DEVELOPING AN INTEGRATED MODEL OF FACTORS INFLUENCING ENTREPRENEURIAL INTENTION: A CASE STUDY OF THE UNIVERSITY OF FINANCE - MARKETING

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Appendix 1. Measurement Scales

NOTATION	STATEMENTS	ACADEMIC REFERENCES
Entrepreneurship education (EE) has a positive influence on perceived behavioral control (PBC)		
EE1	I have learned how to analyze business risks through entrepreneurship education.	Aga (2023), Mustofa & Setiawan (2022), Fitzsimmons and Douglas (2011), Krueger et al. (2000)
EE2	Entrepreneurship education helps me develop the ability to create business plans effectively.	
EE3	Entrepreneurship courses have helped me better understand the critical skills needed to run a business	
EE4	I believe I can identify and leverage business opportunities thanks to the knowledge I gained from entrepreneurship education	
Perceived behavioral control (PBC)		
PBC1	I believe I can overcome difficulties when starting a business on my own.	Aga, (2023), Mustofa & Setiawan, (2022), Otchengco Jr. & Akiate (2021), Adu et al., (2020)
PBC2	I have sufficient skills to run a successful business.	
PBC3	Confidence in making business decisions reinforces my entrepreneurial intention.	
PBC4	The more I develop risk management capabilities, the more likely I am to realize my business ideas.	
Entrepreneurship education (EE) has a positive influence on attitude towards entrepreneurship (ATE)		
EE5	Entrepreneurship courses have helped me understand the challenges and benefits of starting a business.	Mahendra et al. (2017), Fayolle and Gailly (2015)
EE6	Studying entrepreneurship helps me become more confident in evaluating and seizing business opportunities.	
EE7	Entrepreneurship education has equipped me with the necessary skills to develop a feasible business plan.	
EE8	After studying entrepreneurship, I have a more positive view of choosing an entrepreneurial path in the future.	
EE9	The entrepreneurship program helps me better understand the ethical and social responsibilities of a business owner.	
Attitude towards entrepreneurship (ATE)		
ATE1	I have a positive perception of entrepreneurship as a way to achieve personal and financial success.	Batz Liñeiro et al. (2024), Maydiantoro et al.
ATE2	I prefer to start my own business rather than work for an external	

NOTATION	STATEMENTS	ACADEMIC REFERENCES
	company.	(2021), Vamvaka et al. (2020)
ATE3	Entrepreneurship provides higher job satisfaction than traditional employment.	
ATE4	I admire successful entrepreneurs and aspire to follow in their footsteps.	
Subjective norms (SN)		
SN1	My family members support my entrepreneurial intention.	Batz Liñeiro et al. (2024), Maydiantoro et al. (2021)
SN2	My close friends believe I should pursue entrepreneurship as a career choice.	
SN3	I feel social pressure when considering entrepreneurship as a career option.	
SN4	People who are important to me think entrepreneurship is a good career path for me.	
Perceived feasibility (PF)		
PF1	I believe that implementing a business idea in a real-world environment is feasible, thanks to available resources and support from the university and society.	Shabbir (2025), Johnson et al. (2024), Romero-Galisteo et al. (2022), Peng's (2012)
PF2	I feel confident that I can leverage my professional skills to successfully start a business in my field of pursuit.	
PF3	I have sufficient business and professional knowledge to identify and utilize entrepreneurial opportunities aligned with my field of study	
PF4	I receive necessary support and resources from the university and related organizations to realize my entrepreneurial ideas	
PF5	With my current skills and learning experiences, I find establishing and operating a startup venture to be feasible.	
Perceived desirability (PD)		
PD1	I find entrepreneurship to be an interesting and appealing career choice.	Shabbir (2025), Romero-Galisteo et al. (2022), Zhang et al. (2022)
PD2	The idea of running my own business excites me.	
PD3	I believe entrepreneurship is something worth pursuing in life.	
PD4	Becoming an entrepreneur aligns well with my personal aspirations.	
PD5	If given the opportunity, I would consider starting a business because I find it attractive and meaningful.	
Entrepreneurial intention (EI)		
EI1	I intend to start my own business venture in the near future.	Ajzen (1991), Bagozzi (1990), Shapero and Sokol (1982)
EI2	I view entrepreneurship as a career choice worth pursuing.	
EI3	I am currently actively preparing knowledge, skills, or resources for my entrepreneurial plan.	
EI4	Among many career options after graduation, I prioritize the entrepreneurial path.	
EI5	I aspire to achieve career autonomy through entrepreneurship in the	

NOTATION	STATEMENTS	ACADEMIC REFERENCES
	future.	

Appendix 2. Respondent's Profile

Measure	Value	Frequency	Percent
Gender	Male	216	54.0
	Female	184	46.0
Year of Study	Year 1	60	15.0
	Year 2	100	25.0
	Year 3	120	30.0
	Year 4	100	25.0
	Other	20	5.0
Startup Experience	No	310	77.5
	Yes	90	22.5
Career Intention after Graduation	Undecided	124	31.0
	Work for Company	152	38.0
	Further Study	92	23.0
	Teaching Assistant	16	4.0.0
	Run Business	16	4.0.0
Entrepreneurship Course Taken	No	260	65.0
	Yes	140	35.0

Appendix 3. Results of the Analysis of Outer Factor Loadings of the Variables

	ATE	EE	EI	PBC	PBC*PD	PD	PF	SN
ATE1	0.813							
ATE2	0.865							
ATE3	0.935							
ATE4	0.901							
EE1		0.744						
EE2		0.792						
EE3		0.805						
EE4		0.777						
EE5		0.88						
EE6		0.79						
EE7		0.757						
EE8		0.757						
EE9		0.749						
EI1			0.814					
EI2			0.93					
EI3			0.815					
EI4			0.849					
EI5			0.861					
PBC1				0.838				
PBC2				0.873				

PBC3	0.79			
PBC4	0.806			
PBC * PD		1.448		
PD1			0.842	
PD2			0.856	
PD3			0.847	
PD4			0.866	
PD5			0.833	
PF1				0.736
PF2				0.856
PF3				0.771
PF4				0.79
PF5				0.859
SN1				0.828
SN2				0.868
SN3				0.811
SN4				0.805

Appendix 4. Results of the Reliability and Convergent Validity Analysis of the Measurement Scales

	Cronbach's Alpha	**Composite Reliability (rho_A)**	**Composite Reliability (rho_C)**	**Average Variance Extracted (AVE)**
ATE	0.903	0.921	0.932	0.774
EE	0.921	0.923	0.935	0.615
EI	0.907	0.912	0.931	0.731
PBC	0.846	0.854	0.897	0.685
PBC*PD	1.000	1.000	1.000	1.000
PD	0.903	0.905	0.928	0.721
PF	0.865	0.88	0.901	0.646
SN	0.847	0.851	0.897	0.686

Appendix 5. Introduction (cont)

Addressing these inquiries will illuminate the complex interplay among cognitive, affective, and experiential dimensions in shaping entrepreneurial intention. The anticipated findings promise to advance theoretical frameworks while generating actionable insights for curriculum development, pedagogical innovation, and policy formulation, specifically calibrated to Vietnamese students' requirements, particularly those pursuing economics and business disciplines.

One important point is that this study not only builds on the traditional Theory of Planned Behavior (TPB) but also extends it by integrating elements from the Entrepreneurial Event Theory (EET) and the Theory of Trying (TOT). The traditional TPB, with its three key components: Attitude (ATE), Subjective Norm (SN), and Perceived Behavioral Control (PBC), has been widely used to predict entrepreneurial intention. However, it has often been criticized for overlooking emotional drivers, intrinsic values, and the actual process of turning intention into action.

This research makes several theoretical contributions. First, we extend TPB by adding Perceived Desirability (PD) from EET. This factor captures intrinsic motivation and emotional appeal, which TPB leaves out. Our results show that PD is not only the strongest direct predictor of entrepreneurial intention (EI), but also highlights the role of

personal value and emotional attraction in shaping entrepreneurial choices. Second, we identify a new mechanism: PD moderates the relationship between PBC and EI. While TPB treats PBC as a direct predictor, our findings show that belief in control (PBC) translates into strong intention only when paired with high levels of desirability (PD).

Third, our model goes beyond TPB's simple linear structure by including the indirect influence of Entrepreneurship Education (EE) through TPB constructs. This creates a multi-layered causal network rather than only direct links, better reflecting the complexity of the academic and policy environment. Fourth, we clarify the emotional side of intention by distinguishing between ATE (an instrumental evaluation based on expected outcomes) and PD (an intrinsic/emotional evaluation). Our empirical evidence confirms that PD is both the strongest direct predictor and a catalyst that strengthens the PBC–EI link, showing that emotional motivation can outweigh cognitive and social factors in shaping entrepreneurial intention.

Finally, by integrating TOT, our study shifts the focus from simple behavioral intention to the intention to try. This is a key step beyond traditional TPB, as it better reflects the iterative and uncertain nature of entrepreneurship, where setbacks are common and persistence is essential. Taken together, these contributions show that our model not only extends TPB but also offers a more complete framework that combines cognitive, emotional, and behavioral factors, well-suited to the context of students in emerging economies such as Vietnam.

Appendix 6. Theoretical framework (cont)

2.1.1. Theory of Planned Behavior (TPB)

Ajzen's (1991) TPB represents a seminal predictive framework that elucidates behavioral intention through three cardinal constructs: *Attitude Toward Entrepreneurship* (ATE), *Subjective Norm* (SN), and *Perceived Behavioral Control* (PBC). This theoretical paradigm has garnered extensive empirical validation across diverse geographical and cultural contexts, with substantial evidence substantiating the significant predictive capacity of these constructs vis-à-vis EI (Batz Liñeiro et al., 2024; Maydiantoro et al., 2021).

Of particular significance, PBC demonstrates dual functionality as both a direct antecedent and a mediating mechanism that channels the influence of contextual factors, notably Entrepreneurship Education (EE) and experiential engagement toward EI formation (Aga, 2023; Mustofa & Setiawan, 2022). Nevertheless, TPB exhibits inherent limitations in its circumscribed consideration of affective and situational variables that may modulate behavioral manifestations. Consequently, theoretical augmentation becomes imperative to comprehensively capture the multifaceted dynamics characterizing student entrepreneurship.

2.1.2. Shapero's Entrepreneurial Event Theory (EET)

The EET framework, conceptualized by Shapero and Sokol (1982), foregrounds the catalytic function of "displacement events", transformative disruptions in life trajectories as precipitating mechanisms for entrepreneurial engagement. This theoretical construct delineates three fundamental components: "Perceived Feasibility" (PF), "Perceived Desirability" (PD), and "Propensity to Act".

This theoretical lens demonstrates exceptional relevance for student populations navigating pivotal career junctures. Empirical investigations by Ranga et al. (2019) and Peng et al. (2012) have substantiated the pronounced influence of both PD and PF on EI formation, particularly when conceptualized as interactive variables (Fitzsimmons & Douglas, 2011). However, the Vietnamese empirical landscape remains notably devoid of investigations examining PD's potential moderating function, a theoretical lacuna that the current study endeavors to address comprehensively.

2.1.3. Theory of Trying (TOT)

Bagozzi's (1990) Theory of Trying introduces a more nuanced, process-oriented conceptualization of behavioral enactment, positing that action represents not merely a terminal outcome but rather an iterative sequence of attempts characterized by varying degrees of success. This theoretical perspective demonstrates particular salience

for student cohorts who frequently engage in entrepreneurial experimentation through pedagogical exercises, co-curricular initiatives, and innovation-focused programs.

TOT incorporates two innovative constructs: “Outcome Expectations” and “Motivation”, which facilitate the examination of decision-making processes under conditions of uncertainty, failure apprehension, and self-efficacy challenges. Contemporary empirical investigations across Indonesia (Mahendra et al., 2017), Ethiopia (Aga, 2023), and Ghana (Adu, 2020) have corroborated EE's mediating function in the EI formation process through both PBC and intrinsic motivational pathways.

The theoretical synthesis of the *Theory of Planned Behavior, Shapero's Entrepreneurial Event Theory, and the Theory of Trying* enables this investigation to comprehensively encompass the multidimensional constellation of cognitive, affective, and experiential antecedents underpinning entrepreneurial intention within Vietnamese higher education contexts. TPB illuminates subjective cognitive mechanisms, EET introduces motivational and perceptual dynamics, while TOT accounts for experiential learning processes and intrinsic drive. This integrative theoretical architecture provides a robust conceptual foundation for model construction and hypothesis development, specifically calibrated to address the transitional experiences of students navigating the trajectory from academic preparation to entrepreneurial practice within Vietnam's evolving economic landscape.

In terms of cognition, the Theory of Planned Behavior (TPB) and the Entrepreneurial Event Theory (EET) show some clear overlaps. The idea of Perceived Behavioral Control (PBC) in TPB, which reflects a person’s belief in their own ability and access to resources, works in a similar way to Perceived Feasibility (PF) in EET, which also refers to confidence based on evaluating available resources. Both are seen as important factors shaping Entrepreneurial Intention (EI). The key difference is that TPB treats PBC as having a dual role, both a direct predictor and a mediator, while EET places PF alongside Perceived Desirability (PD) as core drivers of entrepreneurial action. If these two concepts are not clearly separated, there is a risk of conceptual overlap.

There is also a partial overlap between Attitude Toward Entrepreneurship (ATE) in TPB and Perceived Desirability (PD) in EET, since both reflect evaluations or feelings about starting a business. However, they are not the same. ATE refers to a more instrumental evaluation (whether the outcomes of entrepreneurship are good or bad), while PD reflects the intrinsic appeal of entrepreneurship (personal excitement, prestige, or non-material benefits). Keeping both constructs in the model helps us capture different sides of the emotional component of entrepreneurial intention.

Moreover, TPB focuses mainly on the formation of intention, but does not explain how intention is turned into actual effort. This is where the Theory of Trying (TOT) adds value. It offers a process-oriented view, arguing that intention alone is not enough and needs to be supported by ongoing effort and motivation. The idea of “trying” is particularly relevant for students, who often engage in small experiments or early entrepreneurial activities where setbacks are common.

For these reasons, combining the three theories is necessary to overcome the limits of each when used alone. The integrated model allows us to: *(i)* distinguish between PBC and PF, *(ii)* extend TPB by adding the persistence mechanism from TOT, and *(iii)* balance external drivers (EET) with internal motivation (TOT). This way, the study provides a more complete picture of how students form entrepreneurial intentions, considering their thoughts, emotions, and experiences together.

Appendix 7. Measurement scales and questionnaire development

Entrepreneurship Education (EE) was measured using items adapted from Aga (2023), Mahendra et al. (2017), and Fayolle and Gailly (2015), focusing on perceived relevance, support, and inspiration provided by educational programs.

Perceived Behavioral Control (PBC) was measured using items adapted from Ajzen (1991) and validated in subsequent studies such as Mustofa and Setiawan (2022), Otchengco Jr. & Akiate (2021), and Adu et al. (2020), capturing self-efficacy and perceived control over starting a business.

Attitude Toward Entrepreneurship (ATE) items were adapted from Liñán and Chen (2009) and supported by Vamvaka et al. (2020) and Batz Liñeiro et al. (2024), capturing affective and evaluative dimensions of entrepreneurial behavior.

Subjective Norm (SN) followed the original TPB formulation by Ajzen (1991) and was contextualized based on Maydiantoro et al. (2021) and Batz Liñeiro et al. (2024).

Perceived Feasibility (PF) was operationalized based on Shapero and Sokol (1982) and refined using items from Shabbir (2025), Johnson et al. (2024), and Romero-Galisteo et al. (2022).

Perceived Desirability (PD) was measured by five items adapted from Shapero and Sokol (1982), Fitzsimmons and Douglas (2011), and recent validations by Shabbir (2025), Zhang et al. (2022), and Romero-Galisteo et al. (2022). These items capture the personal attractiveness, meaning, and alignment of entrepreneurship with individual aspirations.

The moderating role of PD was tested using an interaction term (PBC × PD) created by mean-centering the relevant indicators and multiplying the constructs, following standard moderation analysis procedures in PLS-SEM (Hair et al., 2022).

Entrepreneurial Intention (EI) was measured using items grounded in Ajzen's Theory of Planned Behavior (1991) and extended by Shapero and Sokol's Entrepreneurial Event Theory (1982) and Bagozzi's Theory of Trying (1990), emphasizing intention strength and commitment to venture creation.

Appendix 8. Implications for Research

This study strengthens the theoretical importance of combining cognitive, affective, and motivational constructs when examining entrepreneurial intention within emerging economies. The empirical validation of perceived behavioral control, attitude toward entrepreneurship, and perceived desirability as critical antecedents highlights the need to extend the traditional Theory of Planned Behavior by incorporating motivational dimensions beyond feasibility or normative pressure. This expansion corresponds with prior conceptual developments proposed by Fayolle and Gailly (2015) and Fitzsimmons and Douglas (2011), which emphasize the role of affective resonance and perceived desirability in entrepreneurial cognition.

The findings indicate that entrepreneurial intention formation depends less on external social expectations and more on internalized self-efficacy and personal motivation. This corresponds with research by Dinis et al. (2013), who found that entrepreneurial mindsets develop through psychological ownership and meaningful self-perception, particularly among university students. Additionally, the moderating role of perceived desirability provides an expanded perspective to examine how motivational valuation strengthens the effect of behavioral control, reflecting recent insights from Zollo et al. (2017) regarding the contextual contingency of intention models.

The non-significant effects of subjective norms and perceived feasibility require further examination of contextual factors affecting entrepreneurial decisions. Rather than treating these constructs as universal drivers, future studies should examine cultural transitions and identity-based motivations, especially in collectivist societies experiencing individualistic shifts (Phuong et al., 2020). Researchers may also consider longitudinal approaches or mixed-method designs to reveal how students' entrepreneurial beliefs develop through experiential learning.

From an academic perspective, this study makes several important contributions to the understanding of entrepreneurial intention. By integrating three key theoretical frameworks: the Theory of Planned Behavior (TPB), Shapero's Entrepreneurial Event Theory (EET), and the Theory of Trying (TOT), the model moves beyond the traditional linear structure of TPB. It combines cognitive, emotional, and motivational dimensions to provide a

more complete explanation of how students develop entrepreneurial intentions. This integrated model not only reexamines the core assumptions of TPB but also offers new empirical evidence that extends behavioral theories to emerging economy contexts.

The main theoretical contribution lies in identifying the dual role of Perceived Desirability (PD). The results show that PD is both the strongest direct predictor of entrepreneurial intention (β = 0.487) and a moderator between Perceived Behavioral Control (PBC) and Entrepreneurial Intention (EI). This finding clarifies how self-belief (PBC) becomes more effective when supported by strong emotional motivation (PD), aligning with the Theory of Trying's idea that motivation acts as a catalyst, turning ability into action.

The study also adds contextual insights. The non-significant effects of Subjective Norms (SN) and Perceived Feasibility (PF) suggest that, in the Vietnamese higher education context, entrepreneurial intention is driven more by internal mechanisms such as belief, attitude, and emotional appeal than by social pressure or external factors. This challenges the universality of SN and PF in TPB and opens new directions for exploring the roles of culture, personal identity, and intrinsic motivation in societies transitioning from collectivism to individualism.

Finally, the study provides empirical evidence supporting the indirect influence of Entrepreneurship Education (EE) on Entrepreneurial Intention (EI) through Attitude toward Entrepreneurship (ATE) and Perceived Behavioral Control (PBC). This highlights that entrepreneurship education should focus not only on knowledge but also on building students' confidence and inner motivation. Academically, this research sets the foundation for future integrated models and encourages scholars to further explore how emotional (PD) and cognitive (PBC) factors interact across different cultural and economic contexts to strengthen the extended TPB framework.

Appendix 9. Discriminant Validity Analysis Based on Fornell and Larcker

	ATE	EE	EI	PBC	PBC*PD	PD	PF	SN
ATE	0.88							
EE	0.329	0.784						
EI	0.586	0.47	0.855					
PBC	0.557	0.495	0.622	0.827				
PBC*PD	-0.117	-0.15	-0.049	-0.361	1			
PD	0.527	0.61	0.719	0.515	-0.13	0.85		
PF	0.461	0.64	0.501	0.537	-0.217	0.65	0.8	
SN	0.521	0.648	0.576	0.583	-0.27	0.67	0.73	0.83

Appendix 10. Discriminant Validity Analysis Based on HTMT

	ATE	EE	EI	PBC	PBC*PD	PD	PF	SN
ATE								
EE	0.352							
EI	0.635	0.514						
PBC	0.631	0.545	0.707					
PBC*PD	0.14	0.156	0.052	0.388				
PD	0.574	0.671	0.791	0.581	0.136			
PF	0.495	0.713	0.539	0.605	0.231	0.708		
SN	0.594	0.733	0.655	0.678	0.293	0.76	0.827	

Appendix 11. Variance Inflation Factor (VIF)

Construct	Number of Observed Variables	VIF
ATE	4	2.282 - 4.266
EE	9	1.968 - 3.407
EI	5	2.174 - 4.476
PBC	4	1.735 - 2.386
PBC*PD	1	1
PD	5	2.261 - 2.501
PF	5	1.525 - 2.595
SN	4	1.724 - 2.195

Appensix 12. R^2 and adjusted R^2 coefficients

	R Square	R Square Adjusted
ATE	0.109	0.106
EI	0.648	0.642
PBC	0.245	0.243