

INTERNET ENTREPRENEURIAL SELF-EFFICACY AND INTENTION. THE MEDIATING ROLE OF THE THEORY OF PLANNED BEHAVIOR

BEATRICE ADRIANA BALGIU*

National University of Science and Technology Politehnica Bucharest

Abstract

The study aims to investigate the mediating role of the key components of the Theory of Planned Behavior (TPB) in the relationship between internet entrepreneurial self-efficacy (IESE) and students' entrepreneurial intentions. The sample consisted of engineering students from three major technical universities in Romania (N=900; 380 females; 520 males; Mean age=21.06). Participants completed an online survey assessing internet entrepreneurial self-efficacy and intentions, and the TPB components (attitudes, perceived behavioral control, and subjective norms) related to digital entrepreneurship. Partial least square-structural equation modeling (PLS-SEM) was used for data analysis. The results indicate that internet entrepreneurial self-efficacy has an indirect effect on entrepreneurial intentions through attitudes and perceived behavioral control regarding internet entrepreneurship, while subjective norms negatively influence the intention to start businesses in the online environment. These findings suggest that TPB offers valuable insights into the motivational processes underlying entrepreneurial behavior.

Cuvinte-cheie: antreprenoriat digital; autoeficacitate antreprenorială digitală; intenție antreprenorială; studenți în domeniul tehnic.

Keywords: digital entrepreneurship; internet entrepreneurial self-efficacy; entrepreneurial intention, engineering students.

1. INTRODUCTION

The rapid digitalization of the traditional commerce sectors led to an increase in the researchers' interest in internet entrepreneurship (IE), also known as cyber-entrepreneurship or digital entrepreneurship (Tajvidi and Tajvidi, 2020; Wang *et al.*, 2020; Ndofirepi, 2022), defined as the opportunity identification process for both the innovation and the implementation of business-transforming breakthrough technologies (Wang *et al.*, 2020; von Briel *et al.*, 2021). While the factors influencing entrepreneurial intentions in traditional environments have been extensively studied, contemporary challenges such as the COVID-19 pandemic have shifted the focus of societies and researchers toward digital entrepreneurship (Maheshwari *et al.*, 2022). In Romania there is a comprehensive examination of the digital platform economy, which highlights the increasing interest in researching the online entrepreneurship within the country. By discussing the way in which digital platforms may facilitate the adaptation of Romania to technological progress and structural changes, studies underlie the potential increase of online businesses in the context of the digital revolution (Apostol, 2023). According to a recent study on the young Romanians' perceptions of digital entrepreneurship, students understand the advantages of incorporating ITC tools into their projects. They

* National University of Science and Technology Politehnica Bucharest, Department of Career and Educational Training, Splaiul Independenței, 313, București, RO-060042, E-mail: beatrice.balgiu@upb.ro.

specifically target cloud computing and social network technologies. The incorporation of digital technologies into business is viewed by the younger generation as a valid substitute for traditional businesses (Lungu and Georgescu, 2023). A special case were the studies which focused more on the role that engineering students have in internet entrepreneurship (IE) (Barba-Sánchez and Atienza-Sahuquillo, 2018; Shekhar and Huang-Saad, 2021). These studies highlight the growing awareness among educational institutions of the need to cultivate an entrepreneurial mindset among engineering students—an essential quality for fostering technological innovations that address societal challenges (Litvinov *et al.*, 2022).

Several researchers have sought to identify the main factors influencing entrepreneurial intention among students (Kautonen *et al.*, 2015; Duong and Bernat, 2019; Ilevbare *et al.*, 2022). Given the recent technological progress, it is essential that research should focus on understanding the latter in the cybernetic context. This topic is particularly relevant for Romania, where research in this area remains limited. The present study focuses on the relation between the students' entrepreneurial intention to start online businesses and internet entrepreneurial self-efficacy. We have chosen the analysis of engineering students for the present study for two reasons. Firstly, they are considered more adept at using digital technologies compared to other students and IE employment is significantly more IT-focused than traditional entrepreneurship (Lei *et al.*, 2023). Secondly, the study of the future engineers' attitude and behavior is extremely important in a knowledge-based economy and, consequently, in companies dominated by technologies (Barba-Sánchez and Atienza-Sahuquillo, 2018). This makes engineering students an ideal sample to study entrepreneurial intention in the digital domain.

2. ENTREPRENEURIAL SELF-EFFICACY AND INTENTION AND THE THEORY OF PLANNED BEHAVIOR

Studies have demonstrated the significant role of entrepreneurial self-efficacy (ESE) in shaping students' entrepreneurial intentions (EI) and, ultimately, in their decision to start a business (Elnadi and Gheith, 2021; Du *et al.*, 2022; Pham *et al.*, 2023). Entrepreneurial self-efficacy is defined as a person's belief about their own ability to successfully fulfill various roles and responsibilities of entrepreneurship (Primario *et al.*, 2024). Studies have shown similar results regarding the findings according to which students with high ESE are much more likely to engage in entrepreneurial endeavors, thereby increasing their intention to start new businesses (Duong and Bernat, 2019).

The effect of entrepreneurial self-efficacy on entrepreneurial intention – an individual's determination to start a business – has been analyzed from the perspective of the theory of planned behavior (TPB), in several studies (Kautonen *et al.*, 2015; Duong and Bernat, 2019; Maheshwari and Kha, 2022; Pham *et al.*, 2023; Wardana *et al.*, 2024). TPB was developed by Ajzen (1991, 2011) and it was widely used for understanding human behavior in various contexts. The theory is based on the hypothesis that the intention to adopt a certain type of behavior is the main driving force behind the respective behavior. This intention is influenced by three essential factors: (1) the attitude towards the behavior, (2) the subjective norms, and (3) the perceived behavioral control. Each of these factors has an important role in shaping intention and, consequently, influencing behavior. The

attitude represents the individual's favorable and unfavorable assessment of a certain behavior, and it is determined by the person's behavioral beliefs, namely the perceptions about possible results of the behavior and the evaluation of these results. The subjective norms refer to the social pressure perceived by the individual regarding the adoption or the non-adoption of a certain behavior. The latter are determined by normative beliefs, namely the individual's perceptions about what the significant people in their life (for example, their family, their friends, their colleagues) consider the latter should do. Finally, the perceived behavioral control is the individual's perception of how easy or difficult it is to have a specific behavior, and it is influenced by the perceptions of the presence or of the absence of those factors that can make the behavior easy or difficult to adopt.

The research which analyzed the students' entrepreneurial intention (EI) has found that the entrepreneurship education, the perceived behavioral control, the attitude toward entrepreneurship, and the subjective norms all have a direct impact on entrepreneurial intention (Kautonen *et al.*, 2015; Sampene *et al.*, 2023). For example, in a study carried out on students it was demonstrated that the relationship between self-efficacy and entrepreneurial intention is mediated by the preference for entrepreneurship and by the control of perceived behavioral control. As for the direct effect on EI, the study showed that the attitude towards entrepreneurship has the strongest influence on the students' entrepreneurial intention followed by entrepreneurial self-efficacy (Duong and Bernat, 2019). Arroyo *et al.* (2021) analysed engineering students and found that, while entrepreneurial self-efficacy plays a role in predicting entrepreneurial intention, its influence is moderated by attitudes and educational factors, thereby underscoring the importance of experiential learning in fostering both self-efficacy and positive entrepreneurial attitudes.

A high number of studies showed that subjective norms represent another critical factor in EI (Liñán and Chen 2009; Joensuu-Salo *et al.* 2021; Maheshwari and Kha, 2022). According to these studies, a person's entrepreneurial self-efficacy may increase if their significant others agree with their decision to become an entrepreneur; on the other hand, if their significant others disagree, the person's entrepreneurial self-efficacy may decrease (Duong and Bernat, 2019, Duong, 2023). For example, one relatively recent study which assessed EI in three East European countries (Bulgaria, Serbia, and Romania) found that family support has a significant effect on the students' EI. According to Veličković *et al.* (2023), the students who acknowledge the support of their parents and close relatives are more likely to engage in entrepreneurial activity. Another study carried out on students in economics demonstrates that the relationship between subjective norms, achievement demands, and entrepreneurship intention is mediated by entrepreneurial self-efficacy (Wardana *et al.*, 2024). Numerous studies indicate that subjective norms positively influence entrepreneurial intention (Joensuu-Salo *et al.* 2021), whereas other pieces of research suggest that norms may not correlate with entrepreneurial intention (do Nascimento Silva *et al.* 2022) or may exert a negative effect on it (Sarwar *et al.* 2023). For example, Kurjono *et al.* (2022) highlight that significant subjective norms can either enhance or diminish entrepreneurial intentions based on the social pressures exerted by close relationships, such as family and friends. In our study carried out on engineering students (Balgiu *et al.*, 2024) we found that subjective norms have a negative impact on the students' entrepreneurial intention. This reveals that the students will be less inclined to pursue entrepreneurship the more societal pressure they experience. These mixed

results suggest that the influence of subjective norms on EI may depend on contextual factors such as cultural background or educational experiences.

As for the third component, the authors consider that PBC significantly affects the university students' aspirations for independence and success (Barba-Sánchez and Atienza-Sahuquillo, 2018), as well as their growth in self-efficacy and entrepreneurial orientation (Mahlaole and Malebana, 2021). Overall, entrepreneurial self-efficacy, attitudes, and perceived behavioral control emerge as critical determinants of entrepreneurial intention, while the role of subjective norms remains context-dependent.

The internet entrepreneurial self-efficacy is defined as a person's belief or confidence in launching a successful entrepreneurial venture in the online environment. This aspect comprises five dimensions: business operation, leadership, technology utilization, online customer service, and Internet marketing (Wang *et al.*, 2020). As for internet entrepreneurial self-efficacy (IESE), it is considered that when people trust their ability to manage entrepreneurial activities in e-commerce, they will tend to have a high entrepreneurial intention, even if the entrepreneurial activity has a high risk of failure (Wang *et al.*, 2020). In the same vein, studies underline the fact that individuals with digital entrepreneurship education and knowledge tend to have higher expectations of efficiency regarding online entrepreneurship (Wibowo *et al.*, 2023). IESE is recognized as a key driver of online entrepreneurial intentions (Wang *et al.*, 2020).

Building on the established role of entrepreneurial self-efficacy in traditional entrepreneurship, internet entrepreneurial self-efficacy extends this framework into the digital domain. Drawing from the established influence of ESE on EI, we propose that IESE similarly impacts students' intentions to establish online businesses through the components of TPB. To this purpose, we established the following hypotheses:

H1. Attitudes towards entrepreneurship mediate the positive relationship between internet entrepreneurial self-efficacy and internet entrepreneurial intention.

H2. Perceived behavioral control over entrepreneurship mediates the positive relationship between internet entrepreneurial self-efficacy and internet entrepreneurial intention.

H3. Subjective norms regarding internet entrepreneurship mediates the positive relationship between internet entrepreneurial self-efficacy and internet entrepreneurial intention.

3. METHOD

3.1. PARTICIPANTS AND PROCEDURE

The study is part of a larger project aimed at evaluating the entrepreneurial intentions of engineering students. Therefore, the sample was drawn from three major technical universities in Romania: the National University of Science and Technology Politehnica Bucharest (UNSTPB), the Polytechnic University of Timisoara (UPT) in Timișoara, and the Technical University of Construction (UTCB) in Bucharest. The study involved completing an online survey in Google Forms© format between October 2023 and March 2024. The survey link was distributed to students at the end of the class by the teachers who work with them in different disciplines. Before completing the online survey, participants had to read the information about the purpose of the study and select the option "I agree to participate in the study". Participation was anonymous to minimize the social

desirability effect (Podsakoff *et al.*, 2003). Completing the survey required approximately 10–12 minutes. To ensure data integrity, the survey link was secured to allow each participant to respond only once. Participants were provided with an introduction outlining the research purpose, procedures, and informed consent details. The study utilized a cross-sectional design and was based on self-reported data.

3.2. MEASURES

1. Internet Entrepreneurial Self-efficacy Scale – IESES (Wang *et al.*, 2020) contains 16 items designed as a 7-point Likert scale, ranging from *1 – strongly disagree*, to *7 – strongly agree* and included in three subscales: *Leadership*: Measures the ability to lead partners and make decisions in internet-based businesses (e.g., "I possess the ability to be a leader"); *Technology Utilization*: Assesses the capacity to use multimedia tools and website applications (e.g., "I can install and manipulate basic types of computer hardware to help my business") and *Internet Marketing and e-commerce*: Evaluates the ability to provide high-quality services to online customers (e.g., "I can create a unique electronic commerce website"). Scores for each subscale are obtained by summing the responses to their respective items. The coefficients for the total score of the 16 items show good internal consistency: $\alpha=0.91$ [$_{95\%}0.90-0.92$]; $\omega=0.91$ [$_{95\%}0.90-0.92$], and CFA highlights good factoriality of the scale: $\chi^2/df=4.50$; CFI=0.95; TLI=0.95; NFI=0.94; RMSEA=0.063 [$_{90\%}CI: 0.057-0.069$]; SRMR=0.051.

2. Entrepreneurial Intention Questionnaire – EIQ (Liñán and Chen, 2009) comprises 19 items on a scale from *1 – total disagreement* to *7 – total agreement* that targets motivational factors that have a role in influencing entrepreneurial behavior. Following the model by Tseng *et al.* (2022), the items were adapted for online entrepreneurship. The three subscales are: *Attitudes toward internet entrepreneurship*: Examines perceived advantages of online entrepreneurship (e.g., "Being an internet entrepreneur implies more advantages than disadvantages to me"); *Subjective Norms*: Measures perceived social pressure to engage in or avoid online entrepreneurship (e.g., "My friends approve of my decision to create an online firm") and *Perceived Behavioral Control*: Assesses perceived ease or difficulty in becoming an online entrepreneur (e.g., "I can control the creation process of a new online firm"). In the present study, the three subscales present a good internal consistency: α scores between 0.81 and 0.94; ω between 0.81 and 0.95. The instrument illustrates a good factorial validity: $\chi^2/df=3.96$; CFI=0.98; TLI=0.97; NFI=0.97; RMSEA=0.058 [$_{90\%}CI: 0.049-0.066$]; SRMR=0.034.

3. Individual Entrepreneurial Intent Scale – IEIS (Thompson, 2009) measures entrepreneurial intention. The scale contains 10 items. Three of them are reversed, while four of them are distractor items unrelated to entrepreneurial intention. All items are evaluated on a scale from *1 – definitely false* to *6 – definitely true*. The total score is calculated by summing the scores of all relevant items. As with the EIQ, items were adapted for internet entrepreneurship (e.g., "I intend to set up an online company in the future"). In the present context it has obtained a good internal consistency of $\alpha=0.83$ [$_{95\%}CI=0.82-0.85$]; $\omega=0.83$ [$_{95\%}CI=0.82-0.85$]. CFA reveals that the model fit data very well: $\chi^2/df=1.64$; CFI=0.99; TLI=0.99; NFI=0.99; RMSEA=0.027 [$_{90\%}0.001-0.055$]; SRMR=0.024.

3.3. DATA ANALYSIS

Data are modeled with the partial least squares (PLS) path modeling – a variance-based structural equation modeling technique that is preferred when the data do not meet the conditions of normality (Hair *et al.*, 2022). Or, as the Shapiro-Wilk test shows, all items deviate significantly from normality ($p_s < 0.001$). Firstly, we measured the characteristics of the structural model, namely: the reliability by using Dijkstra-Henseler (ρ_A), Jöreskog's rho (ρ_c) (composite reliability) and Cronbach's α , the convergent validity by using Average variance extracted (AVE), and the discriminating validity by using the high sensitivity criterion Heterotrait-monotrait (HTMT). As a rule, it is advisable that the coefficients should be > 0.70 in order to obtain an acceptable level of reliability (Chin 2010), AVE should be at least 0.50, and HTMT has a good value when it is < 0.85 (Henseler, 2020). According to Kline (2023), the constructs are not distinguishable if the HTMT score is less than 0.85. Another index used to verify the accuracy of models is the standardized root mean square residual (SRMR), which, according to recommendations, is adequate when its values are close to 0.080 (Henseler, 2020). The analysis of multicollinearity was carried out by means of the indicator Variance inflation factor (VIF) which should not be > 5.00 (Hair *et al.*, 2022). The bootstrapping technique was also used to examine the path model-ling's significant coefficient (Henseler, 2020). We used the bootstrapping technique with 5.00 samples according to the recommendation of Henseler *et al.* (2016). The mediation analysis was focused on direct, indirect, and total effects. The data were analysed by using the ADANCO 2.4.0 software (University of Twente, Enschede, The Netherlands).

4. RESULTS AND DISCUSSION

4.1. DEMOGRAPHIC ANALYSIS

The sample is made of 900 students (mean_{age}=21.06; $SD=2.91$), out of which 520 are male (mean_{age}=21.03; $SD=2.41$) and 380 females (mean_{age}=21.12; $SD=3.48$) of which 418 (46.45%) are currently in their first and second years of study, while 482 (53.55%) are in their third and fourth years. Students were registered in different subfields in their universities, including IT&C and Automation Sciences (26.44%), Medical engineering (25%), Transportation (13.01%), Business Engineering and Management (13.33), Civil Engineering (12%) and Electrical engineering (10.22%).

4.2. COMMON METHOD BIAS

The possibility of respondent social desirability was assessed because all of the measures in this study were self-reported. This was calculated in two ways: the post-hoc evaluation procedure of the common method variance (CMV), which is Harman's single-factor test (Podsakoff *et al.*, 2003). It was conducted an Exploratory Factorial Analysis (EFA) in which the factorial solution illustrated six distinct factors greater than 1. These make up 66% of total variance. The first factor captures 38.40% of data variance and scores below the 50% recommended threshold (Fuller *et al.*, 2016) (Kaiser-Meyer-Olkin=0.95; Bartlett's Test of Sphericity=20554.479; $df=561$; $p < 0.001$). The second method of calculation was through confirmatory factorial analysis (CFA) which highlighted a weak model fit: $\chi^2=8462.18$; $df=527$; $\chi^2/df=16.05$; CFI=0.60; TLI=0.58; RMSEA=0.129 [_{90%} 0.127-

0.132]; SRMR=0.101. These results indicated that there was no common method bias to measure data in our study.

4.3 THE ANALYSIS OF THE MODEL OF STRUCTURAL EQUATION

Firstly, we analyzed the indices for the assessment of the model concerning the connection between internet entrepreneurial self-efficacy and internet entrepreneurial intention by utilizing the theory of planned behavior (Table no. 1). Reliability is high in the case of all variables (all the reliability coefficients are between 0.82 and 0.92). The value of AVE is 0.60 in the case of 3 variables and close to 0.50 in the case of other two variables (0.48 - IEI and 0.47 - IESE, respectively). However, AVE < 0.5 can be accepted if CR scores over 0.60 because the construct convergent validity is adequate (McNeish and Wolf, 2020). The values of HTMT are < 0.80, which demonstrates the fact that the discriminating validity of the obtained model is enough. The values of VIF between 1.43 and 4.50 do not show any collinearity problems. The value of SRMR is 0.0819, indicating adequate model fit.

Table no. 1

Evaluation indicators of the model (reliability, convergent, and discriminant validity)										
Variables	(ρ _A) >0.70	(ρ _c) >0.70	α >0.70	Loadings (interval)	VIF (interval) <5.00	AVE >0.50	1	2	3	4
1. AT	0.93	0.92	0.92	0.71-0.92	1.52-2.05	0.71				
2. SN	0.83	0.82	0.83	0.74-0.81	1.43-3.66	0.60	0.49			
3. PBC	0.90	0.89	0.89	0.73-0.88	1.73-4.50	0.68	0.75	0.32		
4. IEI	0.86	0.83	0.84	0.49-0.88	1.67-2.47	0.48	0.77	0.23	0.80	
5. IESE	0.91	0.90	0.90	0.50-0.87	1.86-3.51	0.47	0.64	0.34	0.77	0.68

Note: AT-Attitudes; SN-Subjective norms; PBC-Perceived behavioral control; IEI-Internet entrepreneurial intention; IESE- Internet entrepreneurial self-efficacy.

Table no. 2 shows the inferences of the effects from the mediation model. Regarding the direct effect, the attitudes towards internet entrepreneurship have the strongest effect on the entrepreneurial intention ($\beta=0.48$; $t=11.42$; $p < 0.001$), followed by perceived behavioral control ($\beta=0.40$; $t=7.36$; $p < 0.001$). In addition, IESE is positively linked to IEI ($\beta = 0.11$). These findings align with previous studies carried out by Vafaei-Zadeh *et al.* (2022). In general, the students with a higher sense of entrepreneurial self-efficacy will be able to evince an increased interest in the entrepreneurial activities they are involved in.

Table no. 2.

Effects Inference (direct, indirect, and total)

Direct effect	β	SE	t-value	p-value <
AT -> IEI	0.48	0.04	11.42	0.001
SN -> IEI	-0.15	0.02	-5.02	0.001
PBC -> IEI	0.40	0.05	7.36	0.001
IESE -> AT	0.64	0.02	27.49	0.001
IESE -> SN	0.33	0.03	9.55	0.001
IESE -> PBC	0.77	0.01	42.55	0.001
IESE -> IEI	0.11	0.04	2.42	0.015

Indirect effect				
IESE -> IEI	0.57	0.03	14.93	0.001
Total effect				
IESE -> IEI	0.69	0.02	29.01	0.001

Note: AT-Attitudes; SN-Subjective norms; PBC-Perceived behavioral control; IEI-internet entrepreneurial intention; IESE-Internet entrepreneurial self-efficacy.

The subjective norms are a significant negative predictor of the entrepreneurial intention ($\beta = -0.15$; $t = -5.02$; $p < 0.001$). In other words, social pressure may become a barrier against an online entrepreneurial career. People's perceptions of entrepreneurship may be influenced by a country's overall economic status, which can lead to both financial satisfaction and the threat of bankruptcy. Because entrepreneurship can be dangerous and risky in some cultures, EI may be discouraged by the subjective norms of those societies.

The results show that the internet entrepreneurial self-efficacy has the strongest influence on perceived behavioral control ($\beta = 0.77$; $t = 42.55$; $p < 0.001$) and attitudes towards internet entrepreneurship ($\beta = 0.64$; $t = 27.49$; $p < 0.001$), while the latter influence the entrepreneurial intention ($\beta = 0.40$; $t = 7.36$; $p < 0.001$ and $\beta = 0.48$; $t = 11.42$; $p < 0.001$, respectively). Hypotheses 1 and 3 are confirmed. This suggests that fostering students' positive attitudes toward online entrepreneurship and enhancing their confidence to start a business can amplify the effects of self-efficacy on entrepreneurial intention among students. Although there is a positive relation between internet entrepreneurial self-efficacy and subjective norms ($\beta = 0.33$; $p < 0.001$), the latter have a negative effect on the entrepreneurial intention. Therefore, hypothesis 3 is partially confirmed.

The model shows that internet entrepreneurial self-efficacy influences the entrepreneurial intention for online business ($\beta = 0.57$; $t = 14.93$; $p < 0.001$) via attitudes and perceived behavioral control (Figure no. 1).

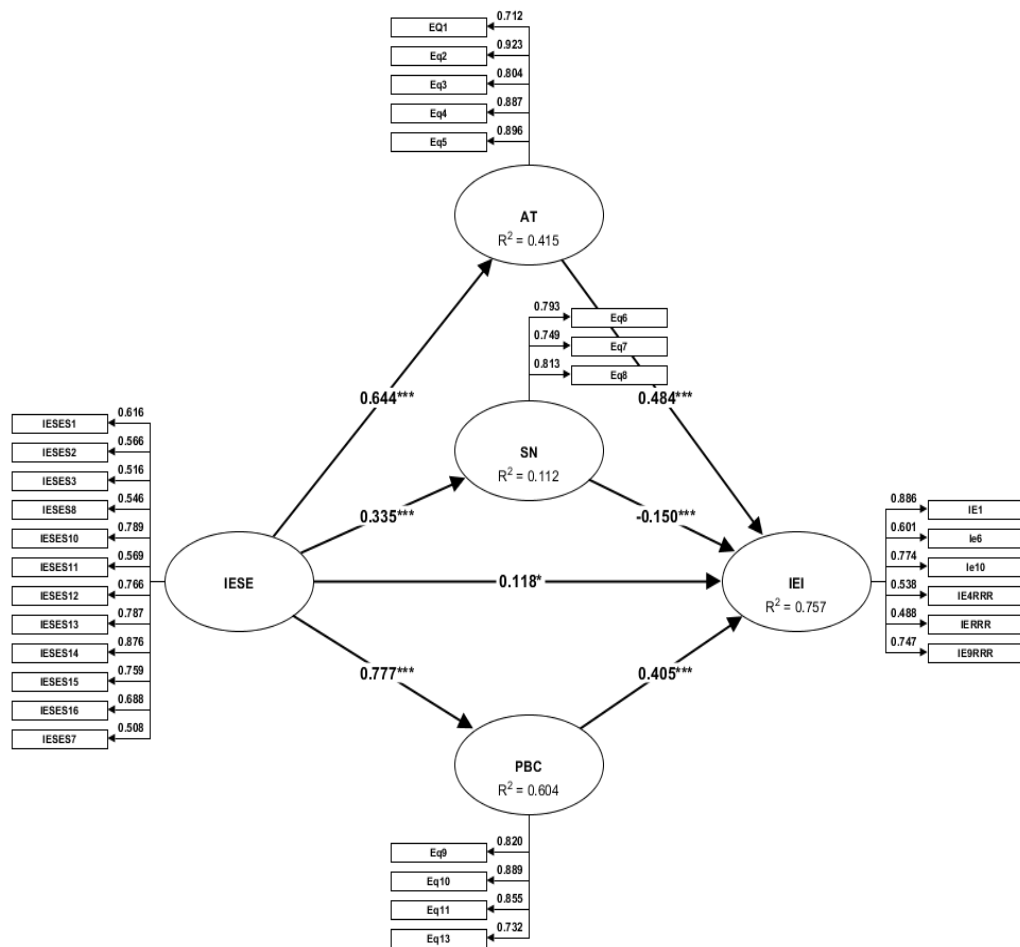


Figure no.1. *The Model Path*
 $***p < 0.001$

Through the components of the theory of planned behavior (attitudes, perceived behavioral control, and subjective norms), the internet entrepreneurial self-efficacy accounts for 75.7% of the variation of entrepreneurial intention towards the online environment, considered to have a substantial statistical value (Hair *et al.*, 2021, p. 118). What the model demonstrates is the fact that the students' conviction that they can be online entrepreneurs influences the intention to start an online business, but this is the case of those who have high attitudes and behavior control related to cyber-entrepreneurship.

The result according to which internet entrepreneurial self-efficacy has an impact on attitudes, perceived behavioral control, subjective norms, and entrepreneurial intention was to be expected, given the comparison with the association between self-efficacy, entrepreneurial intention, and the core component of the TPB within traditional entrepreneurship (Maheshwari and Kha, 2022; Pham *et al.*, 2023, Tseng *et al.*, 2022). Most studies show that in traditional entrepreneurship, self-efficacy is essential for the intention and the behavior regarding the creation of a business (Duong and Barnet, 2019; Liu *et al.*, 2019; Mensah *et al.*, 2021). In addition, it was found that attitudes and perceived behavioral control have an impact on the entrepreneurial intention to start a business in the traditional way (Arroyo *et al.*, 2021; Blanco-Mesa *et al.* 2023). For

example, research demonstrated that one's individual attitude influences the IT specialists' intention to start a business (Lee *et al.* 2011). The role of subjective norms on the entrepreneurial intention is not clearly established, varying according to the cultural context. For example, in a systematic literature study based on geographic regions, Andrade and Carvalho (2023) proved that subjective norms have a lower impact on EI in Europe than in Africa, where social pressure is at its most visible in relation to getting involved in entrepreneurial activities. In collectivist cultures, the influence of subjective norms is significantly stronger, because they emphasize group cohesion, social harmony, and the importance of community. However, one must remember that Ajzen's (2002) subjective norms include friends, family, and coworkers, but other normative criteria may also impact entrepreneurial intention (Liñán and Chen 2009).

The focus on the mediating role of TPB in the case of the relation between entrepreneurial self-efficacy and entrepreneurial intention in the traditional environment helps us in our comparison with the results obtained in the present study. Prior research has demonstrated that entrepreneurial self-efficacy influences one's entrepreneurial intention through the intermediary of entrepreneurial attitude (Liu *et al.*, 2019; Duong and Bernat, 2019). The findings of the studies showed that, while entrepreneurial education significantly increases the entrepreneurial intention, it is the entrepreneurial self-efficacy that positively shapes entrepreneurial attitudes, which in turn affects intentions, thereby reinforcing the TPB framework in the context of entrepreneurship among college students (Duong and Bernat, 2019).

Limitation of the study: The research was conducted on engineering students which might limit the generalizability of the findings. The results should be repeated in different university settings in order to draw generalizable implications because they are restricted to a particular student environment. Consequently, there is a need for studies on other categories of students. Second, it is a cross-sectional study. None of the correlations can be attributed to causal relationships. Although we have underlined that the results support our hypothesis, we cannot be positive that the causal relationship is as implied until the longitudinal study is carried out. To address this kind of limitation, we suggest that the same cohort of students be followed over time to assess how their internet entrepreneurial self-efficacy and intention develops.

CONCLUSION

The study showed that the students with high internet entrepreneurial self-efficacy tend to have positive attitudes and perceived behavioral control with regard to cyber-entrepreneurship, in the absence of social pressure, increasing their intention of starting an online business. Theoretically, the present study highlights the importance of integrating psychological models such as TPB in order to better understand the dynamics between self-efficacy and intention in the entrepreneurial environments. Another contribution is related to the extinction of TPB in the case of online entrepreneurship and it demonstrates that the application of TPB in the analysis of the relationship between internet entrepreneurial self-efficacy and entrepreneurial intention is adequate. Subsequent studies should extend the research model by adding new variables such as gender, entrepreneurial education, and/or personality traits in order to enrich and to contribute to the literature review and to the entrepreneurial practices in the field. This research may help in

numerous ways, allowing educational institutions to personalize entrepreneurship courses for the purpose of stimulating positive attitudes towards entrepreneurship and the students' trust that they are able to successfully start an online business. One of the implications of the study would be to highlight how important it is to improve the dimensions specific to internet entrepreneurial self-efficacy in order to efficiently promote entrepreneurial intentions. Specifically, the development of these specific skills contained in internet entrepreneurial self-efficacy needs to be accelerated, namely critical abilities related to technology utilization (for example: using hardware multimedia, website applications etc.), internet marketing and e-commerce skills (example: the creation of an innovative marketing strategy, the creation of e-commerce websites, the resolution of a tariff issue pertaining to import and export), and last, but not least, managerial skills to help future entrepreneurs build the team with potential partners that will bring along the required skills. In addition, ways to evaluate students' entrepreneurial self-efficacy can be integrated into the entrepreneurship curricula to identify students who need additional support or training in digital entrepreneurship. This would provide practical value to educators and policymakers who are looking to foster entrepreneurship in technical and engineering students.

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