The Distribution Role of Entrepreneurship Mindset and Task Technology Fit: An Extended Model of Theory of Planned Behavior*

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Abstract

Purpose: This study aims to dissemination a new concept based on empirical research on enhancing entrepreneurship intention (EI) in the theory of planned behavior (TPB) through entrepreneurship mindset (EM) and task technology fit (TTF). The TTF is a moderating variable in strengthening the relationship between EM and EI. **Research design, data, and methodology:** This research design was quantitative research. The respondents were 202 students from Malaysia and Indonesia who had filled out and collected an online questionnaire in Microsoft form. Three hypotheses examined the direct influence and the indirect impact of EM on EI through antecedent variables of TPB, and the effect of TTF as moderating variable to enhance the relationship between EM and EI. The data was analyzed using the WarpPLS version 7.0. **Results:** The result showed that EM had a significant impact on the students' EI. The interaction of EM and TTF was significantly able to improve EI. **Conclusions:** The findings contributed new ideas to develop the theoretical framework of the TPB model and were able be utilized by lecturers to consider the integration of EM and TTF in the model. The novelty of this study elaborated the EM and TTF variables as an extended model of the TPB.

Keywords : Entrepreneurship Mindset, Theory of Planned Behavior, Task Technology Fit, Moderating Variable, Dissemination

JEL Classification Code : L26, L29, O33, C30

1. Introduction

Global research has shown that entrepreneurship is significant during economic crises caused by pandemics Covid 19. In many countries, entrepreneurship is one of the priorities in reducing the impact of the economic crisis.

Many new jobs have been created because a region or country provides opportunities for the development of entrepreneurial activities for the community, especially students in the higher learning education environment (Handayati, Wulandari, Soejipto, & Wibowo, 2020; Maritz, Perenyi, de Wall, & Buck, 2020).

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Although entrepreneurship is one of the solutions for supply job creation and welfare improvement for the community, not mindlessly, the condition fosters interest in entrepreneurship, especially among students. It is likely because the entrepreneurship mindset among students has not been well developed. Some researchers argue that an entrepreneurial mindset increases through entrepreneurship education in the family or higher education (Lindner, 2020), and adequate utilization of information technology as technology-based entrepreneurship fosters entrepreneurship skill acquisition (Martinez Dy, 2019). The entrepreneurial mindset is essential for students who want to become an entrepreneur. The students can learn 1) how to think, 2) how to feel, 3) how to adapt and 4) how to mobilize even in uncertain situations.

Based on the theory of planned behavior (TPB), three factors affect entrepreneurship intention (EI), namely, attitude toward entrepreneurship (ATE), social norms (SN), and perceived behavioral control (PBC) (Ajzen, 1991). In fact, in various research results, the three antecedent variables have different impacts on EI. Some of the following study results provide ATE, SN, and PBC results in all three influences on EI (Nguyen, Dinh, & Luu, 2020; Wu, Wei, Yu, & Kao, 2020). Conversely, some other researchers showed that two factors only affected EI, such as ATE and SN's positive effect on EI (Sharahiley, 2020); the positive influence of ATE and PBC on EI (Aleksandrova, Gerry, & Verkhovkaya, 2019; Galvão, Marques, & Marques, 2018). Despite this, there are also some researchers whose results show only ATE variables that affect EI (Alghamdi, 2019; Otache, Umar, & Audu, 2019); or PBC on EI (Nguyen et al., 2020; Sharma, 2019).

In addition, the entrepreneurship mindset as an exogenous variable is added to the TPB model to stipulate mixed research results. Several studies have supported that EM directly affects EI (Cao & Ngo, 2019; Handayati et al., 2020). However, research linking the entrepreneurship mindset to EI using the TPB model has not been widely done.

There are two compelling reasons to conduct this study. First, there is different effect from previous research among three variables of the antecedent TPB on entrepreneurship intention. Second, it has not yet the adequate model that integrates both exogenous variables (e.g., entrepreneurship mindset) and moderating variables (e.g., task technology fit) into an integrated model for developing TPB.

Thus, this study provides three contributions. First, this study provides insight by studying the influence of an entrepreneurship mindset on students' entrepreneurship intention. Second, this research also deeply investigates the mediating role of the task technology fit on the relationship between entrepreneurship mindset and entrepreneurship intention in the TPB model. Lastly, the study contributes to fulfilling the academic gap in the extended model of TPB by adding entrepreneurship mindset as an exogenous variable and the task technology fit as a moderating variable. distribution

2.   Literature Review and Hypotheses Development

2.1. Theory of Planned Behavior

Ajzen (1991) has formulated the Theory of Planned Behavior (TPB) as an extended theory from the Theory of Reasoned Action (TRA). The theory states that personal attitudes, social norms, and perceived behavioral control affect an individual's intention. TPB is widely applied by researchers in adopting information systems and entrepreneurship intention. Recent researches have highlighted that TPB has been demonstrated to be resilient and relevant in predicting individual EI to venture creation and most consistently (Bueckmann-Diegoli, Salmones, Sanzhez, & Hector, 2021).

Entrepreneurial intention (EI) is the process of determining, building, and developing business opportunities as an essential matter in understanding entrepreneurship. The intention is a cognitive construct, a future-oriented conscious thought that motivates a new venture (Looi, 2019). In area entrepreneurship research, Ajzen's TPB theory has been explained that three antecedent variables influence entrepreneurship intention, particularly in the circumstances of understanding young people's career choices.

According to entrepreneurship, the intention is a state of mind of the individual's attitude and values as a product and dynamic force for beginning and running the business venture or an enterprise (Hamilton, Phipp, Schmidt, & Ajzen, 2022). The intention is considered the single best forecaster of behavior. Entrepreneurship is a type of planned behavior for which intention models are appropriate.

Personal attitude (in terms of attitude toward entrepreneurship) concerns the degree of personal appraisal of an entrepreneur's positive or negative aspects. It includes not only practical but also evaluative concerns. Subjective norm (SN) establishes the perceived social force to carry out—or not to carry out – entrepreneurial behavior as representing the perception that "reference people" would accept the choice to become an entrepreneur or not.

Perceived behavioral control (PBC) is defined as the awareness of the easiness or struggle of becoming an entrepreneur. All three concepts discuss in accord with firm-creation behaviors. PBC takes account of the feeling of being capable and the perception about the controllability of the behavior (Ajzen, 1991; Krueger, Jr. & Brazeal, 2018). The researchers propose the following hypothesis:

H1a: Attitude toward entrepreneurship has a positive impact on entrepreneurship intentions.

H1b: Social norms have a positive impact on entrepreneurship intentions.

H1c: Perceived behavioral control has a positive impact on entrepreneurship intentions.

2.2. Entrepreneurship Mindset and TPB

There is no single concept of the definition of entrepreneurship mindset. The entrepreneurship mindset has been defined in several ways. Entrepreneurship mindset is "a feeling or tendency to provide a critical and creative thinking ability" (Naumann & Naumann, 2017). Conceptually, entrepreneurial mindset refers to a specific state of mind which directs an individual to conduct himself/herself to engage in entrepreneurial activities that would lead to the search for significant outcomes, such as chances, survival, innovation, and new value creation (Naumann & Naumann, 2017; Nabi, Linan, Fayolle, Krueger, & Warmsley, 2017).

An entrepreneurial mindset is a set of characteristics embedded in an entrepreneur. These characteristics of an entrepreneur that students could learn and practice, such as 1) the ability to think, 2) the ability to consider risk and enables to overcome challenges, 3) the ability to act according to what is thought to be the main characteristic of an entrepreneur, and 4) the ability to accept responsibility for the outcomes (Gorlewicz & Jayaram, 2020). These things help students improve their entrepreneurship intentions either directly or indirectly through three factors, namely attitude toward entrepreneurship, social norms, and perceived behavioral control in the TPB model.

A person who has EM will reflect his attitude and actions lead to attitude toward entrepreneurship in the search for economic opportunity and have autonomy and authority in realizing all plans to grow and develop EI.

In addition, individuals who have EM and live together in family backgrounds, or close friends who support him in entrepreneurial activities; or communities' local businesses that provide support and opportunities for entrepreneurial activities; then the individual following social norms tend to have a high interest for a career as an entrepreneur.

Lastly, perceived behavioral control (PBC) is an individual who struggles to become an entrepreneur. In general, this person can control the perceived behavior of high entrepreneurship intention (Ramos-Rodríguez, Medina-Garrido, & Ruiz-Navaro, 2019). Hence, the researchers hypothesize:

H2a: Entrepreneurship mindset directly affects the entrepreneurship intention of students.

H2b: Entrepreneurship mindset indirectly affects the original TPB on the entrepreneurship intention of students throughout attitude toward entrepreneurship.

H2c: Entrepreneurship mindset indirectly affects the original TPB on the entrepreneurship intention of students throughout subjective norms.

H2d: Entrepreneurship mindset indirectly affects the original TPB on the entrepreneurship intention of students throughout perceived behavioral control.

2.3. Task Technology Fit as Moderating Variable

The task-technology fit (TTF) model was introduced by Goodhue and Thompson (1995). This model affects measuring the fitness between task and technology for information system utilization among the end-user (Safra, Wan, Ghani, Zulkarnaen, & Tze, 2018). Goodhue & Thompson (1995) defined TTF as "The degree to which technology assists an individual performing their portfolio of a task." TTF is used to explore how individual task requirements, individual abilities, and technology fit profiles improve user performance and technology utilization/functionality (Yu & Yu, 2010). Meanwhile, Isaac, Aldholay, Abdullah, and Ramayah (2019) cite Lin and Wang (2012), defined TTF as "the intensity with which systems match interests, suit or fit tasks, and meet requirements."

Some researchers have integrated TTF with TPB as well as other theories such as Technology Acceptance Model (TAM), Self-Efficacy Theory (SET), Innovation Diffusion Theory (IDT), or Information System (IS) success with diverse research areas. For example, these are such as the field of marketing to use cloud and e-commerce services (Safra et al., 2018); the oil and gas industry sector to use IT (Badpa, Salim, Yahaya, & Kotamjani, 2018); the field of communication to use mobile phones (Liang, Ying, Yeh, & Lin, 2013; Yu & Yu, 2010); and purchase intention (Bukie, 2015; Chen & Huang, 2017).

Safra et al. (2018) combined TTF variables with TPB to test their effect on the intention to adopt cloud-based retail application (CBMA) usage on 348 Malaysian textile cyberpreneurs. The study results proved that the combination of TTF and TPB could describe the adoption intention of textile cyberpreneurs. Furthermore, the result proved that both task-related and human behavior factors play significant roles in influencing textile cyberpreneurs' intention to adopt CBMA.

Rahman and Mohammad (2017) states that entrepreneurship encouragement is identifying the best methods of stimulating the students' entrepreneurial mindset (EM). Many teaching methods to improve EM include computer simulation of business games, role play, business plan development, personal and group projects, visitation to entrepreneurs, new business creation,

workshops, group discussions, and case studies. However, additional variables are needed to increase EM because no one claims that none of the methods is the best. The integration of several variables into one model ascertains the effectiveness based on student demand, teacher knowledge, course content to be taught, and the environment in which learning occurs. Therefore, the researchers hypothesize the following:

H3: Task technology fit has moderating effect on the relationship between entrepreneurship mindset and entrepreneurship intention.

2.4. The Theoretical Model

This research adopts the TPB to predict the EI of students. From the objective and hypotheses of the study, the proposed research framework is reflected in Figure 1. The researchers extend this framework with two variables: entrepreneurship mindset and task technology fit.

This study examines the direct and indirect influence of EM on EI through the three variables of TPB namely ATE,

3. Methodology

3.1. Research Design

The study employed a quantitative approach to test the relationships between exogenous and endogenous variables. The relationships between these variables could be observed in figure 1 (conceptual framework).

3.2. Participant and Data Collection

Students had filled out an online questionnaire survey on

SN, and PBC. The mediating effects of task technology fit on the relationship between students' entrepreneurship mindset and their entrepreneurship intention is also examined. In addition, this study tests the role of moderating variables in the following hypothesized framework.
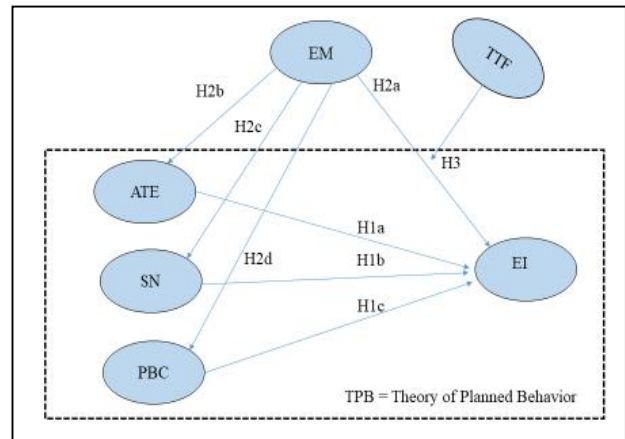

Figure 1. Conceptual Framework

Microsoft-Form that was taken from a link https://forms.office.com/r/SsnJurvevT. The respondents were students who had taken entrepreneurship classes or similar courses from Universiti Teknikal Melaka, Malaysia, and Universitas Atma Jaya Yogyakarta, Indonesia. A total of 50.5% or 202 students of 400 students who participated submitted in complete questionnaires. The students' demographic data could be read in table 1.

Most respondents were from Indonesia, 87.13% and 12.87% Malaysian. The male gender dominated, 57.92%, compared to the female gender 42.08%. A total of 121 respondents were from families that owned businesses and 81 respondents from non-business families.

Table 1: Respondent Demographic Data

Demographic data	Indonesian students n = 176	Malaysian students n = 26	All Students n = 202
Male	106 [52.57%]	11 [5.45%]	117 [57.92%]
Female	70 [34.66%]	15 [7.42%]	85 [42.08%]
	176 [87.13%]	26 [12.87%]	202 [100%]
Business	99 [49.01%]	15 [7.42%]	114 [56.44%]
Non-business	77 [38.12%]	11 [5.45%]	88 [43.56%]
	176 [87,13%]	26 [12.87%]	202 [100%]
Family business	100 [59.50%]	21 [10.39%]	121 [59.90%]
Nonfamily business	76 [37.63%]	5 [2.48%]	81 [40.10%]
	176 [87.13%]	26 [12.87%]	202 [100%]

3.3. Measures

A five-point scale, ranging from one (strongly disagree to five (strongly agree), was utilized to measure six latent variables. Measuring ATE, the researcher used four items extracted from Karimi (2020) which included five dimensions: autonomy, self-realization, economic opportunity, challenge, and authority. Here were two examples of ATE items, "Being an entrepreneur would give me great satisfaction." "A career as an entrepreneur is desirable to me." Variable latent SN was measured using three items (Ahmed, Chandran, Klobas, Linan & Kokkalis, 2020). These three-dimensional items were "My closest family members think that I should pursue my career as an entrepreneur." "My closest friends think that I should pursue my career as an entrepreneur." "People that are important to me think that I should pursue my career as an entrepreneur."

Then, the PBC measurement used four items (Ahmed et al., 2020). The two items were "My life chiefly controlled by powerful others." "To a great extent, accidental events control my life." Furthermore, EI was measured using ten items (Karimi, 2020) grouped into two time periods; intermediate intention and future intention. Some of these indicator items included "My professional goal is to become an entrepreneur," "I have already prepared myself to become an entrepreneur," "I have strong intention to start a business someday." Entrepreneurship mindset was measured using seven items based on the entrepreneurial mindset (Davis, Hall, & Meyer, 2016). Two examples of EM indicators items were "I am passionate about the work that I do" and "I do not give up easily".

TTF was measured using three items from Isaac, Aldholay, Abdullah, and Ramayah (2019), namely, "fit with entrepreneurship learning goals"; "fit with enhancing efficiency in entrepreneurship learning"; and "fit the way to strengthen entrepreneurship learning skill." The selection of indicator items of all latent variables in this study was based on Hair, Hult, Ringle, and Sarstedt (2014) items with loading factors > 0.6

3.4. Statistical Methods

Data analysis was done using PLS-SEM (partial least square structural equation modeling) with the SmartPLS version 7.0. This software had several advantages (Janib, Rasdi, & Zaremohzzabieh, 2022; Kock, 2020). First, it used extensive in a wide variety of fields. Second, this software explicitly identified nonlinear functions connecting pair of latent variables in the SEM model and calculate multivariate coefficients of association accordingly. Third, this software provided classic PLS algorithms and factors based PLS algorithms for SEM. Four, it had suitable for studies with a small sample size. Finally, the PLS-SEM method offered additional analysis, such as moderating effects (Hair et al.,

2014).

Sarstedt et al. (2022) conducted a study of 196 research articles from 239 articles. The study provided a rationale for using PLS-SEM. The results revealed several rational reasons driving the researchers to utilize PLS SEM. As for the findings of the study, PLS SEM was suitable for the following situation: 1) small sample size, 2) non-normal data, 3) theory development and exploratory research, 4) high model complexity, 5) predictive study focus, and 6) formative measure. This research confirmed conditions number three to five.

4. Results and Discussion

4.1. Model Fit and Quality Indices

Referring to Hair et al. (2014), WarpPLS did not provide a single goodness-of-criterion fit to evaluate PLS-SEM estimations. Instead, nonparametric evaluation criteria based on bootstrapping and blindfolding were used. Therefore, WarpPLS provided ten quality indicators to assess the fit or absence of a research model (Kock, 2020). The quality indicator and score are in Appendix 1.

4.2. Measurement Model Assessment (Outer Model)

In this study, reflective measurement model based on Hair et al. (2014) related to reliability and validity of the constructed measure included four things, namely: a) internal consistency using composite reliability; b) indicator liability using Cronbach Alpha; c) convergent validity using average variance extracted, and d) discriminant validity. The minimum limit (which was conventional) of composite reliability had the value of 0.60 and Cronbach Alpha > 0.70 (Hair et al., 2014).

Validity tests used in this research were convergent and discriminant validity. Convergent validity ensured that the quality of measurement of items was perceived equally between respondents and designers of statement items on the questionnaire (Amora, 2021). An instrument met the convergent validity test if the outer loading factor value was at least 0.6 and the value of average variance extracted (AVE) > 0.5 (Hair et al., 2010).

Table 2 presents the results of reliability and convergent validity tests for reflective measurement models. Information from table 2 reveals that all six latent variables show a high internal consistency composite reliability due to a score of > 0.70 and Cronbach Alpha >0.70 and meet convergent validity due to loading all indicator items > 0.6 and AVE values > 0.50.

Table 3 shows results of discriminate validity based on the Fornell-Lacker criterion; all the latent variables have a higher score than all its cross-loading.

Table 2: The Reliablity and Convergent Validity

Latent Variable	Indicators	Reliability Tests		Convergent Validity Test		
		Cronbach Alpha (> 0.70)	CR (> 0.70)	Loadings (>0.60)	AVE (> 0.50)	Convergent Validity?
EI		0.916	0.930		0.573	Yes
	EI1			0.630		
	EI2			0.768		
	EI3			0.750		
	EI4			0.663		
	EI5			0.810		
	EI6			0.781		
	EI7			0.781		
	EI8			0.822		
	EI9			0.828		
	EI10			0.713		
ATE		0.732	0.833		0.555	Yes
	ATE1			0.787		
	ATE2			0.726		
	ATE3			0.759		
	ATE4			0.705		
SN		0.898	0.936		0.830	Yes
	SN1			0.910		
	SN2			0.908		
	SN3			0.915		
PBC		0.735	0.834		0.557	Yes
	PBC1			0.719		
	PBC2			0.753		
	PBC3			0.781		
	PBC4			0.732		
EM		0.851	0.887		0.531	Yes
	EM1			0.811		
	EM2			0.712		
	EM3			0.759		
	EM4			0.784		
	EM5			0.654		
	EM6			0.674		
	EM7			0.693		
TTF		0.881	0.926		0.808	Yes
	TTF1			0.873		
	TTF2			0.918		
	TTF3			0.905		

Note: CA = Cronbach alpha; CR = composite reliability; AVE = average variance extraction; VIF = variance inflection factor.
EI= entrepreneurship intention, ATE = attitude toward entrepreneurship, SN = subjective norms, PBC = perceived behavioral control, EM = entrepreneurship mind-set, and TTF = task technology fit. *All indicators p-value > 0.001

Table 3: Discriminant Validity for Reflective Constructs

No.	Construct	Correlations Among Independent Variables with Square Roots of Averages						Full Collinearity Variance Inflation Factors (VIF) < 3.30***
		EI	ATE	SN	PBC	EM	TTF	
1	EI	**0.757**						2.132
2	ATE	0.677***	**0.745**					1.986
3	SN	0.418***	0.347***	**0.911**				1.326
4	PBC	0.218 **	0.275***	0.057	**0.747**			1.142
5	EM	0.432***	0.384***	0.398***	0.239***	**0.729**		2.001
6	TTF	0.109	0.037	0.069	0.031	0.199**	**0.899**	1.059
7	TTF * EM							1.144

Note: *** p-value < 0.01; **p-value < 0.05
*** according to Kock (2020)

Based on table 3, the seven constructs meet the discriminant validity either by Fornell-Larker or utilizing full collinearity VIF < 3.3 (Kock, 2020).

EM correlates with the variables EI, ATE, SN and PBC at the significance level of p-value <0.01 and correlates with the TTF at a significance level of p-value<0.05. Furthermore, TTF variables do not correlate with the four variables in the TPB and only correlate with EM variables.

4.3. Structural Model Assessment (Inner Model)

The results presented in Table 4 show that the model has high predictive relevancy. The R^2 and Q^2 values significantly demonstrate EI, the medium effect size for ATE and SN, and the small effect for PBC. Q^2 valued larger than zero indicates that the exogenous constructs were relevant for the endogenous construct under consideration (Hair et al., 2014).

From table 4, R^2 shows that the endogenous and moderating variables in this model can explain 50.9% on EI. The remaining 40.1% is another variable outside of the model.

**Table 4:** The Predictive Relevancy and Effect Size

Const ructs	R^2	Significance of Endogenous Latent Variables	Q^2	Effect Size
HI	0.509	moderate	0.568	Large
ATE	0.153	weak	0.155	Medium
SN	0.161	Weak	0.164	Medium
PBC	0.063	weak	0.063	Small
Note:				
R^2 significance of endogenous latent variables; ≥ 0.75 = substantial, ≥ 0.50 = moderate; and ≥ 0.25 = weak				
Q^2 value size effect; small ≤ 0.02; 0.15 medium ≤; 0.35 ≤ large				

Table 5: The Result of Hypothesis Testing

H		Variables Path	Path Coefficient	Effect Sizes of Path Coefficients	Standard Error	P-Value	Result
H1a		ATE to EI	0.525	0.357	0.064	<0.001***	supported
H1b		SN to EI	0.178	0.079	0.068	0.005**	supported
H1c		PBC to EI	-0.088	0.028	0.069	0.101	not supported
H2a		EM to EI	0.122	0.056	0.069	0.039**	supported
H2b		EM to ATE	0.392	0.153	0.065	<0.001***	supported
H2c		EM to SN	0.401	0.161	0.065	<0.001***	supported
H2d		EM to PBC	0.287	0.082	0.067	<0.001***	supported
H3		EM*TTF to EI	-0.156	0.046	0.068	0.012**	supported

Note: one tail, *** p-value < 0.001; ** p-value < 0.05
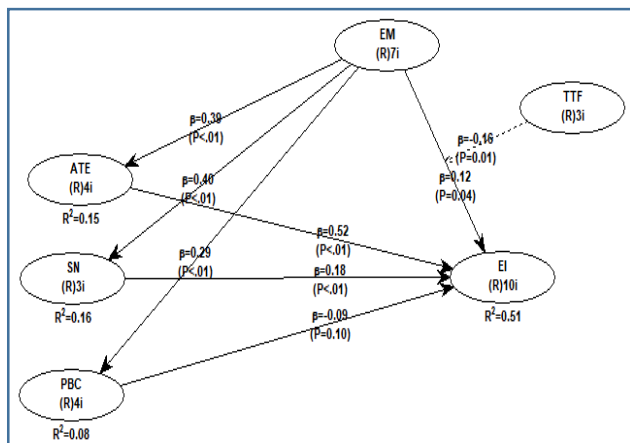
Note: WarpPLS version 7.0 result

Figure 2. Structural Model for The Research

The results of hypothesis testing (tabulated in Table 5) show that all hypotheses are supported except H1c (PBC → EI) as it generates a weak path of - 0.088 and an insignificant

p-value of 0.101. Strongly supported hypotheses with a significance level of p-value < 0.001 are H1a, H2b, H2c, H2d. Some latent variables have a large influence >0.30. There are ATE on EI of 52.5% (p-value < 0.001), EM on SN of 40.1% (p-value < 0.001) and EM on ATE of 29.2% (p-value < 0.001). H1b, H2a, and H3 support a moderate sign value of p-value < 0.05.

Figure 2 displays the results of WarpPLS version 7.0 with path relationships (β and p-value) between exogenous and endogenous variables and moderating variables in the research model.

4.4. The Effect of Three Antecedent Variables on Entrepreneurship Intention

Referring to the TPB model, student EI is affected by all three antecedent variables: ATE, SN, and PBC. This research confirms these relationships except a direct impact of PBC on EI. EI is not affected by PBC.

This study shows that ATE is the most substantial factor and the highest predictive power for entrepreneurship intention (52.5 percent of total variance) with a p-value <

0.001. It means that ATE has the most impact on EI than SN and PBC as antecedent variables. This study confirms some researchers (Galvão et al., 2018; Mingolla, Hudder, Vanwesenbeeck, & Claerebout, 2019) which indicated the influence of ATE on EI > 0.50 with a p-value significance level < 0.001 and p-value< 0.05.

Students at UAJY and UTeM perceive that autonomy, self-realization, economic opportunity, and economic opportunity dimensions have a crucial role in increasing EI. Students possess a long-term professional goal of becoming an entrepreneur.

They can work hard, have themselves prepared early, and are ready to enter the business world at the latest and within the next ten years to start a business.

Students perceive economic opportunity by choosing a career as an entrepreneur. Thus, the entrepreneurial attitude is reflected in the dimension of autonomy and as a challenge. Attitude is an intention to perform a behavior, either favorable or opposite, as a good predictor of EI (Alam, Kousar, & Reman, 2019; Alshebami, Jubari, Alyoussef, & Raza, 2020).

The second significant factor in predicting EI is SN. It confirms researches by Farrukh, Sajid, and Waheed (2019) and Mingolla et al. (2019) that the entrepreneurship intention of students were determined by friends and family or someone's recommendations (Sharahiley, 2020).

Lastly, the result of the study shows contradiction to previous research's results. This study does not support providing empirical evidence of the effect of PBC on increasing student EI. Merely this result confirms some researchers (Alghamdi, 2019; Otache et al., 2019; Ramos-Rodríguez et al., 2019).

4.5. The Effect of Entrepreneurship Mindset on Entrepreneurship Intention

This research shows that student EI is increasing due to the influence of EM directly and indirectly. This study successfully confirms previous research (Handayati et al., 2020) even though the significance level of p-value < 0.05. In addition, this research shows that the presence of indirect influence of EM on EI is significant through the antecedent variables of TPB with a p-value level of < 0.001.

According to EM dimensions in this research, personalities (risk acceptance and passion) and skills (future focus, execution, self-confidence, optimism, persistence) are all personality traits and skills needed to become an entrepreneur. Students who have the characteristics of entrepreneurship mindset tend to have a high interest in becoming an entrepreneur. An aspiring entrepreneur has a great passion for his work and is a person who can accept risks, especially business risks. In addition, the skills needed for a career as an entrepreneur include being oriented to the

future focus, being able to execute all plans with confidence, being optimistic and persistent. (Davis et al., 2016).

Based on the Australian case, they were facing the impact and situation of the Covid 19 pandemic. Entrepreneurial mindsets were believed to help overcome the problem of unemployment due to the negative impact of Covid-19 in the work environment. By opening people's way of thinking to be more adaptable and more able to survive not only survive future similar Covid-type scenarios but to grow well during them, and for society to come out better on the other side, for example, start a new economy with an entrepreneurship mindset (Maritz et al., 2020).

4.6. Moderating Effect of Task Technology Fit

This study tested the effect of TTF moderation on the relationship between EM and EI using WarpPLS version 7.0 software. This software was developed by Kock (2020). The moderating effect calculation option of TTF used "two stages" approach.
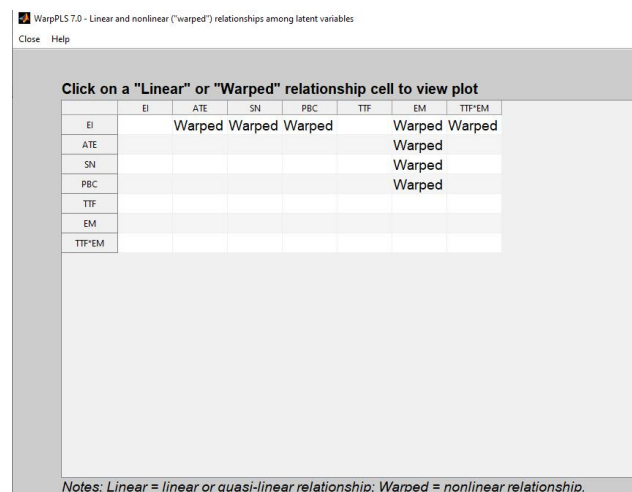

Figure 3. Linear Output and Nonlinear Relationship

Based on WarpPLS version 7.0, the effect of TTF moderation on the relationship between EM and EI was non-linear (warp) and negative (see figure 4). Two things could be observed in figure 4. First, when EM was below the average of 3.98 with a standard deviation of 0.66, the high TTF could increase EI compared to the low TTF. However, negative interactions occurred when the EM value exceeded 3.98, thus lowering EI at high TTF. Alternatively, in other words, EI would be higher at a low TTF compared to a high TTF when the EM was more significant than 3.98. It means that TTF will be effective as a moderation variable that positively impacts EI in the condition that students have relatively moderate EM.
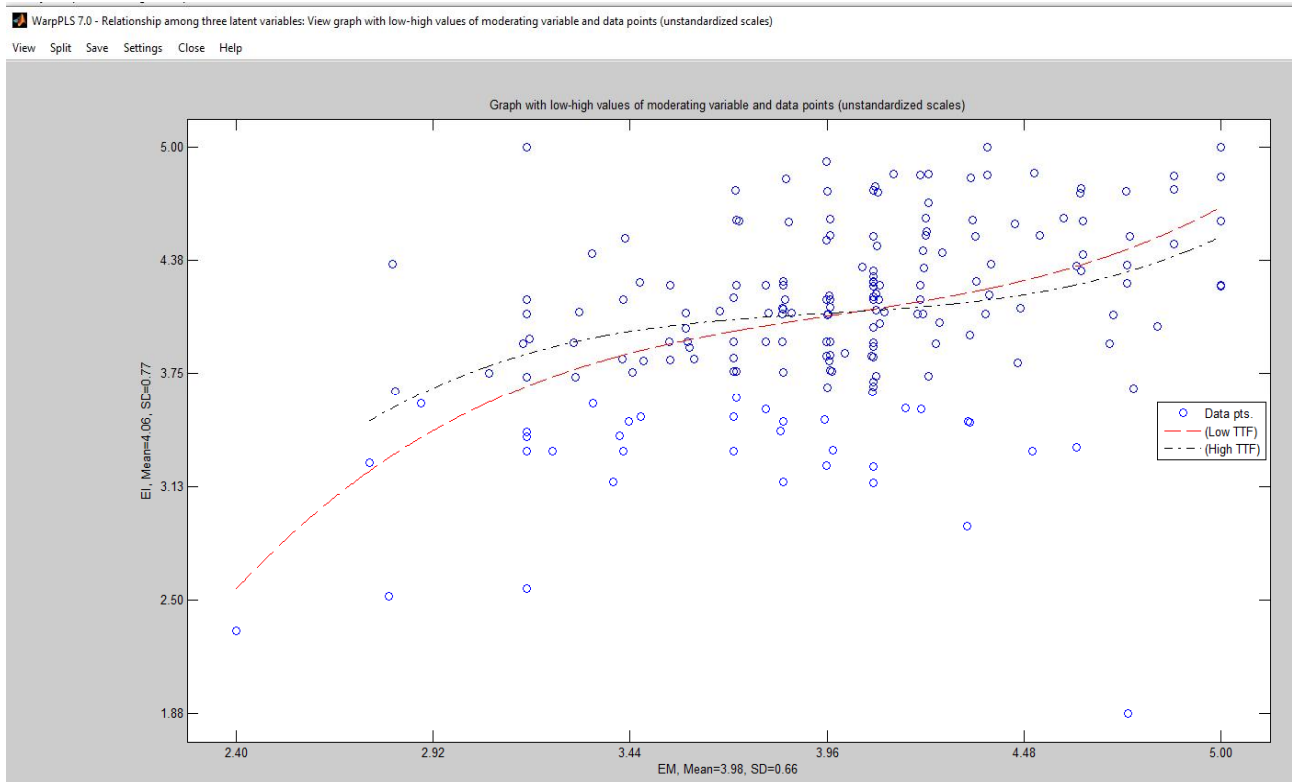
Figure 4: Moderating Effect of TTF on the Relationship Between EM and EI

5. Conclusion

5.1. Conclusion

This study successfully delivery presents empirical evidence that the entrepreneurship mindset and task technology fit adjoined to the theory of planned behavior model can improve student entrepreneurship intentions. Of the eight hypotheses, seven are supported, while one, H1c, is not supported. PBC is unable to give significant results to its effect on EI.

The entrepreneurship mindset affects EI directly or indirectly through three TPB antecedent variables, namely ATE, SN and PBC. It means that in improving student EI, it is not solely using the TPB approach but can directly associate EM with EI even if its significance level is at a moderate level (p-value< 0.05). Moreover, in some previous studies, entrepreneurship mindset students can be formed and developed early before students learn entrepreneurship in college.

Finally, an interesting finding is the presence of a turning point (the cut point between the TTF line and EM) as the optimal point of the effectiveness of TTF interaction with EM in increasing EI. Thus, medium TTF can enhance

student EI, but at some point (in this case as the mean of TTF) high TTF lowers the student's EI. It is due to the non-linear curve (warp) shape of the TTF's interaction with EM and is marked negative. Therefore, there is a need for educators to take advantage of information technology in supporting entrepreneurial tasks in the classroom at an optimal level.

5.2. Contribution

This research provides two contributions. First, the academic contribution is to fill the gap by developing a conceptual model of the TPB model by adding two factors, namely entrepreneurship mindset and task technology fit, to improve entrepreneurship intention. Second, contribution to learning in the entrepreneurship class to develop student entrepreneurship interests through the growth of entrepreneurial mindset moderated by task technology fit.

5.3. Limitation and Future Research

The results of this research cannot be generalized because they are only applied in both universities, Universitas Atma Jaya Yogyakarta and Universiti Teknikal

Malaysia Melaka. The extensive sample scope **is** highly recommended for future research. In addition, the research design can be a hybrid by combining quantitative and qualitative research designs. Finally, EM and TTF integration models into TPB models can be retested using samples from entrepreneurs.

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Appendix

Appendix 1: Model Quality Indicator from WarpPLS 7.0

No.	fit model	quality indices	result
1	Average path coefficient (APC)	$p < 0.005$	APC = 0.269, p<0001
2	Average R-squared (ARS)	$p < 0.005$	ARS = 0.226, p<0.001
3	Average adjusted R-squared (AARS)	$p < 0005$	AARS = 0.220, p<0.001
4	Average block VIF (AVIF)	acceptable if ≤ 5, ideally ≤ 3.3	AVIF = 1,267
5	Average full collinearity VIF (AFVIF)	acceptable if ≤ 5, ideally ≤ 3.3	AFVIF = 1,458
6	Tenenhaus GoF (GoF)	small ≥ 0.1, medium ≥ 0.25, large ≥ 0.36	GoF = 0.396
7	Sympson's paradox ratio (SPR)	acceptable if ≥ 0.7, ideally = 1	SPR = 0.875
8	R-squared contribution ratio (RSCR)	acceptable if ≥ 0.9, ideally = 1	RSCR = 0.971
9	statistical suppression ratio (SSR)	acceptable if ≥ 0.7	SSR = 1,000
10	nonlinear bivariate causality direction ratio (NLBCDR)	acceptable if ≥ 0.7	NLBCDR = 0.938

Appendix 2: Latent variable coefficient from WarpPLS version 7.0

	EI	ATE	SN	PBC	TTF	EM	TTF*EM
R-squared	0.509	0.153	0.161	0.082			
Adj. R-squared	0.496	0.149	0.156	0.078			
Composite reliab.	0.930	0.833	0.936	0.834	0.926	0.887	1.000
Cronbach's alpha	0.916	0.732	0.898	0.735	0.881	0.851	1.000
Avg. var. extrac.	0.573	0.555	0.830	0.557	0.808	0.531	1.000
Full collin. VIF	2.128	1.955	1.323	1.162	1.056	1.439	1.144
Q-squared	0.568	0.155	0.164	0.081			
Min	-4.159	-3.403	-2.411	-2.780	-3.858	-3.092	-5.741
Max	1.781	1.783	2.013	2.486	1.966	2.001	8.507
Median	0.060	0.178	-0.013	0.026	0.510	0.100	-0.068
Mode	0.181	0.178	-0.199	-0.320	0.510	0.205	-0.068
Skewness	-0.651	-0.384	-0.208	-0.104	-1.843	-0.213	1.209
Exc. kurtosis	1.288	0.043	-0.338	0.370	5.467	0.010	34.767
Unimodal-RS	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Unimodal-KMV	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Normal-JB	No	Yes	Yes	Yes	No	Yes	No
Normal-RJB	No	Yes	Yes	Yes	No	Yes	No
Histogram	View	View	View	View	View	View	View

Notes: Unimodal-RS = Rohatgi-Székely test of unimodality; Unimodal-KMV = Klaassen-Mokveld-van Es test of unimodality; Normal-JB = Jarque–Bera test of normality; Normal-RJB = robust Jarque–Bera test of normality; click on "View" cell to see corresponding histogram.