

Does entrepreneurial self-efficacy really matter for entrepreneurial intention? Lesson from covid-19

Ludi Wishnu Wardana, Jefry Aulia Martha, Andy Prasetyo Wati, Bagus Shandy Narmaditya, Amelia Setyawati, Farij Ibadil Maula, Angga Martha Mahendra & Suparno

To cite this article: Ludi Wishnu Wardana, Jefry Aulia Martha, Andy Prasetyo Wati, Bagus Shandy Narmaditya, Amelia Setyawati, Farij Ibadil Maula, Angga Martha Mahendra & Suparno (2024) Does entrepreneurial self-efficacy really matter for entrepreneurial intention? Lesson from covid-19, Cogent Education, 11:1, 2317231, DOI: [10.1080/2331186X.2024.2317231](https://doi.org/10.1080/2331186X.2024.2317231)

To link to this article: <https://doi.org/10.1080/2331186X.2024.2317231>



© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.



Published online: 22 Feb 2024.



Submit your article to this journal 



Article views: 4693



View related articles 



View Crossmark data 



Citing articles: 12 View citing articles 



Does entrepreneurial self-efficacy really matter for entrepreneurial intention? Lesson from covid-19

Ludi Wishnu Wardana^a , Jefry Aulia Martha^a , Andy Prasetyo Wati^a , Bagus Shandy Narmaditya^a , Amelia Setyawati^b , Farij Ibadil Maula^c , Angga Martha Mahendra^d and Suparno^e

^aFaculty of Economics and Business, Universitas Negeri Malang, Malang, Indonesia; ^bDepartment of Management, STIE Indonesia Malang, Malang, Indonesia; ^cDepartment of Management, STIE ABI Surabaya, Surabaya, Indonesia; ^dDepartment of Management, STIE Al-Anwar, Indonesia; ^eFaculty of Economics, Universitas Negeri Jakarta, East Jakarta, Indonesia

ABSTRACT

Entrepreneurship has emerged a prominent of concern during Covid-19 pandemic, making essential contribution toward unemployment as a result of the pandemic. The purpose of this research is to look at the entrepreneurial intentions of students in Indonesia's East Java Province. The research focuses on how students' entrepreneurial intentions are influenced by their perception of their own abilities as entrepreneurs, as well as subjective criteria, role models, and success needs. To further understand the connections between these variables, this quantitative study used the Structural Equation Modeling (SEM) equation model based on Partial Least Square (PLS) variance. The research involved 340 East Java economics students who were polled. The findings indicate that subjective norms, role models, and needs for achievement affect students' entrepreneurial intention. Additionally, the relationship between subjective norms, role models, achievement demands, and entrepreneurship intention is mediated by entrepreneurial self-efficacy. These results provide recommendations for Indonesian institutions and governments to improve their entrepreneurial education approach, emphasizing practice over theory. This research contributes to the scientific knowledge about students' entrepreneurial intentions.

ARTICLE HISTORY

Received 4 May 2023
Revised 14 November 2023
Accepted 6 February 2024

KEYWORDS

Entrepreneurial self-efficacy; subjective norms; role model; needs for achievement; entrepreneurial intention

REVIEWING EDITOR

Yvonne Xian-Han Huang,
University of Hong Kong,
Hong Kong

SUBJECTS

Educational research; Higher Education; Education - Social sciences

1. Introduction

COVID-19 and the steps adopted to prevent its spread have caused the world economy to decline. According to the International Monetary Fund (IMF), the world economy will be in its worst slump since World War II by 2020, with GDP falling by 4.4 percent (Papadopoulos et al., 2020). The crisis has significantly impacted Indonesia's economic growth and unemployment issues. This is due to the fact that some startups and small businesses have struggled to survive, others have thrived in the face of adversity (Sawang, 2023). In addition, many people experiencing financial hardship due to job loss or reduced income, starting a business has become an appealing option during the pandemic (Asad & Kashif, 2021). According to certain recent research, enterprise can survive the Covid-19 pandemic if it can adjust to the circumstances and deal with concerns related to unemployment (Sharma et al., 2022; Sari et al., 2023).

As a consequence of this experience, fostering entrepreneurship is critical to developing new job opportunities and tackling the unemployment crisis. To combat this problem, the government and educational institutions have encouraged students to consider starting their own businesses (Widjaja et al.,

CONTACT Ludi Wishnu Wardana ludi.wishnu.fe@um.ac.id Faculty of Economics and Business, Universitas Negeri Malang, Malang, Indonesia

Farij Ibadil Maula and Angga Martha Mahendra is now affiliated to Faculty of Economics and Business, Universitas Negeri Surabaya, Surabaya, Indonesia.

© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

2022; Wardana et al., 2020; Wibowo & Saptono, 2018). The existence of entrepreneurial intention is believed to drive individuals to actively seek and capitalize on business opportunities by leveraging the potential available to them. Instilling an entrepreneurial attitude via higher education is important (Martins et al., 2023), yet entrepreneurship instruction takes up more time at most colleges. Integrating entrepreneurial education throughout the curriculum might help develop an entrepreneurial mindset in students (Cui & Bell 2022). However, despite the availability of entrepreneurial education, Indonesian students still struggle to become active economic agents because to a lack of demand (Wardoyo et al., 2023).

To build awareness of students so they are not only fixated on finding a job but can also work independently. By cultivating an entrepreneurial spirit, students are expected to grow an intention in entrepreneurship (Urban, 2013). In this regard, some factors affect the choice of entrepreneurship. Prior to engaging in entrepreneurial activity, one must first have the desire to do so. A multitude of factors influence this intention, including self-perceived norms, role models, the need for success, and entrepreneurial self-efficacy (Wijayati et al., 2021). Personal standards impact social circumstances and intention, according to Ajzen's (1991) planned behavior theory. An entrepreneur must have subjective norms to be more confident and enthusiastic to start opening a business. Utami (2017) added that subjective norms are a person's perspective of other people's opinions that impact their desire to conduct or not execute the activity they are contemplating. Vinothkumar and Subramanian (2016) argued that norms in the value system of entrepreneurship will be a factor that strengthens or weakens the Intention of entrepreneurship.

The spirit of student entrepreneurs can be honed by changing their mindset and providing motivation to them. Students need role models and need to be given an understanding that being different is good. Self-identity does not have to be uniform, just like most people. Students need to be trained independently and reassured that they could support the economy (Fillis & Rentschler, 2010; Sahinidis et al., 2019). Meanwhile, the need for outstanding entrepreneurs is seen in the form of actions to do something better and more efficient than before (Hansemark, 1998). Aforementioned studies remarked that motivation or need for achievement is an impulse contained in individuals to achieve success in competing so that individuals always try or strive to improve or maintain the highest possible ability in all activities using standards of excellence either derived from their own standards of achievement in the past or the achievements of others (Hansemark, 2003; Wu et al., 2007).

The existing literature on entrepreneurial intention and entrepreneurship is not adequately take into account contextual factors that can affect the relationship between students' subjective norms, role models, self-achievement, and self-efficacy, particularly in the Indonesian context. Thus, this study provides a more comprehensive knowledge of the factors influencing students' entrepreneurial intentions among Indonesian university students by looking at the interactions between variables involved in this paper. This present paper will add insight on whether subjective norms, role models, self-achievement, or self-efficacy play a more influential role and inform targeted strategies to enhance entrepreneurial intentions. In addition, providing study in Indonesian context is unique and consistent with the Indonesian government's objective of increasing the number of entrepreneurs among university graduates. Lastly, understanding the factors that influence entrepreneurial intentions among students can help shape policies that create an enabling environment, provide mentorship programs, and develop role models to inspire and support university entrepreneurs.

2. Theoretical review

2.1. Supporting theories

Three basic ideas that explain the link between the variables are the foundation of this investigation. Ajzen's (1991) theory of planned behavior (TPB) provides a theoretical framework for understanding how people decide to engage in certain acts, such as entrepreneurship. TPB aids researchers in locating crucial elements and developing treatments to encourage students' entrepreneurial aspirations. Subjective norms, or people's perceptions of societal pressures and expectations, are what TPB is interested in as a factor in determining behavioral intentions. The Theory of Reasoned Action (TRA), which gives insights into the function of attitudes and subjective standards, is also included as a forerunner to the TPB (Ajzen & Fishbein, 1975). It is more logical to apply Bandura's (2001) Social Cognitive Theory (SCT) to explain the

relationship between self-efficacy and entrepreneurial intention. According to theory, self-efficacy is linked with a individual's belief in their capacity to perform actions and achieve desired goals. In the context of entrepreneurship, self-efficacy is acquainted with a person's conviction in their ability to perform entrepreneurial activities, overcome challenges, and maintaining a business. In this matter, higher levels of self-efficacy may result in escalated entrepreneurial intention as people believe they have the necessary skills and abilities to engage in entrepreneurial activities. Last but not least, we also considered McClelland's (1961) notion of the need for accomplishment, which states that a person's intense desire to meet a particular level of performance (Hoffarth, 2020; Lindner et al., 2018). Furthermore, McClelland (1961) also reveals that individuals with high-achieving needs prefer challenging tasks that require competence, effort, and clear feedback on performance and entrepreneurial situations (Jabeen et al., 2017).

2.2. Entrepreneurial intention and entrepreneurial self-efficacy

According to Karimi et al. (2016), self-efficacy is a belief that influences how a person completes tasks and achieves success in the future. Entrepreneurial self-efficacy is the conviction that people can effectively launch their own businesses and run them until they become profitable (Liu et al., 2019). According to Elnadi and Gheith (2021), a person with high entrepreneurial self-efficacy would constantly look for opportunities, build trustworthy relationships, and exercise self-control in their job and finances. According to several preliminary research, entrepreneurial self-efficacy improves people's capacity to spot and grab business opportunities (Hassan et al., 2020; Elnadi & Gheith, 2021). In this regard, Individuals are more likely to have entrepreneurial intentions when they are confident in their ability to detect and capitalize on opportunities. Self-efficacy enables people to assess opportunities, make sensible decisions, and take the initiative in their entrepreneurial pursuits. As a result, it is obvious that entrepreneurial self-efficacy is a key motivator that a person must have in order to run a successful organization. This is true since doing so calls for hard work, dedication, and meticulous business planning. This assumption is supported by research by Zhao et al. (2005), which shows that entrepreneurial self-efficacy has a positive and substantial influence on entrepreneurial inclinations. This idea backs up the claim:

H₁: Entrepreneurial intentions are significantly and directly impacted by entrepreneurial self-efficacy.

2.3. Need for achievement (NFA)

People are motivated to take on challenging occupations that require expertise, effort, and unambiguous performance feedback because they have a strong desire to achieve a certain degree of accomplishment, according to McClelland's (1961) notion of the need for success. According to this notion, people who have a high-achieving urge are more drawn to entrepreneurial circumstances (Jabeen et al., 2017). As a result, they are probably going to launch a business to demonstrate that they are capable business-people who can succeed in a cutthroat industry (Soomro & Shah, 2022). According to certain reports, the desire for success might have a favorable effect on one's entrepreneurial aim. This is due to the fact that people with strong needs for accomplishment are frequently motivated by a desire to take chances, look for opportunities, and realize their entrepreneurial ambitions. They become even more motivated by the possibility of finding success through entrepreneurial initiatives, which eventually strengthens and develops entrepreneurial intention (Hoffarth, 2020; Lindner et al., 2018).

However, the urge for success can also affect self-efficacy. High-need achievers frequently have greater self-confidence in their capacity to overcome obstacles and succeed. This self-assurance results from their innate desire to achieve difficult objectives. As a result of their strong internal will to achieve, their conviction in their entrepreneurial ability and self-efficacy are probably stronger. The demand for success and entrepreneurial ambition might be related to each other through the entrepreneurial self-efficacy, according to some earlier studies. A person may believe they are competent of carrying out entrepreneurial duties and activities if they have a high need for achievement. These individuals have higher degrees of entrepreneurial intention as a result of their increased self-efficacy as entrepreneurs. The desire for accomplishment in this situation is mediated by entrepreneurial self-efficacy, which explains how entrepreneurial intention develops from that need. Thus, the hypotheses are provided as below.

H₂: The need for success has a significant direct influence on one's entrepreneurial goals.

H₃: Entrepreneurial Self-Efficacy is significantly and immediately impacted by the need for achievement.

H₄: Through entrepreneurial self-efficacy, the need for accomplishment has a significant direct impact on one's intents to start a business.

2.4. Role model (RM)

Role models have been discovered to affect career decisions, according to literature and early study (Sahinidis et al., 2019). This suggests that role models may foster entrepreneurship and self-confidence (Fobbe & Hilletoth, 2021), as people are drawn to role models that share their traits, attitudes, or intentions and may teach them new skills (elements of the model) (Gibson & Gibson 2010). The construction theory explains this phenomenon, which posits that people identify with others and model their behavior, matching their cognitive ability and behavioral patterns with those of the observed individual. The concept of social identity and learning (role) elucidates the role of role models (Gibson & Gibson, 2010), as role identification is a cognitive response to an individual's perception that the models' traits are similar to their goals and character (Sahinidis et al., 2019), and that these models play an essential role in society or hold fascinating positions (Nowiński & Haddoud, 2019). Identification might lead to preferences or copying behavior and inspire someone to pursue a specific direction, hobby, or profession (Entrialgo & Iglesias, 2017). Role models also demonstrate goal achievement and help people define their sense of self (Trotter & Brophy, 2022), boosting their confidence to undertake specific tasks. Therefore, by supporting and legitimizing entrepreneurial ideas, role models may increase the urge to start their own business (Hassan et al., 2020; Nowiński & Haddoud, 2019; Robledo et al., 2015; Bandura, 2001). People learn through observing people they can identify and recognize who excel in areas they desire to participate in or succeed in, i.e. learn by example or model. Excellent examples of entrepreneurship are essential to promote it because entrepreneurs use social networks to learn about the market, industry, regulatory requirements, and potential problems (Wagner & Sternberg, 2004). Role models increase entrepreneurial self-efficacy and goals (Nauta and Kokaly, 2001). The following hypotheses have been established based on these conversations.

H₅: The influence of role models on entrepreneurial intentions is considerable and direct.

H₆: The impact of role models on entrepreneurial self-efficacy is considerable and direct.

H₇: Through entrepreneurial self-efficacy, role models have a substantial direct effect on entrepreneurial intentions.

2.5. Subjective norms (SN)

Subjective norms are described as socially acceptable activities or inactions (Beck & Ajzen, 1991). According to Mou et al. (2017), they refer to an individual's conviction in the norm, peers, and the desire to follow it. Two main aspects of subjective norms are confidence in expectations and expectations of the norm of reference. The latter refers to the view of the other party that is considered necessary by the individual who suggests the individual displaying or not displaying certain behaviors, as well as the motivation of the individual's willingness to carry out or not carry out opinions or thoughts. Subjective norms imply societal pressure to start a business (Utami, 2017). Norms in a person's environment can influence their belief in executing a specific activity in this case. Subjective norms shape entrepreneurial attitudes through influencing one's mindset, and these conventions influence one's commercial ambitions. According to Krueger et al. (2000) and Kolvereid and Isaksen (2006) studies, subjective norms have a considerable and beneficial effect on entrepreneurial attitudes and inclinations. From the aforementioned above, the hypotheses are provided as follows.

H₈: Subjective norms have a substantial direct effect on entrepreneurial intentions.

H₉: Subjective norms have a direct and considerable impact on entrepreneurial self-efficacy.

H₁₀: Subjective norms have a substantial direct effect on entrepreneurial intentions via entrepreneurship self-efficacy.

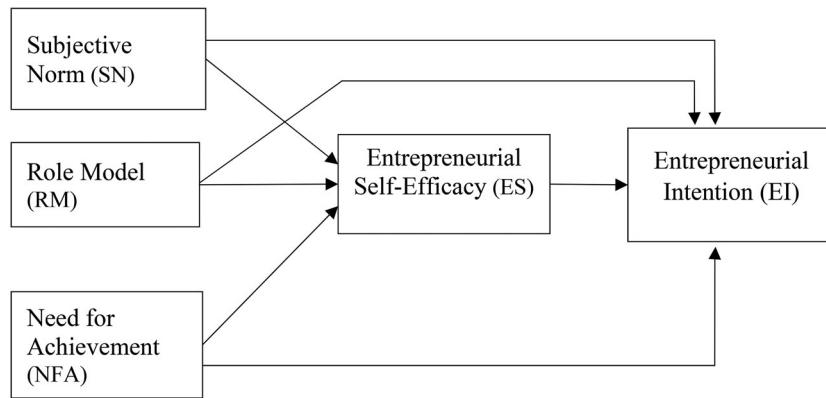


Figure 1. Methodology of the theoretical framework.

Source: Adapted from the work of Krueger et al. (2000); Kolvereid & Isaksen (2006); Nauta & Kokaly (2001); and Zhao et al. (2005).

3. Methods and materials

3.1. Study design

This quantitative study used partial square variance (PLS) based on structural equations (SEM) to better understand how subjective norm, role model, and need for achievement are related to entrepreneurial intention, as well as to investigate the role of entrepreneurial self-efficacy mediation (See Figure 1). As the issue of entrepreneurship emerged in Indonesia, we employed several universities in East Java as respondents to this research. The main reason for studying in East Java is that the majority of universities are located there, primarily in Malang, the city of education in Indonesia.

3.2. Sample and data collection

The research ethics committee of Universitas Negeri Malang in Indonesia gave permission to conduct this study. Using a convenience selection approach, the questionnaire was distributed to several universities in East Java using Google Forms. The respondents in this research provided their consent on a voluntary basis. The data collection was provided to university students who were involved in an entrepreneurship education year. Approximately 350 students were involved in the study, however, we found 340 usable responses for further analysis. Therefore, SEM-PLS was examined further. With an overall rate of 81%, female students made up the majority of respondents in this study. (View Table 1).

3.3. Measurement

This study assessed entrepreneurial self-efficacy using a questionnaire designed by Zhao et al. (2005) that contained five elements. Kolvereid and Isaksen (2006) developed four measures for evaluating subjective norm. The role model was evaluated using four characteristics from Nauta and Kokaly (2001). The five indicators proposed by Soomro and Shah (2022) were utilized to measure the requirement for achievement. Finally, Krueger et al. (2000) and Liñán et al. (2011) identified seven criteria to measure entrepreneurial intention. The scale ranged from 1 to 5, with 1 representing 'strongly disagree' and 5 representing 'strongly agree'. The study ensured that the language used in this section was written in an academic way, complete with back-to-back translation.

3.4. Data analysis

The suggested model and assumptions were calculated in this study utilizing partial least squares equation modeling (PLS-SEM) using SmartPLS3. We used Anderson and Gerbing's (1988) two-step strategy in this study. The measuring model is the initial stage in determining validity and reliability. The next step is to apply the structural model to the hypothesis and conduct a mediation analysis. The use of PLS-SEM

Table 1. Respondent characteristics.

Categorical	Characteristics	Frequency	%
Gender	Female	275	81
	Male	65	19
Educational Level	Bachelor degree	340	100
	16-18	57	17
Age	18-20	269	79
	20-22	14	4

Table 2. Calculation of measurement model.

Construct	Items	λ	α	CR	AVE
SN	SN1	0.807	0.842	0.894	0.678
	SN2	0.813			
	SN3	0.864			
	SN4	0.808			
RM	RM1	0.786	0.857	0.903	0.701
	RM2	0.860			
	RM3	0.812			
	RM4	0.886			
NFA	NFA1	0.709	0.801	0.862	0.555
	NFA2	0.760			
	NFA3	0.729			
	NFA4	0.758			
	NFA5	0.767			
ICE	ES1	0.774	0.830	0.880	0.595
	ES2	0.767			
	ES3	0.766			
	ES4	0.771			
	ES5	0.778			
EI	EI1	0.763	0.868	0.899	0.559
	EI2	0.766			
	EI3	0.770			
	EI4	0.734			
	EI5	0.771			
	EI6	0.775			
	EI7	0.747			

is advantageous in that it provides greater statistical power, which increases the likelihood of demonstrating a significant link (Hair et al., 2017).

4. Results

4.1. Measurement model

In measurement models, it is suggested that the reliability and validity of a measurement model be accomplished first. At this level, we calculated composite reliability, convergent validity, and discriminant validity. The measurement model outcomes are shown in Table 1, which demonstrate that Composite reliability (CR) ranges from 0.862 to 0.903, suggesting that it satisfies the cut-off value of 0.5. Later, for each construct, the extracted average variance (AVE) varied from 0.555 to 0.701 (>0.5), indicating convergent validity. All items are over 0.6. This research assessed convergent validity using cross-loading variables. All variables (SN, RM, NFA, ES, and EI) had cross-loading values of more than 0.70, demonstrating convergent validity (Table 2).

This study also estimates the Fornell-Larcker (1981) criterion for discriminant validity of conceptions. The square root of AVE is used by the Fornell-Larcker criteria for each construct that should be greater than its correlation with any other latent variable. As a result, the model's discriminant validity was confirmed (see Table 3).

4.2. Structural model

The structural model passes the collinearity test if the Variance Inflation Factor (VIF) is less than 5.00 (Hair et al., 2014). In the initial examination, all variables had VIF coefficient values ranging from 1.506 to

Table 3. Discriminant validity.

	EI	ES	NFA	RM	SN
EI	0.748				
ES	0.839	0.771			
NFA	0.650	0.680	0.745		
RM	0.703	0.658	0.466	0.837	
SN	0.703	0.683	0.529	0.744	0.823

Table 4. The hypotheses testing.

Hypotheses	Relationship	t-value	p-value	Decision
H ₁	ES → EI	10.235	0.000	Confirmed
H ₂	NFA → EI	2.527	0.012	Confirmed
H ₃	NFA → ES	8.925	0.000	Confirmed
H ₄	NFA → ES → EI	6.368	0.000	Confirmed
H ₅	RM → EI	3.274	0.001	Confirmed
H ₆	RM → ES	4.690	0.000	Confirmed
H ₇	RM → ES → EI	4.561	0.000	Confirmed
H ₈	SN → EI	2.088	0.037	Confirmed
H ₉	SN → ES	3.725	0.000	Confirmed
H ₁₀	SN → ES → EI	3.429	0.001	Confirmed

Note. ES: Entrepreneurial Self-Efficacy; SN: Subjective Norm; RM: Role Model; NFA: Needs for Achievement; EI: Entrepreneurial Intention.

2.546 (5.00), indicating no construct variable collinearity. The R-square model (R^2) then displays the predicted accuracy of the model. The structural equation modeling method is used to test model hypotheses. T-statistics were computed with 1000 bootstrap samples. **Table 4** and **Figure 2** show that the ten hypotheses in this investigation meet the criteria since the range of t-values for each association is 2.088–10.235 (>1.96).

5. Discussion

The empirical findings of this study reveal that entrepreneurial self-efficacy has a direct impact on entrepreneurial intentions. H₁ is supported by a p-value of 0.000 (0.05) and a t-value of 10.235 (>1.96), which is consistent with previous research (e.g. Zhao et al., 2005; Liu et al., 2019; Elnadi & Gheith, 2021). The basic explanation for this relationship is that entrepreneurial self-efficacy boosts an individual's belief in their ability to effectively execute entrepreneurial tasks and activities. University students with higher levels of entrepreneurial self-efficacy are more confident in their abilities to start and run a business (Koenig, 2016). This confidence and belief in their entrepreneurial skills impacts their entrepreneurial intention positively by providing them with the conviction that they can engage in entrepreneurial activities effectively.

The following discovery, with a p-value of 0.012 (0.05) and a t-value of 2.527 (>1.96), supports H₂. The need for achievement reflects the desire for personal accomplishment and success in challenging endeavors (McClelland, 1961), and university students with a high need for achievement are more likely to engage in entrepreneurial activities that offer opportunities for goal-setting, striving for excellence, and realizing their potential (Neneh, 2022). Students are motivated to follow entrepreneurial careers because they want to establish ambitious goals, take measured risks, and reap the advantages of their entrepreneurial efforts (Krueger et al., 2000). As a result, the need for personal accomplishment and success positively impacts entrepreneurial intents among university students, as they direct their drive toward entrepreneurial efforts to fulfill their desire for personal accomplishment and success.

The statistical results demonstrated that the demand for accomplishment had a substantial influence on entrepreneurial self-efficacy, with a p-value of 0.00 (0.05) and a t-value of 8.925 (> 1.96), corroborating H₃. According to the findings, students who have achieved success in business are more likely to uncover new business prospects with the help of their creativity and invention. Individuals with high accomplishment requirements are also driven by the desire to establish and attain tough objectives, which promotes confidence in their capacity to succeed and perform well. In this case, pupils who have a strong need for accomplishment are more likely to acquire greater levels of entrepreneurial self-

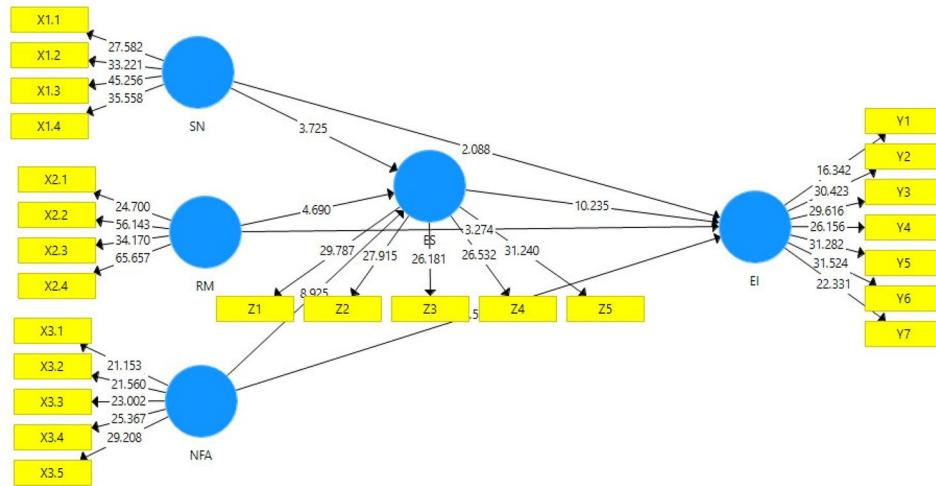


Figure 2. The structural equation modelling calculation.

efficacy. Furthermore, the findings suggest that entrepreneurial self-efficacy might act as a bridge between the need for success and the desire to succeed.

Entrepreneurship students, despite being beginners in the business world, need to increase their confidence in obtaining entrepreneurial intentions. This trust requires both moral and material support, as well as supportive competence. The students who were the subject of this research also expressed their desire to acquire a high amount of money, as well as have authority over others and a job where they can be appreciated. Additionally, they are concerned with outperforming others in their duties. Previous study by Hoffarth (2020), Lindner et al. (2018), and McClelland (1961) demonstrates that students recognize the necessity of hard effort for their entrepreneurial success. Despite their doubts, students seek to start and run their own businesses, demonstrating their potential as future entrepreneurs. This is corroborated by study undertaken by Jabeen et al. (2017) and Soomro and Shah (2022).

Later, role model can affect entrepreneurial self-efficacy ($p\text{-value} = 0.000$, $t\text{-value} = 3.274$) and entrepreneurial intention ($p\text{-value} = 0.000$ and $t\text{-value} = 4.690$), confirming H5 and H6, respectively. These findings highlight the importance of successful role models for novice businesspeople, who require concrete examples to learn from and consult with senior entrepreneurs. Furthermore, statistical estimate demonstrates that role models impact entrepreneurial ambitions via entrepreneurial self-efficacy ($p\text{-value} = 0.000$, $t\text{-value} = 4.561$), supporting H7. The study suggests that role models can improve entrepreneurial self-efficacy, and that students who idolize successful businesspeople in their industry are more likely to pursue entrepreneurial endeavors (Entrialgo & Iglesias, 2017). By gaining a clear understanding of the strategies employed by successful entrepreneurs, students can strengthen their determination to succeed in their own business ventures.

Furthermore, statistical analysis demonstrates that role models influence entrepreneurial ambitions through entrepreneurial self-efficacy ($p\text{-value} = 0.000$, $t\text{-value} = 4.561$), supporting H7. These findings confirmed some preliminary works who remarked this relationship (e.g. Nauta & Kokaly, 2001; Hassan et al., 2020; Nowiński & Haddad, 2019; Robledo et al., 2015). Entrepreneurial self-efficacy influences role models' entrepreneurial ambitions (Austin & Nauta, 2016). Students are inspired and their confidence is increased when they see role models doing business. This feeling of confidence strengthens their own entrepreneurial intentions, as well as the intentions of their role models (Nowiński & Haddad, 2019). In our research, students reported that they have been exposed to general strategies for success in life. They have also seen individuals who they aspire to become in their academic or professional pursuits. These individuals serve as mentors in their academic fields or careers. The institution has brought successful practitioners and business people to interact with the students and they are also active in the community of business people.

Furthermore, subjective standards directly influence entrepreneurial tendencies, validating H8 with a $p\text{-value}$ of 0.037 (0.05) and a $t\text{-value}$ of 2.088 (>1.96). The study's findings indicate that role models have a significant impact on entrepreneurship. Students that get entrepreneurial encouragement from

family members, friends, or other role models have higher self-esteem. Furthermore, subjective norms influenced entrepreneurial self-efficacy with a p-value of 0.000 (0.05) and a t-value of 3.725 (>1.96), corroborating H9. Subjective criteria influence entrepreneurial self-efficacy. Students require support from their community and family to start a business. This strengthens their intentions for entrepreneurship, as the support they receive from their community and family makes them more confident in making business decisions. They have a higher likelihood of developing favorable entrepreneurial ambitions (Ajzen, 1991). Social impact shapes an individual's ideas regarding the desirability and feasibility of entrepreneurial endeavors.

With a p-value of 0.001 (0.05) and a t-value of 3.429 (>1.96), the study's final outcome reveals that entrepreneurial self-efficacy can operate as a mediator between subjective norms and entrepreneurial intention among students. Subjective norms are a social influence that impacts an individual's conduct, in which a person seeks a specific thing or activity because they are affected by others around them or feel that the environment or people around them support their behaviors. Perceived behavioral control is associated with the resources available and the opportunities that exist to carry out a particular activity. The students in this research got moral and monetary support from their closest family members, friends, and other key individuals, giving them the bravery and confidence to pursue entrepreneurship with even more zeal. These findings back up prior work by Mou et al. (2017), Utami (2017), Krueger et al. (2000), and Kolvereid and Isaksen (2006).

6. Conclusion

This study analyzes the direct and indirect effects of subjective norms, role models, and achievement demands on entrepreneurial intention using entrepreneurial self-efficacy. The study shows that subjective standards, role models, and success demands have a direct influence on university students' entrepreneurial intentions in Indonesia. Entrepreneurs must have a subjective belief or norm regarding unwritten standards that are perceived to be endorsed by society in order for their activities to be supported. According to the study, subjective norms, role models, and success demands have a direct influence on entrepreneurial intention and an indirect effect via entrepreneurial self-efficacy.

The research has both theoretical and practical ramifications. For starters, it provides empirical support for the Theory of Planned Behavior (TPB)'s usefulness in assessing entrepreneurial ambitions among university students in an Indonesian environment. Second, it highlights the importance of subjective standards and role models in developing entrepreneurial self-efficacy and, as a result, influencing entrepreneurial intention. This emphasizes the significance of social influences in entrepreneurial intention formation. Further exploration is needed to understand how social factors and role models specifically influence entrepreneurial self-efficacy and intention among university students. Furthermore, the study offers practical implications for institutions and the Indonesian government in expanding the entrepreneurial education paradigm through experiential learning. The university should revitalize and strengthen its entrepreneurship curriculum and culture, and each institution may tailor this entrepreneurial atmosphere. To promote entrepreneurship, seminars, conferences, festivals, bazaars, pamphlets, banners, and publications may be utilized.

However, this study has limitations. The sample may not be representative because it only included Indonesian university students, limiting the findings' generalizability to other groups or cultural situations. To improve the external validity of the findings, future research should involve more varied samples from different geographies, educational backgrounds, and cultural circumstances. Furthermore, this study only looked at four independent factors and one dependent variable. Further research should look into other significant factors influencing students' business plans. Future studies may benefit from mixed methods research to acquire a more thorough knowledge of the elements influencing entrepreneurial inclination among university students.

Disclosure statement

No potential conflict of interest was reported by the author(s).

About the authors

Ludi Wishnu Wardana is an associate professor at Faculty of Economics and Business, Universitas Negeri Malang, concerning on entrepreneurship and entrepreneurial education.

Jefry Aulia Martha is a lecturer at Faculty of Economics and Business, Universitas Negeri Malang, Indonesia.

Andy Prasetyo Wati is a lecturer at Faculty of Economics and Business, Universitas Negeri Malang, Indonesia.

Bagus Shandy Narmaditya is a lecturer at the Economic Education Program, Faculty of Economics and Business, Universitas Negeri Malang, Indonesia.

Amelia Setyawati is lecturer at Department of Management, STIE Indonesia Malang, Malang, Indonesia.

Farij Ibadil Maula is a lecturer at Faculty of Economics and Business, Universitas Negeri Surabaya, Indonesia.

Angga Martha Mahendra is a lecturer at Faculty of Economics and Business, Universitas Negeri Surabaya, Indonesia.

Suparno is a lecturer at Faculty of Economics and Business, Universitas Negeri Jakarta, Indonesia.

ORCID

Ludi Wishnu Wardana  <http://orcid.org/0000-0003-4213-5213>

Jefry Aulia Martha  <http://orcid.org/0000-0003-1846-9723>

Andy Prasetyo Wati  <http://orcid.org/0000-0003-4208-3599>

Bagus Shandy Narmaditya  <http://orcid.org/0000-0002-4019-8723>

Amelia Setyawati  <http://orcid.org/0000-0002-5653-2108>

Farij Ibadil Maula  <http://orcid.org/0000-0003-2545-2479>

Angga Martha Mahendra  <http://orcid.org/0000-0002-1284-6850>

References

- Ajzen, I., & Fishbein, M. (1975). A Bayesian analysis of attribution processes. *Psychological Bulletin*, 82(2), 261–277. <https://doi.org/10.1037/h0076477>
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Asad, M., & Kashif, M. (2021). Unveiling success factors for small and medium enterprises during COVID-19 pandemic. *Arab Journal of Basic and Applied Sciences*, 28(1), 187–194. <https://doi.org/10.1080/25765299.2020.1830514>
- Austin, M. J., & Nauta, M. M. (2016). Entrepreneurial role-model exposure, self-efficacy, and women's entrepreneurial intentions. *Journal of Career Development*, 43(3), 260–272. <https://doi.org/10.1177/0894845315597475>
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52(1), 1–26. <https://doi.org/10.1146/annurev.psych.52.1.1>
- Beck, L., & Ajzen, I. (1991). Predicting dishonest actions using the theory of planned behavior. *Journal of Research in Personality*, 25(3), 285–301. [https://doi.org/10.1016/0092-6566\(91\)90021-H](https://doi.org/10.1016/0092-6566(91)90021-H)
- Cui, J., & Bell, R. (2022). Behavioural entrepreneurial mindset: How entrepreneurial education activity impacts entrepreneurial intention and behaviour. *The International Journal of Management Education*, 20(2), 100639. <https://doi.org/10.1016/j.ijme.2022.100639>
- Elnadi, M., & Gheith, M. H. (2021). Entrepreneurial ecosystem, entrepreneurial self-efficacy, and entrepreneurial intention in higher education: Evidence from Saudi Arabia. *The International Journal of Management Education*, 19(1), 100458. <https://doi.org/10.1016/j.ijme.2021.100458>
- Entrialgo, M., & Iglesias, V. (2017). Are the intentions to entrepreneurship of men and women shaped differently? The impact of entrepreneurial role-model exposure and entrepreneurship education. *Entrepreneurship Research Journal*, 8(1), 1–14. <https://doi.org/10.1515/erj-2017-0013>
- Fillis, I., & Rentschler, R. (2010). the Role of Creativity in Entrepreneurship. *Journal of Enterprising Culture*, 18(01), 49–81. <https://doi.org/10.1142/S0218495810000501>
- Fobbe, L., & Hilletoft, P. (2021). The role of stakeholder interaction in sustainable business models. A systematic literature review. *Journal of Cleaner Production*, 327, 129510. <https://doi.org/10.1016/j.jclepro.2021.129510>
- Fornell, C., & Larcker, D. F. (1981). *Structural equation models with unobservable variables and measurement error: Algebra and statistics*.
- Gibson, L. G., & Gibson, R. A. (2010). Entrepreneurial attitudes of arts and business students. In *ICSB World Conference Proceedings* (p. 1). International Council for Small Business (ICSB).
- Hair, J. F., Jr, Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107–123. <https://doi.org/10.1504/IJMDA.2017.087624>

- Hair, J., Jr, Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review*, 26(2), 106–121. <https://doi.org/10.1108/EBR-10-2013-0128>
- Hansemark, O. C. (1998). The effects of an entrepreneurship programme on Need for Achievement and Locus of Control of reinforcement. *International Journal of Entrepreneurial Behavior & Research*, 4(1), 28–50. <https://doi.org/10.1108/13552559810203957>
- Hansemark, O. C. (2003). Need for achievement, locus of control and the prediction of business start-ups : A longitudinal study. *Journal of Economic Psychology*, 24(3), 301–319. [https://doi.org/10.1016/S0167-4870\(02\)00188-5](https://doi.org/10.1016/S0167-4870(02)00188-5)
- Hassan, A., Saleem, I., Anwar, I., & Hussain, S. A. (2020). Entrepreneurial intention of Indian university students: the role of opportunity recognition and entrepreneurship education. *Education + Training*, 62(7/8), 843–861. <https://doi.org/10.1108/ET-02-2020-0033>
- Hoffarth, M. J. (2020). From achievement to power: David C. McClelland, McBer & Company, and the business of the Thematic Apperception Test (TAT), 1962–1985. *Journal of the History of the Behavioral Sciences*, 56(3), 153–168. <https://doi.org/10.1002/jhbs.22015>
- Jabeen, F., Faisal, M. N., & Katsioloudes, M. I. (2017). Entrepreneurial mindset and the role of universities as strategic drivers of entrepreneurship: Evidence from the United Arab Emirates. *Journal of Small Business and Enterprise Development*, 24(1), 136–157. <https://doi.org/10.1108/JSBED-07-2016-0117>
- Karimi, S., Biemans, H. J. A., Lans, T., Chizari, M., & Mulder, M. (2016). The Impact of Entrepreneurship Education: A Study of Iranian Students' Entrepreneurial Intentions and Opportunity Identification. *Journal of Small Business Management*, 54(1), 187–209. <https://doi.org/10.1111/jsbm.12137>
- Koenig, L. S. (2016). Integrating entrepreneurial self-efficacy into education at universities. *Ekonomski vjesnik/Econviews-Review of Contemporary Business. Entrepreneurship and Economic Issues*, 29(2), 311–321.
- Kolvereid, L., & Isaksen, E. (2006). New business start-up and subsequent entry into self-employment. *Journal of Business Venturing*, 21(6), 866–885. <https://doi.org/10.1016/j.jbusvent.2005.06.008>
- Krueger, N. F., Jr, Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5-6), 411–432. [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0)
- Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: a role for education. *International Entrepreneurship and Management Journal*, 7(2), 195–218. <https://doi.org/10.1007/s11365-010-0154-z>
- Lindner, C., Nagy, G., & Retelsdorf, J. (2018). The need for self-control in achievement tests: Changes in students' state self-control capacity and effort investment. *Social Psychology of Education*, 21(5), 1113–1131. <https://doi.org/10.1007/s11218-018-9455-9>
- Liu, X., Lin, C., Zhao, G., & Zhao, D. (2019). Research on the effects of entrepreneurial education and entrepreneurial self-efficacy on college students' entrepreneurial intention. *Frontiers in Psychology*, 10, 869. <https://doi.org/10.3389/fpsyg.2019.00869>
- Martins, J. M., Shahzad, M. F., & Xu, S. (2023). Factors influencing entrepreneurial intention to initiate new ventures: evidence from university students. *Journal of Innovation and Entrepreneurship*, 12(1), 63. <https://doi.org/10.1186/s13731-023-00333-9>
- McClelland, D. C. (1961). *The achieving society*. Van Nostrand. <https://www.worldcat.org/title/achieving-society/oclc/230046>
- Mou, J., Shin, D. H., & Cohen, J. (2017). Understanding trust and perceived usefulness in the consumer acceptance of an e-service: a longitudinal investigation. *Behaviour & Information Technology*, 36(2), 125–139. <https://doi.org/10.1080/0144929X.2016.1203024>
- Nauta, M. M., & Kokaly, M. L. (2001). Assessing role model influences on students' academic and vocational decisions. *Journal of Career Assessment*, 9(1), 81–99. <https://doi.org/10.1177/106907270100900106>
- Neneh, B. N. (2022). Entrepreneurial passion and entrepreneurial intention: the role of social support and entrepreneurial self-efficacy. *Studies in Higher Education*, 47(3), 587–603. <https://doi.org/10.1080/03075079.2020.1770716>
- Nowiński, W., & Haddoud, M. Y. (2019). The role of inspiring role models in enhancing entrepreneurial intention. *Journal of Business Research*, 96, 183–193. <https://doi.org/10.1016/j.jbusres.2018.11.005>
- Papadopoulos, T., Baltas, K. N., & Balta, M. E. (2020). The use of digital technologies by small and medium enterprises during COVID-19: Implications for theory and practice. *International Journal of Information Management*, 55, 102192. <https://doi.org/10.1016/j.ijinfomgt.2020.102192>
- Robledo, J. L. R., Arán, M. V., Sanchez, V. M., & Molina, M. Á. R. (2015). The moderating role of gender on entrepreneurial intentions: A TPB perspective. *Intangible Capital*, 11(1), 92–117.
- Sahinidis, A., Stavroulakis, D., Kossieri, E., & Varelas, S. (2019). Entrepreneurial Intention Determinants Among Female Students. The Influence of Role Models, Parents' Occupation and Perceived Behavioral Control on Forming the Desire to Become a Business Owner. *Proceedings in Business and Economics*, 173–178. https://doi.org/10.1007/978-3-030-12453-3_20
- Sari, D., Kusuma, B. A., Sihotang, J., & Febrianti, T. (2023). The role of entrepreneurial marketing & innovation capability in the performance of SMEs during covid-19 pandemic: Evidence of MSMEs in West Java. *Cogent Business & Management*, 10(1), 2194091. <https://doi.org/10.1080/23311975.2023.2194091>

- Sharma, G. D., Kraus, S., Liguori, E., Bamel, U. K., & Chopra, R. (2022). Entrepreneurial challenges of COVID-19: Re-thinking entrepreneurship after the crisis. *Journal of Small Business Management*, 1–23. <https://doi.org/10.1080/00472778.2022.2089676>
- Soomro, B. A., Abdelwahed, N. A. A., & Shah, N. (2022). Entrepreneurship barriers faced by Pakistani female students in relation to their entrepreneurial inclinations and entrepreneurial success. *Journal of Science and Technology Policy Management*, <https://doi.org/10.1108/JSTPM-12-2021-0188>
- Trotter, P. A., & Brophy, A. (2022). Policy mixes for business model innovation: The case of off-grid energy for sustainable development in sub-Saharan Africa. *Research Policy*, 51(6), 104528. <https://doi.org/10.1016/j.respol.2022.104528>
- Urban, B. (2013). Influence of the institutional environment on entrepreneurial intentions in an emerging economy. *The International Journal of Entrepreneurship and Innovation*, 14(3), 179–191. <https://doi.org/10.5367/ijei.2013.0122>
- Utami, C. W. (2017). Attitude, Subjective Norms, Perceived behavior, Entrepreneurship education and Self-efficacy toward entrepreneurial intention University student in Indonesia. *European Research Studies Journal*, 20(2), 1–21.
- Vinothkumar, M., & Subramanian, S. (2016). Self-efficacy, attitude and subjective norms as predictors of youth's intention to enlist in defence services. *Journal of the Indian Academy of Applied Psychology*, 42(2), 310–319. <https://doi.org/10.1037/t59415-000>
- Wagner, J., & Sternberg, R. (2004). Start-up activities, individual characteristics, and the regional milieu: Lessons for entrepreneurship support policies from German micro data. *The Annals of Regional Science*, 38(2), 219–240. <https://doi.org/10.1007/s00168-004-0193-x>
- Wardana, L. W., Narmaditya, B. S., Wibowo, A., Mahendra, A. M., Wibowo, N. A., Harwida, G., & Rohman, A. N. (2020). The impact of entrepreneurship education and students' entrepreneurial mindset: the mediating role of attitude and self-efficacy. *Heliyon*, 6(9), e04922. <https://doi.org/10.1016/j.heliyon.2020.e04922>
- Wardoyo, C., Narmaditya, B. S., Handayati, P., Fauzan, S., Prayitno, P. H., Sahid, S., & Wibowo, A. (2023). Determinant factors of entrepreneurial ideation among university students: A systematic literature review. *Heliyon*, 9(6), e17227. <https://doi.org/10.1016/j.heliyon.2023.e17227>
- Wibowo, A., & Saptono, A. (2018). Does teachers' creativity impact on vocational students' entrepreneurial intention? *Journal of Entrepreneurship Education*, 21(3), 1–12.
- Wibowo, A., & Saptono, A. (2018). Does entrepreneurial leadership impact on creativity and innovation of elementary teachers? *Journal of Entrepreneurship Education*, 21(2), 1–9.
- Widjaja, S. U. M., Wibowo, A., Narmaditya, B. S., Wardoyo, C., & Saptono, A. (2022). Identifying factors affecting entrepreneurship education and entrepreneurial intention among Indonesian university students. *Entrepreneurial Business and Economics Review*, 10(3), 89–104. <https://doi.org/10.15678/EBER.2022.100306>
- Wijayati, D. T., Fazlurrahman, H., Hadi, H. K., & Arifah, I. D. C. (2021). The effect of entrepreneurship education on entrepreneurial intention through planned behavioural control, subjective norm, and entrepreneurial attitude. *Journal of Global Entrepreneurship Research*, 11(1), 505–518. <https://doi.org/10.1007/s40497-021-00298-7>
- Wu, Sibin, Dagher, Grace K., Matthews, (2007). Need for achievement, business goals, and entrepreneurial persistence. *Management Research News*, 30(12), 928–941. <https://doi.org/10.1108/01409170710833358>
- Zhao, H., Hills, G. E., & Seibert, S. E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *The Journal of Applied Psychology*, 90(6), 1265–1272. <https://doi.org/10.1037/0021-9010.90.6.1265>