 4.0 technology in entrepreneurial intention, expanding previous studies.

This research contributes to the theoretical foundations of entrepreneurial intention by expanding the understanding of factors influencing individuals' entrepreneurial decisions in specific contexts. Specifically, the

study demonstrates that personal capacity, management structure, educational environment, and support policies significantly impact entrepreneurial intention. These findings further strengthen the theory of planned behavior (TPB) and the entrepreneurial ecological model, emphasizing the roles of environment and individual factors in developing an entrepreneurial mindset.

In addition, the study also clarifies the difference in the level of influence of these factors, in which entrepreneurial support policies are identified as the most crucial factor. This suggests that developing entrepreneurial support programs can be highly effective in promoting entrepreneurial spirit. Additionally, the impact of entrepreneurial attitude on entrepreneurial intention was also noted, although the level of influence was lower than that of other factors, suggesting that more research is needed to clarify the role of attitude when making decisions as an entrepreneur.

These contributions not only strengthen the theoretical basis but also create the premise for further studies to develop more comprehensive models of entrepreneurial intention, especially in the context of education and support policies in Vietnam.

5.2. Managerial Implications

This study not only provides theoretical contributions but also offers important managerial implications for academic establishments, businesses, and policymakers to promote individual entrepreneurial intentions.

First of all, the findings of the study indicate that entrepreneurial support policies have the strongest impact on entrepreneurial intention. Therefore, regulatory agencies and startup support organizations should focus on creating a more conducive environment through training programs, mentoring, and financial support. This will help potential entrepreneurs feel more confident in starting a business. A typical example is Singapore's Startup Support Program (Startup SG), which provides funding, guidance, and networking to help startups grow sustainably (Zain & Ng, 2006).

In addition, the educational environment also has a major influence on the growth of entrepreneurial intentions. Educational institutions should incorporate entrepreneurship training programs into their curricula, combined with business practices, to equip students with the necessary skills. Stanford University's "Startup Garage" program is a successful example of creating conditions for students to directly participate in the startup process, helping them apply knowledge effectively in practice (Osterwalder, Pigneur, Smith, & Etiemble, 2020).

In addition, management structure and individual capabilities are also significant factors. Businesses can support the development of individual capabilities by providing training in management, innovative thinking, and business skills. Goldman Sachs' "10,000 Women" program is an example of training women entrepreneurs globally, helping them improve their leadership and business management skills (Aernoudt & de San José, 2020).

Entrepreneurial attitudes, although having a lower impact, are still a factor to consider. Policymakers can create communication campaigns to change perceptions about entrepreneurship, emphasizing the benefits and opportunities that entrepreneurship brings. For example, (Masero & Townsend, 2014).

5.3. Limitations and Future Research Directions

Apart from the contributions that are both theoretical and practical, this study still has certain limitations. Future studies should consider the following shortcomings to overcome and improve future research:

First, the study only concentrated on students in Ho Chi Minh City, which may limit the generalizability of the results. Future research can broaden the survey scope to other areas or conduct comparative studies between provinces to assess the differences.

Second, the current study only examined factors affecting entrepreneurial intentions without considering moderating variables such as gender, educational level, economic circumstances, or socio-cultural background. Therefore, future studies can include these factors to clarify how the variables influence entrepreneurial intentions.

Third, the design of this study was cross-sectional and therefore could not assess changes in entrepreneurial intentions over time. A potential avenue for further research is to conduct long-term studies to observe changes in factors over time.

Finally, the study relied primarily on survey data and did not consider empirical approaches to test entrepreneurial intentions.

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Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

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