

DOES ENTREPRENEURIAL ECOSYSTEM DRIVE ENTREPRENEURIAL INTENTION AND STUDENTS' BUSINESS PREPARATION? LESSON FROM INDONESIA

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ABSTRACT

Finding a way out for new business creation has been a global issue, and the Indonesian government has responded to this issue by promoting entrepreneurship programs for students. For this matter, understanding the role of the entrepreneurial ecosystem can be used to design and promote business for university students. This study employed structural equation modeling with partial least squares to raise understanding among variables. This study involved an entrepreneurial ecosystem to explain the intention of Indonesian university students to do business. The findings indicate that the entrepreneurial ecosystem robustly links with students' entrepreneurial intention and new business creation. This study confirms that access to finance, government programs, support, access to physical infrastructure factors, education, and training factors are crucial for determining Indonesian university students' business. The theoretical and practical implications were provided in this research.

KEYWORDS

Entrepreneurial ecosystem, entrepreneurial intention, prepare for business, university students

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Highlights

- Enhancing the number of entrepreneurs from university graduates will help to overcome the unemployment issue and provide new job creation.
- An entrepreneurial ecosystem can promote entrepreneurial intention and students' business preparation.
- The entrepreneurial ecosystem consists of a ccess to finance, government programs, and support, access to physical infrastructure, and education and training.
- The government can consider an entrepreneurial ecosystem to boost entrepreneurial intention among university students.

INTRODUCTION

The entrepreneurial intention has been attracted among Indonesian policymakers and scholars in recent years because of its role in driving entrepreneurial activities (Shahab et al., 2019; Doanh et al., 2021). Most scholars on this subject believe that entrepreneurial activities have been seen as a means of promoting economic development and economic welfare by creating new jobs (Hessels and Naude, 2019; Neumann, 2020). However, it is intriguing that Indonesia has struggled with the increase in the number of entrepreneurs. Among Singapore, Malaysia, and Thailand, Indonesia has the lowest desirability to be entrepreneurs compared to the total population (3.4%) (Wardana et al., 2021). To deal with this, the Indonesian government promotes

a program to enhance the number of entrepreneurs, for example, through students' entrepreneurship programs (Iskandar and Said, 2021). The program aims to increase the entrepreneurial capacity of Indonesian students in running and developing businesses. Furthermore, the Indonesian student entrepreneurship program emphasizes funding for student business development and the Indonesian student startup acceleration, which provides an acceleration scheme for students with digital startup businesses.

In addition to developing supporting programs for entrepreneurship, scholars and policy researchers should be aware of factors driving entrepreneurial intention and business preparation for students. The majority of scholars take a point the psychological factors,

such as self-efficacy (e.g., Badri and Hachicha, 2019; Doanh and Bernat, 2019), entrepreneurial mindset (Warraich et al., 2023; Wardana et al., 2021), and subjective norms (Azim and Islam, 2022; Nguyen et al., 2023) as the dominant in promoting entrepreneurial intention for students. Also, some researchers have investigated the relationship between entrepreneurship education and intention for business (Jena, 2020; Badri and Hachicha, 2019). Recent studies on this theme elaborated on the role of mindset mediating intention and business preparation (Wardana et al., 2021; Kwapisz et al., 2021).

There is little research investigating the entrepreneurial ecosystem on entrepreneurial intention and its impact on students' business preparation. In the existing studies, for instance, Wurth et al. (2021) criticize the role of the entrepreneurial ecosystem as a concept to synthesize a variety of research streams, and it needs government attention. Additionally, Ratten (2020) has attempted to link the Coronavirus and business issues from the perspectives of the entrepreneurial ecosystem. The recent study by Elnadi and Gheith (2021) has linked the relationship between the entrepreneurial ecosystem, self-efficacy, and intention in the context of Saudi Arabia, while Lu et al. (2021) focused on the entrepreneurial ecosystem in terms of education in the context of Chinese students. However, no studies have specifically elaborated on the entrepreneurial ecosystem in students' business preparation. Hence, this research fills the gap and aims to empirically examine the influence of the entrepreneurial ecosystem on entrepreneurial intention and its impact on business preparation.

This study makes several contributions to the theme of entrepreneurship studies. First, it adds insight into the role of the entrepreneurial ecosystem as the predicting factors for entrepreneurial intention and business preparation that is rare and missing in prior studies. This is important because a good entrepreneurial ecosystem promotes the productivity of students in terms of entrepreneurship and promotes efficiency regarding entrepreneurial activities. Second, this study provides other perspectives as the government considers taking policy for more efficiency in promoting new business creation from university graduates. Third, the focus study in Indonesia is a unique and under-researched setting for entrepreneurship ecosystem studies to raise productivity among students. Additionally, the study explores the relationship between the entrepreneurial ecosystem and students' business preparation, a relatively unexplored area in the literature.

This study is presented as follows: Section 1 concerns the entrepreneurial ecosystem. Section 2 provides the hypotheses' development and literature used in this research, followed by a detailed description of the method in Section 3. Section 4 presents the findings and discussion, then elaborates with the conclusion in Section 5.

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

The intention for entrepreneurship has been acknowledged among scholars and policy researchers as its role in promoting new business creation (Badri and Hachicha, 2019; Doanh and Bernat, 2019). Most studies believe that entrepreneurial intention and business preparation involve careful planning

and a deliberate thought process (Mamun et al., 2017; Mei et al., 2020). Entrepreneurial intention is often linked with people's self-belief to promote new business creation or improve the value-added of the existing enterprise (Vuorio et al., 2018; Neneh, 2020; Jena, 2020). Linan dan Chen (2009) noted that entrepreneurial intention can be proxied by self-prediction, and pure intention while preparing for business is evidence of an act of planned behavior. The entrepreneurial intention reflects the intention construct from the theory of planned behavior (TPB) by Ajzen (1991), and the business preparation represents the behavior construct from the theory of reasoned action (TRA) developed by Ajzen and Fishbein (2000). The recent work by Miranda et al. (2017) remarked that entrepreneurship activities can be promoted through intention. Stimulating entrepreneurial intention is often linked with the entrepreneurial ecosystem. A prior study by Elnadi and Gheith (2021) revealed that entrepreneurship activities are the output of the entrepreneurial ecosystem, while another study by Breznitz and Zhanget (2019) remarked that an entrepreneurial ecosystem can drive students' intention for business. According to Duan et al. (2021), the entrepreneurial ecosystem comprises six primary domains: conducive culture, policy and leadership, financial availability, quality human capital, markets, and various institutional and infrastructure supports (Elnadi and Gheith, 2021). Meanwhile, Lu et al. (2021) documented that the entrepreneurial ecosystem can be formed with government support, financial support, entrepreneurship education, and a university environment.

In practice, the intention and willingness of students in entrepreneurship are closely related to the ecosystem related to financial support. Access to finance is essential and a major business problem, especially in Indonesia. Many entrepreneurs give first-rank access to finance as a constraint. An antecedent study by Lu et al. (2021) believes financial support is crucial to reducing students' aversion to entrepreneurial risk and enhancing their intention to initiate enterprises. Furthermore, government support is crucial in increasing entrepreneurial intentions and starting a business (Kebairi et al., 2018). The Indonesian government has provided a student entrepreneurship program that is expected to promote students' entrepreneurial intentions and prepare them for business. The program has two purposes. The first stimulus is to enhance the intention through workshops and enlarging the university's entrepreneurship education. Second, this program assists student businesses to be funded and assisted to develop and be competitive. In addition to government support, physical support also plays a crucial role in enhancing intention and preparing students for business (Ferri et al., 2018). In this case, students have a certain community with a certain place provided by the government in collaboration with the university. Some scholars agree that the facilities provided are very helpful for students to be involved in entrepreneurship activities (Mat et al., 2015).

Another main component of the entrepreneurial ecosystem is education and training factors. It determines and provides capital for students to engage in entrepreneurial activities. Universities also play a robust role in encouraging entrepreneurship as a career option through education (Jena,

2020; Li and Wu, 2019). University support can be realized by providing entrepreneurship education and creating a conducive environment for entrepreneurship (Mustafa et al., 2016; Boukamcha, 2015). Entrepreneurship education is an educational program where entrepreneurial behavior and intentions to become successful entrepreneurs in the future are sourced (Rauch and Hulsink, 2015). The university environment also motivates students to become entrepreneurs through key resources provided by the university, such as skilled educators, university infrastructure that supports business activities, and the existing network at the university. The growing body of literature has confirmed that education for entrepreneurship can drive entrepreneurial intention and prepare for their business (Wardana et al., 2021; Jena, 2020; Tung et al., 2020). Therefore, the hypotheses are presented as follows.

- H1.** Access to finance influences students' entrepreneurial intention
- H2.** Access to finance influences students to start new business
- H3.** Government programs and support affect students' entrepreneurial intention
- H4.** Government programs and support promote students to start new business
- H5.** Access to physical infrastructure factors influences

students' entrepreneurial intention

- H6.** Access to physical infrastructure encourages students to start new business
- H7.** Education and training factors affect students' entrepreneurial intention
- H8.** Education and training factors affect students to starting new business
- H9.** Students' entrepreneurial intention links to starting a new business

METHOD

Research Design and Sampling

This study used a survey design that distributed an online questionnaire to several university students in Malang of East Java in Indonesia. Determining this location area is understandable since Malang is well-known as an educational city with more than 50 private and state universities. The framework was gained from literature and previous work papers (see Figure 1). The participants in this study were students who completed entrepreneurship education and/or engaged in entrepreneurial activities. The sample was obtained using the convenience sampling technique, commonly used in social research and involves collecting data from an online pool of readily available individuals willing to participate.

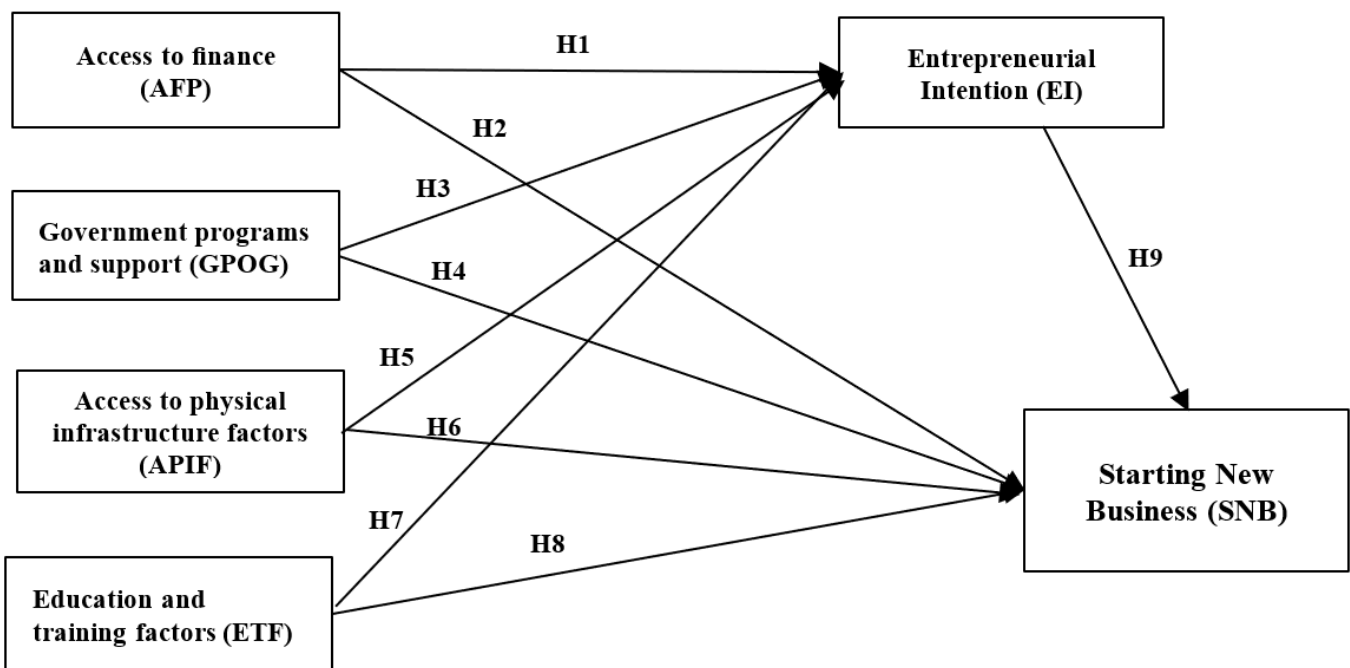


Figure 1: Conceptual framework

Data Collection

The questionnaires were first prepared in English and translated by a professional to Bahasa Indonesia. Hence, the research survey was open to all students from any discipline who enrolled at the university. The online questionnaires were distributed to approximately 430 students using WhatsApp and Telegram from April to May 2022, and 350 completed questionnaires. Some respondents did not complete the questionnaires; thus, we decided to remove them for analysis purposes. In this research,

the respondents were asked for anonymity to meet the ethical issue. The details of the respondents are shown in Table 1. Of the male participants, 60 percent, while the female students engaged in this study were about 40 percent. Regarding age distribution, most respondents ranged between 19 and 20 years old and came from students in their third and fourth years of study. Table 1 also shows that the parents' occupation was that of an entrepreneur (37.14%), farmers (27.71%), and teachers/lecturers (25.71%).

S/No.	Characteristic	Frequency	Percentage
1.	Gender		
	Female	210	60.00
	Male	140	40.00
2.	Age		
	19 years old	90	25.72
	20 years old	135	38.57
	> 20 years old	125	35.71
3.	Parents' occupation		
	Entrepreneur	130	37.14
	Teacher/Lecturer	90	25.71
	Farmers	97	27.71
	Civil Servants	33	9.44
4.	Level of Study		
	Semester 3	12	0.01
	Semester 5	235	67.14
	Semester 7	115	32.85
5.	Prior educational background		
	SMA/MA (Senior High Schools)	130	37.15
	SMK (Vocational Schools)	220	62.85

Table 1: The demographics of respondents

Instrument Development

A conceptual model was provided based on the literature review and previous relevant papers. A questionnaire to measure entrepreneurial intention was borrowed and adopted from the prior study by Linan and Chen (2009). The entrepreneurial ecosystem was measured using 22 items from the Global Entrepreneurship Monitor (GEM, 2019). In this study, the entrepreneurial ecosystem includes access to finance, government programs, and support for new and growing firms, access to physical infrastructure, and education and training factors. Additionally, to measure the starting new business (SNB) variable, we adapted nine items from Lin et al. (2015). The questionnaire items were provided on a seven-point Likert scale ranging from 1 = strongly agree and 7 = strongly disagree.

Data Analysis

The data were analyzed using structural equation modeling (PLS-SEM) with statistical packages of Smart PLS (version 3.0) software. First, the outer model to assess the validity and reliability of the construct was implemented. Principal components for measurement included composite reliability, convergent validity, and discriminant validity. For discriminant validity, we adopted both the Fornell-Larcker criterion and HTMT ratio. Second, the inner calculation was implemented to estimate the hypothesis testing, including collinearity estimation, R -squared (R^2), and Q -squared (Q^2).

RESULTS AND DISCUSSION

Measurement Model

The estimation of the measurement model is primarily shown in this section. The construct validity was assessed based on convergent and discriminant validity. Convergent validity is deemed to be accomplished when the outer loading score is higher than 0.70 (Hair et al., 2020). As shown in Table 2, measurement items involved in this paper had a loading score ranging from 0.702 to 0.874 (> 0.70), indicating to meet the threshold. However, the remaining six items

(AFP3, APIF3, APIF4, ETF2, ETF6, GPOG6) were dropped since they had a loading factor less than the cut-off value. In addition, the average variance extracted (AVE) of all construct variables was higher than 0.50, confirming convergent validity.

Later, composite reliability was estimated using Cronbach's alpha (α) and composite reliability (CR). The values obtained for both indicators were above the minimum threshold of 0.70, as recommended by Hair et al. (2020). As shown in Table 2, the CR value ranged from 0.775 to 0.894, while the (α) ranged from 0.702 to 0.887 to achieve composite reliability. For discriminant validity, the main principle used in the Fornell-Larcker criterion is that the AVE of each construct should be higher than the construct (Fornell and Larcker, 1981). From the estimation, it can be known that the model achieved the discriminant validity criteria (see Table 3). This suggests that the measurement of all constructs in the outer model is internally consistent and reliable.

Structural Model

This study first evaluated the collinearity among the constructs following the variance inflation factor value (VIF) and recommended meeting the criteria when the VIF is less than 5.00 (Hair et al., 2013). As informed in Table 4, the VIF value for the variable used in this study was less than 5.00, implicating the achievement of the collinearity estimation. Second, we used the R -squared (R^2) value to estimate the predictive accuracy of the model. The calculation results show that the R^2 value of the EI variable is 0.735, which means that 73.5 percent of the EI variant can be explained by robust levels of all entrepreneurial ecosystems (AFP, APIF, ETF, and GPOG) variables. Indeed, the R^2 value of the SNB variable is 0.824, which means 82.4 percent of the SNB variance can be explained by the AFP, APIF, ETF, GPOG, and EI variables at a strong level. Furthermore, the value of $Q^2 > 0$ (zero) indicates that the model has predictive relevance and vice versa. The calculation results show that the value of $Q^2 > 0$ (zero), indicating the model has predictive relevance.

Construct	Code Item	Loading (λ)	Cronbach's Alpha (α)	CR	AVE
Access to finance (AFP)	AFP1	0.823	0.878	0.916	0.733
	AFP2	0.873			
	AFP4	0.874			
	AFP5	0.853			
Access to physical infrastructure factors (APIF)	APIF1	0.864	0.775	0.868	0.688
	APIF2	0.766			
	APIF5	0.854			
Education and training factors (ETF)	ETF1	0.773	0.778	0.857	0.600
	ETF3	0.702			
	ETF4	0.785			
	ETF5	0.833			
Government programs and support (GPOG)	GPOG1	0.744	0.875	0.909	0.668
	GPOG2	0.845			
	GPOG3	0.795			
	GPOG4	0.831			
	GPOG5	0.866			
Entrepreneurial intention (EI)	EI1	0.857	0.894	0.922	0.705
	EI2	0.885			
	EI3	0.843			
	EI4	0.887			
	EI5	0.714			
Starting new business (SNB)	SNB2	0.861	0.857	0.903	0.700
	SNB3	0.885			
	SNB4	0.854			
	SNB8	0.739			

Table 2: Results of outer model assessment

	AFP	APIF	EI	ETF	GPOG	SNB
AFP	0.856					
APIF	0.681	0.829				
EI	0.709	0.826	0.840			
ETF	0.623	0.566	0.606	0.775		
GPOG	0.577	0.599	0.606	0.615	0.817	
SNB	0.459	0.427	0.396	0.884	0.555	0.837

Table 3: Discriminant validity

	AFP	APIF	EI	ETF	GPOG	SNB
AFP			2.257			2.413
APIF			2.151			3.442
EI						3.779
ETF						2.016
GPOG						1.955
SNB						

Table 4: VIF values

Hypothesis Testing

The path coefficients were analyzed to estimate the significance of the proposed structural relationships between the variables of interest. This analysis involved a standard bootstrapping technique with 5000 iterations and a significant level of $p < 0.05$. The resume of the hypothesis estimation of this study is shown in Table 5 and Figure 2. The first results indicate that access to finance has a significant effect on entrepreneurial intention ($\beta = 0.204$; t -value = 4.320; p -value = < 0.001) and starting

a new business ($\beta = 0.077$; t -value = 2.071; p -value = 0.019), indicating that the appropriate access to finance will promote entrepreneurial intention and starting of business among university students.

The next results show that government programs and support have a significant effect on entrepreneurial intention ($\beta = 0.076$; t -value = 1.695; p -value = 0.045) and starting a new business ($\beta = 0.115$; t -value = 3.452; p -value < 0.001), confirming H3 and H4. In this regard, the role of government programs

and support raise the intention and business activities among university graduates. Furthermore, the results show that access to physical infrastructure factors has a significant effect on entrepreneurial intention ($\beta = 0.585$; t -value = 12.968; p -value = <0.001) and starting a new business ($\beta = 0.099$; t -value = 2.101; p -value = 0.019), indicating that access to physical infrastructure also plays a crucial role in driving intention and business practices among students.

Later, the outputs show that education and training factors have a significant effect on entrepreneurial intention ($\beta = 0.102$;

t -value = 2.318; p -value = 0.010) and starting a new business ($\beta = 0.986$; t -value = 32.324; p -value = <0.001), supporting H7 and H8. The finding implies the need for education and training to enhance productivity regarding entrepreneurial intention and starting a new business. The last finding for the direct effect shows that entrepreneurial intention significantly affects starting a new business ($\beta = 0.299$; t -value = 5.757; p -value = < 0.001), remarking a significant need to enhance entrepreneurial intention in promoting new business from university graduates.

Path	β	Std Error	t -value	p -value	Bias and correlated bootstrap		Decision
					LL95%CI	UL95%CI	
AFP → EI	0.204	0.047	4.320	< 0.001	0.130	0.278	H1. Supported
AFP → SNB	0.077	0.037	2.071	0.019	0.117	0.337	H2. Supported
GPOG → EI	0.076	0.045	1.695	0.045	0.000	0.150	H3. Supported
GPOG → SNB	0.115	0.033	3.452	< 0.001	0.061	0.172	H4. Supported
APIF → EI	0.585	0.045	12.968	< 0.001	0.505	0.655	H5. Supported
APIF → SNB	0.099	0.047	2.101	0.018	0.025	0.178	H6. Supported
ETF → EI	0.102	0.044	2.318	0.010	0.029	0.173	H7. Supported
ETF → SNB	0.986	0.031	32.324	< 0.001	0.033	0.127	H8. Supported
EI → SNB	0.299	0.052	5.757	< 0.001	0.213	0.382	H9. Supported

Note: AFP= Access to finance; APIF= Access to physical infrastructure factors; ETF = Education and training factors; GPOG= Government programs and support; SNB= Intention of starting new business; t -value > 1.645; p < 0.05; SE= standard error; β = path coefficient

Table 5: Path analysis and hypotheses testing

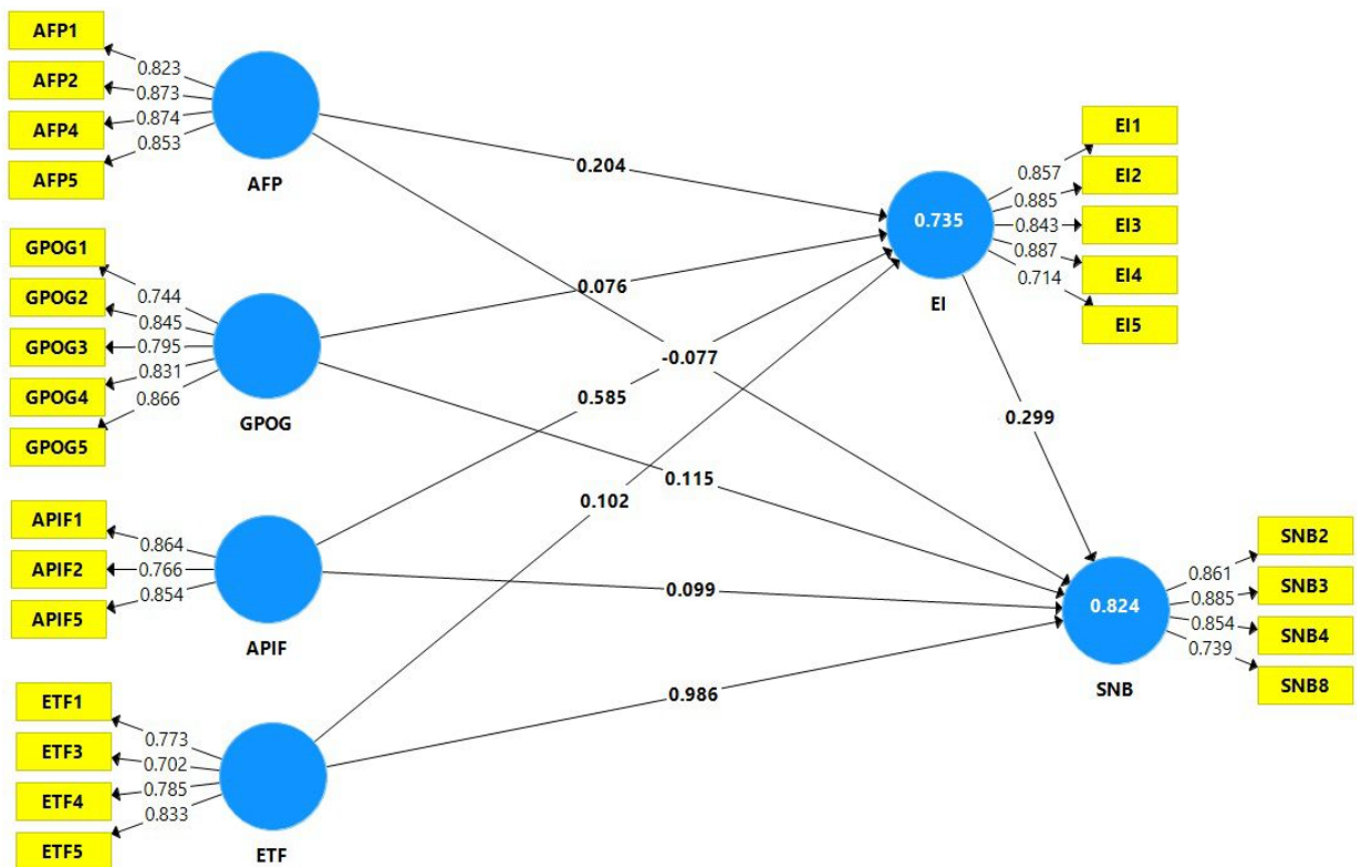


Figure 2: Final model

DISCUSSION

The study intends to examine nine hypotheses proposed. The first and second hypotheses sought to investigate the impact of access to finance, entrepreneurial intention, and starting a new business for Indonesian university students. As expected, this study indicates that access to finance is crucial for determining whether students are entrepreneurs or start a new business. These findings agree with a preliminary study by Lu et al. (2021), which remarked that financial support is crucial to reducing students' aversion to entrepreneurial risk and enhancing their intention to initiate enterprises. The theory of Planned Behavior by Ajzen (1991) noted that individual behavior is determined by their intention, while the intention is influenced by these main dimensions, both internal, such as ease of accessing financing. Some scholars in the Indonesian context ranked the financial issue as the main challenge for new business creation and shaping the business (Davis et al., 2017; Wardana et al., 2021).

Moreover, structural modeling analysis showed that government programs and support can drive students' entrepreneurial intention and preparation for their businesses. These results confirmed several prior studies (e.g., Kebairi et al., 2018; Najib et al., 2021), which mentioned that government support for business could address barriers to promoting intention and new business creation. In the context of university students, the Indonesian government has provided various entrepreneurship programs to promote entrepreneurial intention and support students' businesses. This implies that students positively perceived these programs, and most of them have been involved in the entrepreneurial program. These findings corroborate several prior works by Buffart et al. (2020), Kebairi et al. (2018), and Li et al. (2020), who mentioned that such government programs effectively support and provide a business incubator for students.

The next hypothesis in this research investigates access to physical infrastructure factors, entrepreneurial intention, and students' preparation for business. The fundamental explanation for these findings is that most universities in Indonesia have provided facilities such as a creative center, entrepreneurship corner, business camp, and other relevant models. The government provides these facilities in collaboration with the university (Wardana et al., 2021). Having these facilities, the student's activities on the campus can be accommodated and supported. This finding confirms a prior study by Hechavarria and Ingram (2019), who revealed that the entrepreneurial ecosystem, including access to physical and infrastructure, greatly supports intention and new business engagement for students.

This study also shows that education and training can explain students' entrepreneurial intention and business preparation. This finding confirms some recent works by Jena (2020) and Li and Wu (2019), who mentioned that education and training are significantly linked with students' entrepreneurial intention and business preparation. Entrepreneurship education on the campus provided students with the basic knowledge and theories of entrepreneurship. Some scholars believe that entrepreneurship education can motivate students to be entrepreneurs and their intention for entrepreneurship (Anwar et al., 2022; Hassan et al., 2022). However, the combination of education and training stimulates their intention and enhances the students' engagement in business. These two components matter for students in promoting

entrepreneurial activities. The last findings indicate that there is a robust correlation between students' entrepreneurial intention and business preparation. This is supported by some preliminary studies by Mamun et al. (2017) and Tung et al. (2020), who expressed that entrepreneurial intentions drive the formation of students in starting and preparing their businesses.

CONCLUSION AND IMPLICATION

This study explores how the entrepreneurial ecosystem explains Indonesian students' entrepreneurial intention and business preparation. The findings indicate that the entrepreneurial ecosystem robustly links with students' entrepreneurial intention and new business creation. This study confirms that access to finance, government programs, support, access to physical infrastructure factors, education, and training factors are crucial for determining Indonesian university students' business. This study provides implications. First, the entrepreneurial ecosystem strongly influences the student's intention to start a new business, including access to finance, government programs, support for new and growing firms, access to physical infrastructure, and education and training factors.

Therefore, the government must continue increasing support and convenience for new entrepreneurs to access important factors in the entrepreneurial ecosystem. Second, universities must cooperate with the government besides providing entrepreneurial education and training. The goal is for the university to accommodate the government's support program for new entrepreneurs with changes to the program and curriculum that are coherent and relevant. This is important because most studies on entrepreneurship in Indonesia (Wardana et al., 2020; Kusumojanto et al., 2020; Suratno et al., 2021) have found no synergy between various government programs related to young entrepreneurs and universities. As a result, programs from the government are not effective because of the minimal involvement of universities, and vice versa. Thus, those variables can be considered to boost the intention and students' business preparation.

LIMITATION

Like other studies, this research has confronted some limitations. First, this study did not involve all the variables in the TPB model developed by Ajzen (1991), and other behavioral predictor variables such as self-efficacy, attitude, and mindset were not tested. Future research needs to take a complete picture by including all predictor variables in the TPB model developed by Ajzen. Second, this research does not involve all the variables from the model developed by the Global Entrepreneurship Monitor (GEM, 2019), namely social and cultural factors and government policies. The rational reason is that we do not include these variables because, in the Indonesian context, they already include the variables that we have tested. Future research should include all the variables GEM (2019) developed in the context of other countries.

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