

## CRITICAL SUCCESS FACTORS FOR ENTREPRENEURIAL INTENTION AMONG FEMALE UNDERGRADUATES

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### ABSTRACT

There is a growing need for entrepreneurs because they contribute towards economic development by converting ideas into profitable ventures. The entrepreneurial activities are incubators of innovation and employment opportunities. However, there is a dearth of studies that examined the factors that influence the entrepreneurial intention among female undergraduates in a developing country. This paper aimed to focus on the future context of entrepreneurship by examining the impact of risk-taking propensity, proactiveness and innovativeness on the entrepreneurial intention of female university students. This research was a quantitative study among female undergraduates in Bandung, Indonesia, as the target population. A survey strategy was used to collect primary data. Based on convenience sampling, a self-administered questionnaire was used to collect data from 110. The findings found that proactiveness and innovativeness were both important factors. However, risk-taking did not have a significant relationship with entrepreneurial intention. The study results are expected to provide a better understanding to policymakers and educators. To the best of the author's knowledge, this study is the first to examine the determinants of entrepreneurial intention among female undergraduates in a developing country.

**Keywords:** *Entrepreneurial Intention, Risk-taking, Proactiveness, Innovativeness, Entrepreneurship*

### 1.0 Introduction

The current population of Indonesia is 277,784,425. Indonesia is a sovereign archipelago in Southeast Asia and the fourth most populous country on earth. According to official data from the World Bank, the Gross Domestic Product (GDP) in Indonesia was worth 1058.42 billion U.S. dollars in 2020. The GDP value of Indonesia represents 0.94 per cent of the world economy (Trading economics, 2021). Regarding gender distribution, 49.7% of Indonesia's population is female, while 50.3% of its population is male (Indonesia Population, 2021). 49.7% of Indonesia's population is female, while 50.3% of its population is male. The

unemployment rate in Indonesia increased to 6.26 per cent in the first quarter of 2021 from 4.94 per cent in the same quarter a year earlier, amid the economic downturn caused by the coronavirus crisis. The number of unemployed persons surged from 1.82 million to 8.75 million (Trading Economics, 2021).

Unemployment among youths is a global problem and affects nations at all stages of development. Unemployment among youths brings negative consequences for today's generation and businesses and governments (Bedürftig, Hieronimus, and Klier, 2015). The unemployment rate in Indonesia is high at 6.26%, and a large percentage of the jobseekers were graduates from various disciplines. This issue was highlighted by the President of the Republic of Indonesia during the Indonesia Young Entrepreneur Association Summit (Cabinet Secretariat of the Republic of Indonesia, 2016)). The growing number of unemployed graduates was highlighted. There is also a low number of young entrepreneurs in Indonesia. Compared to other countries, the number of young entrepreneurs in Indonesia is only 1.6 per cent of the total population. In other ASEAN countries, the number of young entrepreneurs is as high as 4 per cent (Cabinet Secretariat of the Republic of Indonesia (2016). Studies have also revealed that entrepreneurship can be a solution to the increase in unemployment among graduates (Dev and Mahajan, 2003). However, entrepreneurship may not be the first career choice among young individuals. Only a handful of individuals venture into setting up their own business (Bosma et al., 2008; Teo and Poon, 1994). This justifies research to find out the factors that can illuminate the entrepreneurial intention among undergraduates in Indonesia.

The entrepreneurial intention of orientation has been one of the focal points of scholars and researchers. Studies have identified several factors that contribute towards the entrepreneurial intention of students, including graduates. Entrepreneur related characteristics such as innovativeness, autonomy, and adventurousness (Lassen et al., 2006; Park, 2017). Some of the key factors that should promote entrepreneurial intention, as suggested by Park (2017), encompass innovation, enterprise and risk-taking) which should be considered when promoting entrepreneurial intention Innovation or innovativeness has been identified as one of the key factors (Kang, 2011; Lee 1999). Another factor is risk-taking behaviour during times of uncertainty (Jung, 2015; Bin and Park, 2002). People with a higher level of risk-taking orientation are much faster in decision making to leverage opportunities (Bin and Park, 2002). Proactiveness is another determinant of entrepreneurial inclination, and by being proactive, entrepreneurs can introduce new products or penetrate new markets (Kim, 2015). Researchers and scholars have also emphasised the importance of networks or networking (Choi, 2010). Through external networks, entrepreneurs can improve their performance. This shows that a myriad of factors contributes to entrepreneurial intention, and it is not clear which are the most prominent factors.

It is known that entrepreneurship contributes to the country's economy and provides employment opportunities to curb unemployment. It is noted that more women are joining the workforce today. However, there is a dearth of studies on the determinants of entrepreneurial intention among females in a developing country. A gap exists in the current body of knowledge that does not provide sufficient literature on the determinants of entrepreneurial intention among female graduates. Based on past studies, several antecedents of entrepreneurial intention, but the results from past studies have been inconsistent. Past studies have not clearly defined the critical determinants of entrepreneurial intention. Studies have also ignored the entrepreneurial intention among female undergraduates. Therefore, to fill in the gap identified, this study will empirically examine the impact of risk-taking, proactiveness and innovativeness on the entrepreneurial intention of female undergraduates. The results of this

study will provide more insights into entrepreneurial intention among female undergraduates. From the practical perspective, the results of the study are expected to provide a better understanding to policymakers and educators.

## **2.0 Literature Review**

### **2.1 Entrepreneurial Intention**

There are different views and definitions of entrepreneurship and entrepreneurial intention. Entrepreneurship is generally referred to as a process taken by a person to discover and the production of goods and services in future (Baron, 2007; Uhlaner & Lukes, 2010). The formulation of entrepreneurial intention is considered as one of the stages in the entrepreneurial process (Baron, 2007). Shane and Venkataraman (2000) added that entrepreneurial behaviour could be referred to as the discovery, exploitation, and exploitation of an opportunity by a particular person. The antecedent of a person's entrepreneurial behaviour can be the entrepreneurial intention. Thompson (2009) further added that entrepreneurial intention could be a person's self-acknowledged feeling that he or she has an intention to venture into a new business. Entrepreneurial intention can be supported by the Theory of Planned Behaviour (Ajzen, 1991). Intention explains the behaviour of a person, and it is an indication of the amount of effort that a person will put in to pursue a particular entrepreneurial behaviour (Liñán 2004).

### **2.2 Relationship between Risk-Taking and Entrepreneurial Intention**

Results revealed in past studies provided support to the characterisation of entrepreneurs who are willing to take the risk (Ozaralli and Rivenburgh, 2016; Gurel, Altinay, and Daniele, 2010; Hao Zhao, Seibert, and Lumpkin, 2009). A study by Ozaralli and Rivenburgh (2016), with a sample of 589 students, revealed a positive and significant relationship between personality attributes of risk-taking and entrepreneurial intention. Another study on the relationship between the personality attribute of risk-taking and entrepreneurial intention revealed that the personality trait related to risk-taking had the highest effect on intention (Hao Zhao, Seibert and Lumpkin, 2009). Similarly, another study with a sample of 409 students revealed that risk-taking propensity was significantly related to entrepreneurial intention. Douglas & Shepherd (2002) further explained that the stronger the attitude towards risk, the higher will be the entrepreneurial intention. This was proven in studies that indicated that entrepreneurially inclined students scores in risk-taking were much higher than the students who were not entrepreneurially inclined. Another study by Yurtkoru, Acar, and Teraman (2014) segregated willingness to take risk into three categories: risk lover, risk-free, and risk avoidance. The study results revealed that only one category, being a risk lover, had a significant relationship with entrepreneurial intentions. The results showed that stated university students had lower entrepreneurial intentions than students in private universities. This shows that although propensity to take risk is generally related significantly to entrepreneurial intention, the strength of the relationship can differ between students in public and private universities. Based on the above review, the following hypothesis was empirically tested.

**H1: There is a significant relationship between risk-taking propensity and entrepreneurial intention among female students**

### **2.3 Relationship between Proactiveness and Entrepreneurial Intention**

An individual's proactive personality is his or her ability to handle challenges contributed by situational forces and make changes in the environment. As stated by Bateman and Crant, 1993: 436), this encompasses "challenging the status quo rather than passively adapting to present conditions" Individuals with higher levels of proactive personality can handle environmental

distractions, and they are not easily affected by these environmental disturbances (Fuller, Marler, & Hester, 2006). Past studies relating to proactive personality have focused on its relationship with entrepreneurial intention and found a positive and significant impact on entrepreneurial intention (Prieto, 2011; Kumar and Shukla, 2019). The study by Kumar and Shukla (2019) that had a sample of 484 students revealed that proactive personality was a positive and significant predictor of entrepreneurial intention. Studies have also found that culture and personality influence entrepreneurial intention. A study by Paul, Hermel, and Srivatava (2017) revealed that the culture of a country and a person's proactive personality has a significant and positive effect on entrepreneurial intention. Similarly, another study by Nenneh (2019) that had a sample of 277 respondents found that there was a positive association between proactive personality and entrepreneurial intentions. On the contrary, a study among Brazilian university students by Ferreira, Fernandes, and Ratten (2017), revealed that risk-taking propensity was a significant predictor of entrepreneurial intention, but no support was found for proactiveness. These results from past studies are sometimes contradictory. Based on the above review, the following hypothesis was empirically tested.

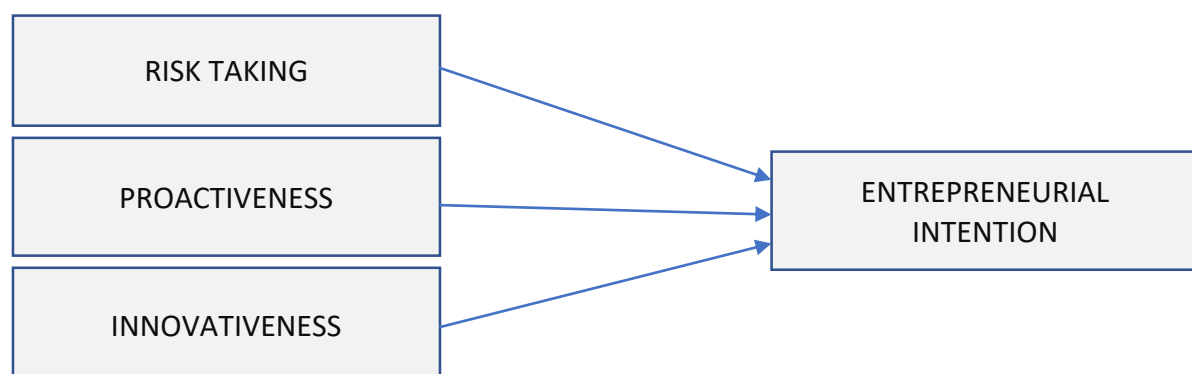
**H2: There is a significant relationship between proactiveness and entrepreneurial intention among female students**

**Relationship between Innovativeness and Entrepreneurial Intentions**

In today's environment, innovativeness is one of the key elements of entrepreneurship. Innovativeness refers to the competence of entrepreneurs to think creatively and leverage opportunities to develop novel and practical ideas, venture into new markets, launch new products and services (Chen 2007; Gupta et al. 2004). Studies have shown that innovation is a key component in launching a new venture (Hisrich et al., 2008). In addition, studies have shown that entrepreneurs possess higher levels of innovative characteristics or behaviour (Gürol and Atsan 2006). Past studies focusing on innovativeness as a predictor of entrepreneurial intention have generally found a positive and significant relationship between an individual's innovativeness and entrepreneurial intention (Law, and Breznik, 2017; Wathanakom, Khlaisang and Songkram, 2020). Law and Breznik (2017) study involving a sample of 998 students revealed that learning motivation strongly correlates with innovativeness. Subsequently, innovativeness affects entrepreneurship intention. Similarly, another study with a sample of 589 students by Ozaralli and Rivenburgh (2016) found that the personality trait of innovativeness was positively and significantly related to entrepreneurial intention. The above review indicates that innovativeness is an important contributor to entrepreneurial intention.

**H3: There is a significant relationship between innovativeness and entrepreneurial intention among female students**

**Figure 1: Research Framework**



### **3.0 Methodology**

#### **3.1 Research Design**

Based on positivism philosophy and deductive approach, a quantitative method was chosen for this research to collect measurable data that will be analysed (Saunders et al., 2016). A survey technique was used to gather large amounts of numerical data in this study. The primary goal of the survey study was to collect information data from the target population. The target population were female undergraduates. A self-reporting was used to get the responses from the sampling elements. Convenience sampling was more appropriate for collecting the data as a sampling frame was unavailable. Throughout this study, primary data was collected using questionnaires, which is ideal for descriptive or explanatory analysis, allowing the researcher to analyse and explain the relationships between variables, particularly the link between causes and effects. The data analysis was done based on descriptive and inferential statistics that were generated by using the SPSS tool (Saunders et al., 2016).

#### **3.2 Data collection and Instrumentation**

This study chose the self-administered questionnaire due to its ease of use, low cost, and higher anonymity. A survey strategy was used where questionnaires were distributed electronically. The questionnaire was divided into two parts. The first part was to collect demographic information, and the scales used were nominal and ordinal scales. The second part was to collect responses from respondents based on a five-point Likert type scale. Data collected was measured using a 5-point Likert scale as it was suitable for the self-administered survey method (Sekaran & Bougie, 2016). A total of 110 responses were received from the respondents. All questionnaires were good based on preliminary checking, and none was omitted. The questions were adapted based on past studies. The questions were adapted from Liñán and Chen (2009) for entrepreneurial intention. The questions to measure innovativeness, proactiveness and risk-taking were based on Bolton and Lane (2012). The reliability and validity of these three constructs were confirmed in a study by Bell (2019).

#### **3.3 Sampling**

The target population were Indonesian female undergraduates from Bandung universities. Convenience sampling technique and snowball sampling technique was used. A qualifying question was included to ensure the respondent was qualified to participate in this study. The sample size was based on the formula by Green (1991) that is  $N \geq 50 + 8m$ , where “m” is the number of predictors. As per the formula, for three independent variables, the minimum sample size should be more than  $50 + 8(3) = 74$ . Therefore, the calculated minimum sample size for this research is 74 respondents. However, to get better results, the target sample size of this study was 100 respondents.

#### **3.4 Data Processing**

Sekaran and Bougie (2016) stated that after collecting data from the population sample, the data is edited, transformed and analysed. Several preliminary steps were completed before the data could be analysed. This is done to ensure that the data is correct and appropriate before proceeding with the analysis. Data coding is the process of assigning a code to each variable of the study. The data was then entered into the database using SPSS Data Editor. Thereafter, descriptive and inferential statistics were generated to test the feel of data, the goodness of data and hypothesis testing (Sekaran and Bougie, 2016).

## 4.0 Research Findings and Results

### 4.1 Respondents' Characteristics

The first part of the survey questionnaire distributed by researchers was regarding their demographic characteristics. This included questions on the respondent's university type, age group, gender, and education level. In this study, there were 110 female respondents. Most respondents studied at public universities with 59% (59 respondents), while 51 respondents studied in private universities. In terms of age group, a majority of respondents were between 18 and 25 years old (107 respondents). The rest were above 25 years old. Most were singles and pursuing their undergraduate degrees.

### 4.2 Data Reliability Testing

Internal consistency or reliability of data was based on the value of Cronbach, which measures the consistency of data distribution. Pallant (2011) stated that the Cronbach alpha values range between 0 and 1, and values closer to 1 indicate higher levels of data reliability. The generally accepted rule of thumb for good reliability is that the score should exceed 0.7 (Pallant, 2011). Hulin, Netemeyer and Cudeck (2001) stated that a generally accepted rule is that the Cronbach alpha value of 0.6-0.7 indicates an acceptable level of reliability. Table 1 shows that the Cronbach alpha value for all the variables in this study was above 0.7. These results indicated that the data was trustworthy, and the reliability of data distribution in this study was good.

**Table 1: Reliability Testing – Cronbach Alpha Values**

Variables	Cronbach's Alpha
Entrepreneurial Intention	0.846
Risk-Taking	0.576
Proactiveness	0.755
Innovativeness	0.775

### 4.3 Normality Test and Descriptive Statistics

The skewness and kurtosis measures were generated using the SPSS tool and were used to check the normality of data distribution in this study. The skewness of data shows the amount and direction of skew, whether positive or negative. Kurtosis of data indicates the peakedness or the height and sharpness of the central peak relative to that of a standard bell curve. Values of skewness and kurtosis between -2 and 2 indicate normality of data distribution (George and Mallery, 2010). In this study, the values for skewness and kurtosis were within the range specified by George and Mallery (2010). Therefore, it was deemed that the normality of data distribution was not violated.

**Table 2: Normality Statistics (Skewness and Kurtosis)**

	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Entrepreneurial Intention	-.445	.230	.204	.457
Risk Taking	-.005	.230	-.350	.457
Proactiveness	.018	.230	.212	.457
Innovativeness	.701	.230	.230	.457

The strength of correlation between two continuous variables was tested based on the Pearson Correlation test. The Pearson product-moment correlation coefficient value shows the strength of the relationship between two variables (Pallant, 2011). The Pearson Correlation values are between -1 and +1, and values closer to -1 or 1 indicates a stronger relationship between the

variables. The results obtained in this study revealed that all the independent variables, namely risk-taking, proactiveness and innovativeness, had a positive and significant ( $p < 0.05$ ) correlation with the entrepreneurial intention, which was the dependent variable. The predictor innovativeness had the highest correlation with entrepreneurial intention ( $r = 0.456$  and  $p < 0.05$ ). The next strongest correlation was between proactiveness and entrepreneurial intention ( $r = 0.445$  and  $p < 0.05$ ). The correlation between risk-taking and entrepreneurial intention was the lowest ( $r = 0.349$  and  $p < 0.05$ ).

**Table 3: Pearson Correlation Coefficients**

		Risk Taking	Proactiveness	Innovativeness	Entrepreneurial Intention
Risk Taking	Pearson Correlation	1			
	Sig. (2-tailed)				
Proactiveness	Pearson Correlation	.412**	1		
	Sig. (2-tailed)	.000			
Innovativeness	Pearson Correlation	.408**	.523**	1	
	Sig. (2-tailed)	.000	.000		
Entrepreneurial Intention	Pearson Correlation	.349**	.445**	.456**	1
	Sig. (2-tailed)	.000	.000	.000	

#### 4.4 Multiple Regression Analysis

In this study, multiple regression was used to predict the value of the dependent variable that is the entrepreneurial intention, based on the three continuous variables, namely risk-taking, proactiveness and innovativeness. In addition, multiple regression was also used to determine the overall fit of the model (Pallant, 2011). The results showed how much the variation in entrepreneurial intention was explained by risk-taking, proactiveness and innovativeness.

The model summary is shown in Table 4 below. The value of the multiple correlation coefficient 'r' is .530. The R-value is one criterion to show the quality of the prediction. The 'R Square' value indicates the proportion of variation in the entrepreneurial intention that is explained by the three predictors, namely risk-taking, proactiveness and innovativeness. In this study, the 'R square' value is .291 and is considered low. However, the interpretation of the R square has been challenged by researchers (Moksony, 1999). Research has stated that the value of R square is irrelevant (Moksony, 1999). The 'r-value' of .291 indicates the variance that occurred in the dependant variable, namely intention to purchase (Field, 2009). In addition, the analysis of variance (ANOVA) showed that F-value is 13.806 and significant. Therefore, it can be construed that the independent variables in the model had a significant effect on the dependant variable, namely entrepreneurial intention (Field, 2009). In this study, it was shown that the regression model was a good fit for the data.

**Table 4: Model Summary/Fit**

Item/Measure	Value
Multiple R	.530
R-square	.291
Adjusted R square	.271
Standard error of estimate	.72220
F Value	13.806
Sig	.000

Table 5 shows the standardised coefficient ( $\beta$ ), the  $t$ -value ( $t$ ) and the corresponding  $p$ -value (Sig). For the first hypothesis, the Beta value for risk-taking is  $\beta=0.137$ . The  $t$ -value is 1.467 ( $<1.96$ ) and the  $p$ -value is not significant ( $p>0.05$ ). This result indicates that hypothesis H1 is not supported. For the second hypothesis, the Beta value for proactiveness is  $\beta=0.247$ . The  $t$ -value is 2.474 ( $>1.96$ ), and the  $p$ -value is significant ( $p<0.05$ ). This indicates that hypothesis H2 is not supported. For the first hypothesis, the Beta value for innovativeness is  $\beta=0.270$ . The  $t$ -value is 2.711 ( $>1.96$ ), and the  $p$ -value is significant ( $p,0.05$ ). This value indicates that hypothesis H3 is not supported. Overall, the regression analysis shows that proactiveness and innovativeness are significant predictors of entrepreneurial intention among undergraduates in Indonesia. However, the impact of risk-taking is not significant.

**Table 5: Coefficients**

Model		Unstandardised		Standardised Coeff.		
		B	Std. Error	Beta	t-value	Sig.
1	(Constant)	.821	.667		1.230	.221
	Risk Taking	.197	.134	.137	1.467	.145
	Proactiveness	.189	.076	.247	2.474	.015
	Innovativeness	.301	.111	.270	2.711	.008

## 5.0 Discussion

The first hypothesis was to examine the relationship between risk-taking and entrepreneurial intention among female undergraduates in Bandung universities. The findings from this study indicated that there is a positive but weak correlation between risk-taking and entrepreneurial intention among female undergraduates in Indonesia. However, the impact, as shown in the results of the multiple regression analysis, was not significant. The findings deviated from the results of other studies (Ozaralli and Rivenburgh, 2016; Gurel, Altinay, and Daniele, 2010; Hao Zhao, Seibert, and Lumpkin, 2009). The deviation of the results of this study could be due to the lower propensity or likelihood to take a risk by females compared to males. Past studies have shown that gender has an impact on risk-taking. The results of the Forlani (2013) study revealed that those females have less confidence in their ability to take risky decisions, and males are more willing to take risks.

Another study by Kisker and Ernst (2015) added that undergraduates who have an interest in entrepreneurship tend to think again about starting a business for several reasons that include fear of taking risks, fear of failure, fear of big responsibilities and fear of challenges that will encounter. Undergraduates were found to avoid high risk, and they prefer to be in a safe zone by looking for jobs as employees and working for others. Another reason could be that this study did not look at the different categories of risk. Willingness to take risks into three categories, namely risk lover, risk-free and risk avoidance and each category of risk can have different results. For instance, the study by Yurtkoru, Acar, and Teraman (2014) revealed that only one category that is being a risk lover had a significant relationship with entrepreneurial intentions.

The second hypothesis was to examine the relationship between proactiveness and entrepreneurial intention among female undergraduates in Bandung universities. The findings from this study indicated that there was a positive and significant relationship between proactiveness and entrepreneurial intention among female undergraduates in Indonesia. The impact, as shown in the results of the multiple regression analysis, was significant. The findings



are in line with the results of other studies (Prieto, 2011; Kumar and Shukla, 2019). For instance, the study by Kumar and Shukla (2019) that had a sample of 484 students revealed that proactive personality was a positive and significant predictor of entrepreneurial intention. Therefore, based on the results of this study, female undergraduates need a proactive personality to handle challenges contributed by situational forces and make changes in the environment. The female undergraduates with proactive personalities can handle the environmental distractions.

The third hypothesis examined the relationship between innovativeness and entrepreneurial intention among female undergraduates in Bandung universities. The findings from this study indicated that there was a positive and significant relationship between innovativeness and entrepreneurial intention among female undergraduates in Indonesia. The impact, as shown in the results of the multiple regression analysis, was significant. The findings are in line with the results of other studies (Law, and Breznik, 2017; Wathanakom, Khlaisang and Songkram, 2020). For instance, Law and Breznik (2017) study involving a sample of 998 students revealed that learning motivation strongly correlates with innovativeness that subsequently affects entrepreneurship intention. Based on the results of this study, innovativeness among female undergraduates leads them to think creatively and leverage opportunities to develop novel and practical ideas, venture into new markets and launch new products and services.

### **5.1 Implications of the Study**

This study revealed the positive and significant impact of proactiveness and innovativeness towards the entrepreneurial intentions of female undergraduates in Indonesia. In addition, the insignificant role of risk-taking. Innovativeness was the strongest predictor of entrepreneurial intention among female undergraduates in Indonesia. The study results will be useful for today's generation, especially female undergraduates, educational institutions, businesses, and governments that face tough labour markets and the consequences of unemployment. To improve entrepreneurial intention and decrease unemployment levels, employers, government agencies, and education intuitions should build a partnership to guide undergraduates into working life, including becoming entrepreneurs. Based on the results of this study, the focus should be placed on enhancing the innovativeness and proactiveness capabilities of undergraduates. These joint efforts are expected to increase undergraduates' knowledge of the working world and entrepreneurship. In addition to the practical implications, there are theoretical and academic implications. The gap in current knowledge was identified in this study. As most past studies did not cover female undergraduates in a developing country, the results of this study added new insights to the current body of knowledge. A notable finding was the insignificant role of risk-taking among female undergraduates and the positive impact of proactiveness and innovativeness. To the researcher's knowledge, this study was the first of its kind, and future academicians can extend or replicate this study in other populations.

### **5.2 Limitations of the Study**

This study examined the effect of risk-taking, proactiveness and innovativeness on entrepreneurial intention amongst female undergraduates in Bandung universities. However, there are other factors such as educational and structural supports provided by educational institutions and government to improve entrepreneurial intention and generate future entrepreneurs. This study did not examine the sub-dimensions of constructs, namely risk-taking, proactiveness and innovativeness. For instance, there are three subdimensions for risk-taking: risk lover, risk-free, and risk avoidance. Inclusion of the sub-dimensions in future can provide better results. The effect of mediators or moderators were not included in this study.

The inclusion of mediators can provide more insights into the effect of the predictors on purchasing intention. Future studies should include mediators such as self-regulation or entrepreneurial behavioural control.

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