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Factors Affecting Entrepreneurship Behavior: Variance-Based Structural Equation Modelling

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Abstrak

Kewirausahaan secara luas diakui sebagai salah satu elemen penting untuk mencapai kesuksesan di masyarakat saat ini karena kontribusinya yang penting terhadap pertumbuhan ekonomi, penciptaan lapangan kerja, dan kemajuan teknologi. Penelitian ini bertujuan untuk menganalisis secara empiris pengaruh interaksi antara niat berwirausaha (EI) dan perilaku berwirausaha (EB), yang dipengaruhi oleh determinan seperti sifat kompetitif, perhatian yang tajam untuk berwirausaha, dan kepribadian proaktif. Penelitian ini menggunakan pendekatan kuantitatif dengan desain survei cross sectional. Sebanyak 2.322 mahasiswa yang akan lulus terlibat dalam penelitian ini. Ketajaman perhatian dalam berwirausaha diukur dengan menggunakan 13 item pertanyaan. Sifat kompetitif diukur dengan menggunakan tiga item. Kepribadian proaktif diukur dengan menggunakan sepuluh item. Niat Berwirausaha diukur dengan menggunakan skala niat berwirausaha, yaitu sikap pribadi, norma subjektif, dan kontrol perilaku yang dirasakan. PLS-SEM digunakan pada tahap pengukuran model dan pengujian hipotesis. Hasil penelitian menginformasikan bahwa keempat hipotesis variabel anteseden berpengaruh langsung terhadap niat dan perilaku kewirausahaan. Namun, tidak ada moderasi dalam sifat kompetitif dan variabel kepribadian proaktif dalam dua hipotesis. Kesadaran siswa akan perlunya berprestasi dan karakteristik kepribadian yang dibutuhkan untuk berwirausaha dapat berubah ketika mereka dibawa ke dalam pengalaman langsung dengan wirausahawan yang dapat menjadi panutan

Kata kunci*: *Kewirausahaan, Pemodelan, Analisis

Abstract

Entrepreneurship is widely recognized as one of the important elements for achieving success in today's society because of its important contribution to economic growth, job creation, and technological advancement. This study aims to analyze empirically the effect of the interaction between entrepreneurial intentions (EI) and entrepreneurial behaviour (EB), which is influenced by determinants such as competitive nature, keen attention to entrepreneurship, and proactive personality. This study used a quantitative approach with a cross-sectional survey design. A total of 2322 students who were about to graduate were involved in this study. Attention sharpness in entrepreneurship was measured using 13-items questions. The competitive trait was measured using three items. Proactive personality was measured using ten items. Entrepreneurial Intentions was measured using the entrepreneurial intention scale, namely personal attitudes, subjective norms, and perceived behavioural control. PLS-SEM was used at the stage of model measurement and hypothesis testing. The results of the study inform that the four hypotheses of the antecedent variable directly influence entrepreneurial intentions and behaviour. Still, there is no moderation in the competitive trait and proactive personality variables in the two hypotheses. Students' awareness of the need for achievement and the personality characteristics required for entrepreneurship can change when they are brought into direct experience with entrepreneurs who can be role models.

Keywords: Entrepreneurship, Modelling, Analysis

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1. INTRODUCTION

Entrepreneurship is widely recognized as one of the important elements for achieving success in today's society because of its important contribution to economic growth, job creation, and technological advancement (Mason & Brown, 2014; Obschonka et al., 2017; Premand et al., 2016). In fact, with unemployment rates raising worldwide, many governments rely on new ventures to create jobs. Previous research over the years has focused on understanding the factors that drive people to become entrepreneurs by examining

why some individuals develop an intention to start a new venture. This study follows the view of previous scholars that entrepreneurial intention is the main determinant of entrepreneurial behavior (Shirokova et al., 2016; Van Gelderen et al., 2015). As a result, many studies have developed many intention-based models to explain the formation of entrepreneurial intentions (Fuller et al., 2018). However, this provides only a limited understanding of entrepreneurial activity because entrepreneurship is the development of intentions and how well individuals engage in those entrepreneurial activities (Kautonen et al., 2015). Thus, researchers have emphasized the need to move beyond models that end with explaining intentions, to include how this intention is translated into an entrepreneurial act (Shirokova et al., 2016).

The previous study stated that entrepreneurship is an important factor in encouraging innovation and job creation and it is believed to be an effective strategy in dealing with the problem of lack of employment (Kirzner, 1979; Tang et al., 2012). Research in the area or field of entrepreneurship, particularly entrepreneurial intentions, is a useful trend. Desire or intention directly determines a person's behavior (Ajzen, 1991). Therefore, entrepreneurial desire is closely related to entrepreneurial behavior. Because entrepreneurial behavior is a desire and part of a person's planned behavior (Krueger et al., 1993; Zampetakis et al., 2009), entrepreneurial desire or intention and behavior can be used as a major factor to predict one's entrepreneurial actions.

The main component of entrepreneurial activity is the recognition of entrepreneurial opportunities, which are then exploited through actions (Shane, 2012). Therefore, entrepreneurial alertness or keen attention to entrepreneurship has been accepted significantly in the entrepreneurial literature because it determines the mechanisms or processes by which an individual recognizes and then acts on those entrepreneurial opportunities (Roundy et al., 2018). However, not all individuals possessing the ability to recognize entrepreneurial opportunities actually intend to engage in entrepreneurship (Obschonka et al., 2018). Moreover, even when an individual develops an entrepreneurial intention to pursue an identified opportunity, there is no guarantee that the individual will subsequently make their intention to carry out entrepreneurial actions (Shirokova et al., 2016; Van Gelderen et al., 2015). However, some limited entrepreneurial behavior-based models explain the steps from keen attention to entrepreneurship to entrepreneurial action (Fuller et al., 2018; Shane, 2012; Van Gelderen et al., 2015)

Over time, several factors that attempt to explain entrepreneurial behavior have become researchers' main concerns (Brandstätter, 2011; Obschonka et al., 2018). Research on factors that influence entrepreneurial behavior is still relevant, especially considering the socio-economic benefits usually associated with one's behavior in entrepreneurial activities (Autio et al., 2014; Shinnar et al., 2018). Entrepreneurial behavior is an important part of one's performance in entrepreneurial activities because entrepreneurial behavior is an important indicator of one's activities in entrepreneurial success (Hu & Ye, 2017; Uy et al., 2015). Some studies show that personal characteristics can influence entrepreneurial success, and several psychological/cognitive factors related to the development of entrepreneurial intentions/desire and the entrepreneurial process itself (Murugesan & Dominic, 2013; Schrock et al., 2016).

Thus, the aims of this study is to analyse empirically the effect of the interaction between entrepreneurial intentions (EI) and entrepreneurial behaviour (EB), which is influenced by determinants such as competitive nature, keen attention to entrepreneurship, and proactive personality, especially at Jambi University. From a managerial and institutional point of view, this study has several implications for university and government policies aimed at triggering an entrepreneurial orientation among students, especially at Jambi University. There are two implications of our research, namely theoretical and managerial.

From a theoretical point of view, the study aims to fill a gap in the existing literature on the process through which Entrepreneurial Start-Up Behavior emerges among students (Major et al., 2012; Seibert et al., 1999; Turker & Selçuk, 2009). This research contributes to the current literature on Entrepreneurial Start-Up Behavior, focusing primarily on the individual and psychological level by introducing a unique integrated endogenous and exogenous factors model.

2. METHODS

This study used a survey research design (Cohen et al., 2002; Creswell, 2014). The research was conducted at Jambi University. The researcher took the location at Jambi University, spread over 15 faculties. The participants were the students who were in their last academic year, that is, in semester 7 and older. The population of this study was about 2500 Jambi University students (Semester 7 and older). Researchers used stratified sampling in the quantitative phase. Stratified sampling is a type of sampling where the researcher groups and divides the target population into several specific characters (for instance, gender, age, major), and then, using simple random sampling, a target sample is selected from each group. Attention sharpness in entrepreneurship was measured using 13-items questions. The competitive trait was measured using three items. Proactive personality was measured using ten items. Entrepreneurial Intentions was measured using the entrepreneurial intention scale, namely personal attitudes, subjective norms, and perceived behavioural control. Entrepreneurial Behaviours was measured using items adapted (Roundy et al., 2018). In addition, researchers conducted regular questionnaire management. Structural Equation Modelling (SEM) was analysed using the Analysis of Moment Structures (AMOS 23) program (JF et al., 2017; Meyer et al., 2019)

3. RESULTS AND DISCUSSION

Results

Measurement Model

Measurement models are the process of checking the reliability and validity of the proposed construct measures. Four reflective measurement models (reflective indicator loadings, internal consistency reliability, convergent validity, and discriminant validity) were examined and presented in the findings below. This study uses the PLS-SEM Algorithm result format to report the results of the reflective indicator test. The Table below provides detailed final results of the assessment of the reflective measurement model of seven variable constructs. The detailed assessment and the results of the reflective indicators found that some of the loading factors (outers loading) were lower than the recommended threshold or value. From the final results of the PLS-SEM process, most of the indicators reached the recommended value >0.708. However, some indicators showed values below the <0.708 thresholds. Several indicators whose value was below 0.708 appeared from the construct items EJ1, PP1, PP2, PP3, PP5, PP8, PP10. SS1. Weak indicators were then removed (omitted) from the process.

Internal Consistency Reliability

Internal consistency reliability was used to evaluate the consistency of results across items. In the PLS-SEM method for this study, Cronbach's alpha and composite reliability were tested. Internal consistency reliability value is measured between 0 and 1, where the higher the value, the higher the validity level. Cronbach's alpha and composite value and reliability should be higher than 0.700. The details of Cronbach's alpha and composite

reliability values. Cronbach's alpha and composite reliability values for all constructs are stable, equivalent, and have good internal consistency reliability exceeding the recommended value with the smallest value of 0.748 and below the largest value of 0.933.

Convergent Validity

The researchers used the AVE value as suggested as a metric to measur. To calculate the AVE, this study used the PLS-SEM Algorithm stages. The minimum acceptable AVE is 0.500 or higher, explaining 50% or more of the item variance for all constructs. All constructs in this study had an AVE value greater than 0.500 or explained 50% or more of the item variance for the construct. The Outer loading, Cronbach's alpha, composite reliability, and AVE is show in Table 1.

Table 1. Outer Loading, Cronbach's Alpha, Composite Reliability, and AVE

Construct	Sub Construct	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE (Average Variance Extracted)
Action Aversion	AA1	0.845	0.817	0.890	0.730
	AA2	0.856			
	AA3	0.862			
Association and Connection	AC1	0.903	0.792	0.906	0.828
	AC2	0.917			
Action Doubt	AD1	0.828	0.775	0.869	0.688
	AD2	0.856			
	AD3	0.804			
Action Fear	AF1	0.844	0.792	0.831	0.710
	AF2	0.841			
Evaluation and Judgment	EJ2	0.710	0.746	0.833	0.557
	EJ3	0.809			
	EJ4	0.784			
Personal Attitude	PA1	0.763	0.827	0.879	0.592
	PA2	0.743			
	PA3	0.809			
	PA4	0.793			
	PA5	0.736			
Perceived Behavioural Control	PBC1	0.822	0.886	0.916	0.686
	PBC2	0.824			
	PBC3	0.831			
	PBC4	0.846			
	PBC5	0.818			
Proactive Personality	PP4	0.744	0.875	0.897	0.768
	PP6	0.728			
	PP7	0.716			
	PP9	0.736			
Subjective Norm	SN1	0.812	0.807	0.886	0.722
	SN2	0.890			
	SN3	0.846			
Scanning and Search	SS2	0.788	0.833	0.875	0.540
	SS3	0.764			
	SS4	0.704			

Construct	Sub Construct	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE (Average Variance Extracted)
Trait Competitiveness	SS5	0.750	0.891	0.924	0.754
	SS6	0.711			
	TC1	0.860			
	TC2	0.870			
	TC3	0.877			
	TC4	0.865			

Discriminant Validity

Discriminant validity is "the extent to which a construct is empirically different from other constructs in the structural model. Furthermore, based on table 4.5, the test results of construct reliability based on discriminant validity can be done in two ways, namely (1) by looking at the AVE value to show the size of the indicator variance contained by the construct and (2) looking at the HTMT cross-loading value. The first discriminant validity criterion, where the AVE value limit is 0.5. The results in the Table below showed all the Squared Root of AVE's and Correlation values are >0.5. In addition, the value of the square root of AVE (shown in Bold) shows a high discriminant validity value and can be accepted because the AVE square root value of all variable constructs is above the correlation value among other construct values. The discriminant validity is show in Table 2.

Table 2. Discriminant Validity (Fornell-Larcker Criterion)

Construct	AA	AD	AF	AC	EJ	PBC	PA	PP	SS	SN	TC
	Squared Root of AVE's and Correlation										
Action aversion	0.854										
Action doubt	0.535	0.830									
Action fear	0.573	0.748	0.843								
Association and connection	0.548	0.474	0.475	0.910							
Evaluation and judgment	0.606	0.662	0.642	0.625	0.746						
Perceived Behavioural Control	0.563	0.569	0.581	0.447	0.609	0.828					
Personal Attitude	0.597	0.556	0.560	0.458	0.574	0.583	0.769				
Proactive Personality	0.537	0.560	0.576	0.451	0.616	0.671	0.553	0.684			
Scanning and search	0.586	0.600	0.601	0.584	0.683	0.642	0.591	0.779	0.735		
Subjective Norm	0.555	0.575	0.575	0.426	0.607	0.793	0.574	0.678	0.638	0.850	
Trait Competitiveness	0.579	0.522	0.503	0.528	0.591	0.706	0.496	0.672	0.615	0.647	0.868

Structural Model

The coefficient of determination (R^2) is a value that measures the prediction accuracy of the model and is calculated as the squared correlation between certain endogenous constructs, or the dependent variable, the actual value, and the prediction value. The value of R2 ranges between 0 and 1, where a higher value indicates a higher level of prediction accuracy. R^2 value of 0.75 is considered substantial, while 0.50 is moderate, and 0.25 is weak. The Table below shows the results of R2; Entrepreneurial Intention (0.646=substantial) and Entrepreneurial Behaviour (0.581=Medium). It can be said that the data of this study are at a good level of predictive accuracy. The result is show in Table 3.

Table 3. R^2 Value & Assessing Predictive Relevance Q2

Endogen Variable	R^2	Category	Q^2	Predictive Relevance
Entrepreneurial Intention	0.646	Substantial	0.301	Moderate
Entrepreneurial Behaviour	0.581	Moderate	0.323	Moderate

The last stage of presenting the research model data was carried out by involving the relevant predictive model through the Stone-Geisser Q2 value. When the model shows the relevant predictive model, it is accurate to predict the indicator data points in the model. In the structural model, a Q2 value greater than 0 for the reflective construct indicates that the predictive relevance of the model for the construct is achieved (0.02 small; 0.15 medium 0.35 large). The procedure for obtaining Q2 was carried out through a blindfolding procedure using SmartPLS 3.0. The results of the relevant predictive models are reported in the Table above. From the Table, it can be seen that all Q2 values are above 0. The results of Q2 support the relevant predictive models for two endogenous constructs, namely Entrepreneurial Intention and Entrepreneurial Behaviour. Table 4 informs the results of the Path Coefficients and effect size values (Direct Influence) and Significance values (P-Value).

Table 4. Effect Size (Bootstrapping Results)

Hypothesis	Path	Path Coefficient (β)	t Value	p Value	Decision
H1	Trait Competitiveness -> Entrepreneurial Intention	0.370	18.917	0.000	Accepted
H2	Entrepreneurial alertness -> Entrepreneurial Intention	0.505	26.675	0.000	Accepted
H3	Moderating Effect 1 -> Entrepreneurial Intention	0.014	1.056	0.291	Rejected
H4	Proactive Personality -> Entrepreneurial Behaviour	0.124	6.285	0.000	Accepted
H5	Entrepreneurial Intention -> Entrepreneurial Behaviour	0.662	39.720	0.000	Accepted

Hypothesis	Path	Path Coefficient (β)	t Value	p Value	Decision
H6	Moderating Effect 2 -> Entrepreneurial Behaviour	0.058	0.981	0.327	Rejected

Base on Table 4 show that out of 6 hypotheses, 4 hypotheses have a significant effect, and the results are accepted (p value <0.05) and 2 hypotheses are not significant and the results are rejected (p value> 0.05. These findings are shown in the Figure 1.

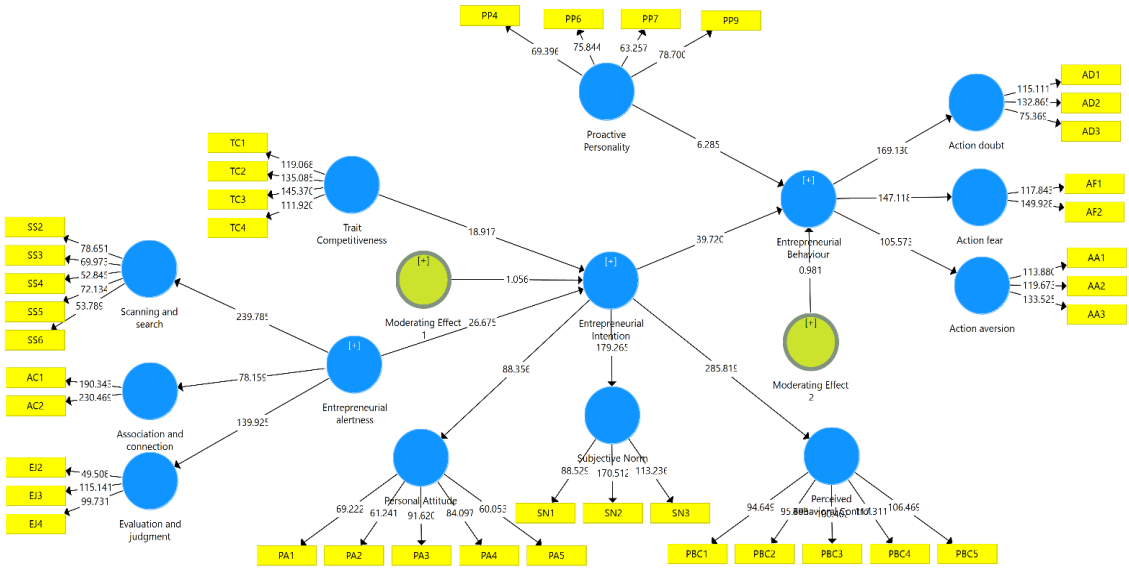

Figure 1. The model and t value

Discussion

Entrepreneurship is a creative effort that is very important because of its impact on job availability, economic efficiency, and innovation (Harsanto, 2020; Isenberg, 2011). Even though it is important, it is surprising that there are very few studies on the determinant factors that affect a student's intention to become entrepreneur especially at Jambi University. In particular, the effects of entrepreneurial attitudes, entrepreneurial competence and creativity are rarely found and tend to be neglected in the existing literature. In addition, previous research reports are very limited. It is rarely found that the research conducted viewed the problem of entrepreneurial intention and its factors from a university perspective.

Jambi University, one of the largest universities on the island of Sumatra is a university that has a long-term vision of becoming "a world-class entrepreneur university." Of course, this vision needs to be supported by activities that promote the achievement of entrepreneurs or entrepreneurship, such as research that can be used as a basis for making decisions or policies related to programs that increase student entrepreneurial activities. In addition, in an effort to fill the limitations of research reports in increasing entrepreneurial activity at Jambi University, the researchers studied the determinant factors that impacted EI in the context of universities in Indonesia that is Jambi University. The researcher proposed a structural equation modelling technique that can statistically determine the effect of each indicator which form a fit or complete model.

Entrepreneurial Intention (EI) or a person's intention to perform entrepreneurial behaviour can be influenced by several factors, such as needs, values, desires, habits, and beliefs. The research findings for the EI construct found that of the four dimensions that

explain EI, namely Personal Attitude (PA), Subjective Norm (SN), Perceived Behavioural Control (PBC), Perceived Entrepreneurial Intention (PEI). Of the four dimensions, empirically the Perceived Behavioural Control dimension or the perception of controlling behaviour has the greatest effect or contributes to explaining one's intentions in entrepreneurship.

The findings of this study are specifically supported by previous researcher who asserts that the construct of cognitive variables that affect intention is called a motivating factor (Ajzen, 1991). Favourable factors will increase one's intention. Obviously, situational factors also influence entrepreneurial intentions. These external factors influence one's attitude towards entrepreneurship the construct of variables such as time constraints, task difficulty, and the influence of others in a supportive social environment can be an example of a person's situational factors in entrepreneurial intentions. The findings of this study supporting by the other researcher, which empirically shows that intention successfully predicts behaviour and attitude successfully predicts intention (Aithal & Aithal, 2019). In order to introduce entrepreneurship, it is important to investigate the factors that can influence individual intentions towards new business establishment, especially among students, such as entrepreneurial attitude, entrepreneurial ability, and creativity.

There are four practical implications of this research. First, there is increasing call for finding ways to encourage individuals to move from simply owning an EI to taking active steps to start a new business (Shirokova et al., 2016; Van Gelderen et al., 2015). One approach that can be taken is to maintain and develop the nature of PP among potential entrepreneurs because individuals with high PP are more likely to act according to their intentions. Previous evidence suggests that proactive behaviour can be significantly enhanced through training (Kirby et al., 2002). Therefore, it is important to examine how a similar training program can be used to increase the proactiveness of prospective young entrepreneurs, namely students. Second, since some individuals with high levels of EI are known to deliberately delay taking entrepreneurial action (Kautonen et al., 2015). It is possible that encouraging them to increase their PP levels could accelerate their desire to take action. Third, intention is an important step in the business creation process. Thus, increasing EI is also important in shaping the next EB. This study shows that EA plays an important role in shaping EI. In addition, the association was stronger for individuals with high levels of TC.

This study has two main limitations, which also provide avenues for future research. First, this study only focuses on a sample of students. While this group represents a significant part of the entrepreneurial population, these findings may not apply to other population groups. Second, although EB is measured by a subjective scale that has been validated in previous studies (Kautonen et al., 2015), findings may differ if EB is measured by instrument using objective measures. Thus, future research can use different samples and measure EB objectively to increase the external validity of the proposed model.

4. CONCLUSION

These results have some theoretical and practical implications for managers. From a theoretical point of view, this study supports that Proactive personality significantly influences entrepreneurial intentions with a supportive framework for explaining entrepreneurial intentions. From a practical point of view, and seeing that college alumni, especially Jambi University, have low entrepreneurial abilities, students still view being employees, especially civil servants, is the main goal after graduating from college. In addition, the family background of students who become entrepreneurs is relatively low, which is only 11% in the findings of this study. Therefore, it is possible to rely on individual entrepreneurial qualities to promote entrepreneurship and stimulate students' desire for

entrepreneurial careers. Educators, in this case lecturers, may be able to strengthen the psychological qualities of openness, awareness, extraversion, competition, and risk tolerance to improve students' entrepreneurial orientation. Policy makers such as the Rectorate and Dean can create educational programs that offer students the right support and challenges to develop these personalities.

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