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Entrepreneurial Performance: Lesson Learnt of Indonesia

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ABSTRACT

This research had a purpose to seek an impact of entrepreneurial mindset on innovativeness, risk taking, competitive aggressiveness, autonomy and proactiveness of bachelor students of management program of public universities in Surabaya, Indonesia and to seek their impact on entrepreneurial performance of the students. Entrepreneurship had been popular in university all over the world including Indonesia. However, the entrepreneurial performance of Indonesian students had not increased yet. How to increase it? This study explored the impact of entrepreneurial mindset on innovativeness, risk taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance of the students. This research was explanatory quantitative for the analyzing technique. It gathered data of 364 respondents, which were Indonesian bachelor students of management program of public universities. The results showed that entrepreneurial mindset had a significant impact to innovativeness, risk taking, competitive aggressiveness, autonomy, and proactiveness which further had enhanced significant positive impact to entrepreneurial performance of the students.

Key words:

Autonomy, competitive aggressiveness, innovativeness, proactiveness, risk taking

ABSTRAK

Penelitian ini bertujuan untuk mengetahui dampak pola pikir kewirausahaan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian dan daya proaksi mahasiswa program sarjana manajemen perguruan tinggi negeri di Surabaya, Indonesia dan mencari dampaknya pada kinerja kewirausahaan mahasiswa. Kewirausahaan telah populer di berbagai universitas di seluruh dunia termasuk Indonesia. Namun demikian, kinerja kewirausahaan mahasiswa Indonesia belum meningkat. Bagaimana cara meningkatkannya? Studi ini menggali dampak pola pikir kewirausahaan terhadap inovasi, pengambilan risiko, agresivitas kompetitif, otonomi, dan daya proaksi terhadap kinerja kewirausahaan mahasiswa. Penelitian ini ialah kuantitatif eksplanatif untuk teknik analisisnya. Penelitian ini mengumpulkan data dari 364 responden, yang merupakan mahasiswa sarjana manajemen program of public universities. Hasil penelitian menunjukkan bahwa pola pikir kewirausahaan memiliki pengaruh yang signifikan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian, dan daya proaktif yang selanjutnya meningkatkan kinerja kewirausahaan mahasiswa secara positif signifikan.

1. INTRODUCTION

Entrepreneurship is an interesting field as a career. World Economic Forum concludes that over a third of Indonesian young people want to be entrepreneurs (Wood, 2019). On the other hand, the choice as an entrepreneur as career stood at 26% from 20% in 2009 (GMAC, 2014). It adds what shown by the survey against 37,000 students from 14 countries by the International Survey of Collegiate Entrepreneurship in 2006, states that 15.4% students choose entrepreneur as a career within the first five years after graduation and for the next five years the number increased to 50.1% (Szerb & Imreh, 2007). In this study, we draw some lessons from Indonesia's experience with the focus of the public universities students. It offers an interesting case study due to the fact that growth of entrepreneurship in the country in general and universities students in particular do not tally to the entrepreneurial performance. Entrepreneurship which encouraged in university level education by various countries in the world and also in Indonesia, apparently has not been followed by an increase in entrepreneurial performance of Indonesia's student.

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Gustiawan et al. (2014) indicated that the entrepreneur in Indonesia was still small although the development of entrepreneurship is critical to the country. They stated that 2% was an ideal figure for entrepreneurs in any country from the total population. In the case of Indonesia, 400,000 entrepreneurs were identified of which about 0.08% were low comparatively to America (12%), Singapore (7%) and Malaysia (6%). From policy perspectives, entrepreneurship help to reduce unemployment while the ability of entrepreneurs needs to be developed and enhance particularly among the young people.

Motivated by the importance of entrepreneurial performance, this article set to explores the impact of entrepreneurial mindset, innovativeness, risk taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance of undergraduate management students of public universities. The concept of entrepreneurial orientations which contains some variables such as innovativeness, risk taking, competitive aggressiveness, autonomy, and proactiveness is adopted from Miller (1983), Lumpkin and Dess (2001), and Rauch et al. (2009) who found that these variables have positive and significant relationships towards entrepreneurial performance. What happen with students of Indonesia?

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Entrepreneurship starts from mindset. Dhliwayo and Van Vuuren (2011) stated that entrepreneurial mindset was a way of thinking about business and the opportunity to benefit from the uncertain circumstances. According to Valerio et al. (2014) entrepreneurial mindset referred to socio-emotional abilities and overall awareness towards entrepreneurship which related with entrepreneurial motivation and the success that would come as an entrepreneur. Indicators used to describe the entrepreneurial mindset in this study are the ability to identify business opportunities and the amount of thinking to entrepreneurship (Solesvik et al., 2013).

Innovativeness can be described as the ability to innovate. There are several definitions about innovativeness. According to the West and Anderson (1996), innovativeness could be defined as the ability to create effective implementation of new processes and products for the organization and was designed to give you an advantage for the organization and stakeholders in it (in Baregheh et al., 2009). Galunic and Rodan (1998) claimed that innovativeness was the ability to produce continuous innovation (in Quintane et al., 2011). Rogers (2003) defined innovativeness as how fast a person or organization in adopting innovations compared against another person or organization (in Yildiz et al., 2014). There are three indicators of Innovativeness, which are 1) Openness towards new things. Hurt et al. (1977) described innovativeness as a willingness to try new things (in Goldsmith & Foxall, 2003); 2) The level of creativity. Kirton (1976) declared that innovative people will search for and combine various information, examines problems they experienced, and produces a thought or idea that is unconventional (in Lee, 2008); and 3) The ability to innovate. The power of innovation is seen as a further phase of creativity, a comparison between the study in quickly manner with the embodiment of an innovation practices, particularly practices that are socio-organized. The power of innovation is a person's ability to understand socially, accept, estimates, disseminate, implement, and use innovation (Mikhailova, 2015).

Byrnes (1998) stated that in some literature about development, risk taking was defined as involvement in a variety of behaviors that are associated with some possibilities against unwanted results (in Boyer, 2006). According to Hyrzky and Tunnanen (undated) the definition of risk taking was a process of decision making and act without enough knowledge about the results that will be obtained (in Noer et al., 2013). Risk taking according to Wenhong and Liuying (2010) was a tendency to take action against something that's rated as risky. There are several indicators to know Risk taking. These indicators include 1) The courage of facing new things. Sung and Hanna (1996) stated that young entrepreneurs were more willing to take risks. They have the urge to invest in new goods/services and enter into new markets (in Wang & Poutziouris, 2010); and 2) The courage of facing a difficult situation. Brockhaus (1980) declared that the tendency of risk-taking as a possibility to receive profit related to success in certain situations which was required by a person before that person puts himself on the consequences associated with failure, an alternative situation that provides a smaller benefit (in Wenhong & Liuying, 2010).

Competitive aggressiveness is associated with a way to confront the threats and challenges of the external environment (Gamble et al., 2013). Lumpkin and Dess (2001) stated that the competitive aggressiveness was the intensity of the desire to beat your opponent. Noer et al. (2013) stated that the competitive aggressiveness was responsive attitude towards any threat as a form of resistance and effort to win the competition. According to Chen (1996) there are three main indicators of competitive behaviour (in

Stambaugh et al., 2011): 1) Awareness of competitors. Awareness includes the analysis of the strength of the opponent, stalking the opponent's competitive actions, and the dissemination of information about the opponent. Awareness talk about awareness of the condition of your opponent that emerges from the information obtained; 2) Motivation to compete. There are two characteristics of motivation in the company that owns high competitive aggressiveness. The first is beating competitors which crucial for aggressive companies. Other companies might choose other things as references of motivation within the company such as its performance in the past, the internal purpose, and satisfied with the reached a target, but the aggressive companies seek information about the competitor company's performance and compare the performance of the own company with the performance of the competitor company. The second one, namely the position of opponents which put the oneself company in difficult situation as appropriate and necessary steps to improve the performance of oneself; and 3) Capability to compete. The intended capability is the ability to deliver attacks to the opponent and reflect the opponent's attack. Part of this ability is a resource that has existed as the funds resulting from the company's good performance in the past. The company is also aggressively identifying available resources and prioritize the resource to attack while the less aggressive company saw the same resource base. Aggressive companies better use the available resources rather than waiting for the resource to achieve the optimal point to available.

According to Metaal (1992), a definition of autonomy was freedom of choice without depending on other parties (in Van Gelderen & Jansen, 2006). In another study, Brooke (1984) also revealed almost the same definition that autonomy was the degree of freedom of a person without the need for approval from others (in Barnabas and Mekoth, 2010). Feinberg (1989) stated that autonomy had at least four meanings: the capacity to govern ourself, the conditions for setting up ourself, the ideal state to regulate ourself, and authority to rule ourself (in Mitcham, 2005). There are several indicators of autonomy, which are 1) Independent. The ability to do things without being influenced by other people (Van Gelderen & Jansen, 2006); 2) Self-learning. Ryan and Deci (2000) said that someone independent would involve himself to learn on an ongoing basis about himself (in Weinstein et al., 2012); and 3) Determination. The ability to set and decide whether the regulations, targets, and the process that occurs in his business (Van Gelderen & Jansen, 2006).

Crant (1993) defined proactiveness as taking the initiative to improve the circumstances of (in Unsworth & Parker, 2003). According to Wiklund and Shepherd (2005) proactiveness was looking far ahead and have the determination to identify and respond to opportunities (in Wong, 2012). Teece (2000) stated that in the entrepreneurship literatures, proactiveness had definitions as the ability to anticipate and feel a vague signs and act to the needs in the future ahead of existing competitors to gain a competitive advantage (in Sundqvist et al., 2012). Crant (2000) stated that proactiveness could be seen from some behaviors. The behaviors could be used as gauges or indicators for proactiveness: The ability to pick the opportunity quickly; Courage start a change; The desirability of creating favorable conditions.

Van Vuuren (1997) said that entrepreneurial performance was the achievement of a number of entrepreneurial objectives (in Sebikari, 2014). According to Dollinger (2008), entrepreneurial performance was something done by an entrepreneur with high initiative to obtain the goal of entrepreneurship (in Tseng, 2013). Callaghan and Venter (2011) mentioned that entrepreneurial performance was something that emphasizes on achieving something and provide continuous satisfaction. There are several indicators of entrepreneurial performance, which are 1) Need for achievement. McClelland (1961) stated that the need for achievement that was often described as a passion to deliver good performance and gain a feeling of achievement, it is one of the specific character of entrepreneurship and Collins et al. (2004) stated that the need for achievement had positive correlation with corporate success (in Khan et al., 2015). Successful entrepreneurs have high scores in need for achievement (Oosterbeek et al., 2010); 2) The enthusiasm for entrepreneurship. Empirical findings using non economic indicators to measure the performance namely enthusiasm in work, which represents positive aspect that belonging to someone (Leitao & Franco, 2008), and 3) The realization of the thinking to entrepreneurship. Dhliwayo and Van Vuuren (2011) stated that entrepreneurship would ultimately culminated in the creation or realization of entrepreneurial and strategic management plan that would be resulting the best performance.

Earlier research claimed that entrepreneurial mindset affect significantly to innovativeness. Previous research by Herbig et al. (1994) stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (in Zhao, 2005). A statement from Herbig et al. indicated that entrepreneurial mindset affected innovativeness and other research by Slater (1980) stated that

entrepreneurship that were tailored to the market-oriented culture will contribute significantly to the successful innovation (in Ndubisi, 2014; Sutanto et al., 2019). Research by Wang and Zang (2005) stated that entrepreneurship was one of the major areas that were relevant in the human resource and innovation. Based on the statements, it can be formulated as the following hypothesis:

H₁: Entrepreneurial mindset significantly affects innovativeness of students of public universities in Indonesia.

Earlier researches claim that entrepreneurial mindset affect significantly to risk taking. Wenhong and Liuying (2010) stated systems thinking that was owned by the entrepreneur will affect their tendency in the conduct of risk taking. Related with entrepreneur behavior in regard to family business, Zahra (1996) stated that the ownership of an industrial entrepreneur associated with risk taking (in Wang & Poutziouris, 2010). In his research, Segal et al. (2005) stated that an entrepreneur received personal financial risk existing in the ownership of a business but was also directly benefit from the potential success of that business. This indicates that the entrepreneurial mindset has significant influence towards risk taking (Sutanto et al., 2019). On the basis of the statement, it can be formulated as the following hypothesis:

H₂: Entrepreneurial mindset significantly affects risk taking of students of public universities in Indonesia.

Previous researches suggest that entrepreneurial mindset affects significant to competitive aggressiveness. Stevenson's research (1990) cited by Piperopoulos (2012) showed that entrepreneurship was somehow became synonymous with competitive aggressiveness. Through the internal factors that influenced by the entrepreneurial mindset, competitive aggressiveness could be improved. Someone with high competitive aggressiveness would be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better competition. Neneh (2012) and Sutanto et al. (2019) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. On the basis of the statement, it can be formulated as the following hypothesis:

H₃: Entrepreneurial mindset significantly affects competitive aggressiveness of students of public universities in Indonesia.

Research by McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies were not able to detect and/or control such acts. Moreover, Sutanto et al. (2019) found that the entrepreneurial mindset has significant effect on autonomy of college students in Malang City, Indonesia. On the basis of the statement, it can be formulated as the following hypothesis:

H₄: Entrepreneurial mindset significantly affects autonomy of students of public universities in Indonesia.

Mintzberg (1975) said that in his research he found that entrepreneurial companies tend to be more engaged in risk than other companies and more proactive in looking for new opportunities (in Zhang et al., 2014). Moreover, Sutanto et al. (2019) found that the entrepreneurial mindset has significant effect on proactiveness of college students in Malang City, Indonesia. On the basis of the statement, it can be formulated as the following hypothesis:

H₅: Entrepreneurial mindset significantly affects proactiveness of students of public universities in Indonesia.

In their study, Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with the entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, where in the entrepreneurial orientation there were dimensions of innovativeness. It shows that the innovativeness has an impact on performance. Moreover, Khalili et al. (2013) and Sutanto et al. (2019) stated that innovativeness had a significant impact on performance. On the basis of the statement, it can be formulated as the following hypothesis:

H₆: Innovativeness significantly affects entrepreneurial performance of students of public universities in Indonesia.

Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that risk taking was one of the dimensions associated with the entrepreneurial performance. On the other hand, Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, where in the entrepreneurial orientation there were dimensions of risk taking. This suggests that risk taking has an impact on performance. On the basis of the statement, it can be formulated as the following hypothesis:

H₇: Risk taking significantly affects entrepreneurial performance of students of public universities in Indonesia.

Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that competitive aggressiveness was a dimension that was associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, where in the entrepreneurial orientation there was a dimension of the competitive aggressiveness. It shows that competitive aggressiveness has an impact on performance. Moreover, Khalili et al. (2013) mentioned that the competitive aggressiveness equaled as effort to lead in performance and beat your opponent. On the basis of the statement, it can be formulated as the following hypothesis:

H₈: Competitive aggressiveness significantly affects entrepreneurial performance of students of public universities in Indonesia.

In their study, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that autonomy was one of the dimensions that associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, where in the entrepreneurial orientation there was a dimension of autonomy. It shows that the autonomy has an impact on performance. On the basis of the statement, it can be formulated as the following hypothesis:

H₉: Autonomy significantly affects entrepreneurial performance of students of public universities in Indonesia.

Costa and McCrae (1992) stated that openness to experience was the proactive search and an appreciation for the experience itself as well as tolerance over the exploration of new things (in Smith, 2013). On the other hand, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that proactiveness was one dimension that was associated with the entrepreneurial performance. In the study, it was mentioned that openness to experience is one of the factors influencing entrepreneurial performance. It can be concluded that proactiveness give an impact on entrepreneurial performance. Chen et al. (2007) also stated that there was a positive relationship between entrepreneurial orientation taking action against performance, where in the entrepreneurial orientation there was a dimension of proactiveness. It shows that the proactiveness have an impact on performance. On the basis of the statement, it can be formulated as the following hypothesis:

H₁₀: Proactiveness significantly affects entrepreneurial performance of students of public universities in Indonesia.

3. RESEARCH METHOD

The population of this research were the bachelor students of management program of public universities in Surabaya, Indonesia. The total amount of it were 4,036 people as shown in Table 1. This study used a purposive sampling because in this study certain criteria were set out against the respondents in order to get the results in accordance with the research objectives. They were bachelor students of management program of public universities in Indonesia, who were/are ever engaged in entrepreneurship. The 364 samples were taken from the population and determined using the Slovin's formula. The questionnaires were disseminated directly. Screening of respondents to conform with the criteria of the respondents in this research was conducted orally by asking the respondents one by one and strengthened with the existing questions in the questionnaire.

Table 1. Amounts of Bachelor Students of Management Program of Public Universities in Surabaya

University	Amounts of Bachelor Students of Management Program
Airlangga University Surabaya	2,026
Public University of Surabaya	997
Institute of Technology November 10 th Surabaya	109
National Development University of Veteran East Java Surabaya	904
TOTAL AMOUNT	4,036

4. DATA ANALYSIS AND DISCUSSION

Variable Descriptive Analysis

All responses of the respondents to each variable was designed by likert scale from 1 to 5. In order to describe them, it was set categories of variables by this formula as shown on the Table 2.

$$\text{Range} = \frac{\text{Maximum Value} - \text{Minimum Value}}{\text{Amounts of Category}} \quad [1]$$

$$\text{Range} = \frac{5 - 1}{3}$$

$$\text{Range} = 1.33$$

Table 2. Interval of Mean Scores

Range	Remarks
1.00–2.33	Low
2.34–3.67	Medium
3.67–5.00	High

By using the category, then the evaluation of the answers of respondents for each of variables can be described as follows.

Table 3. The Description of Entrepreneurial Mindset

Item	Statement	Mean	Remark
$X_{1.1}$	I want to create my own workplace	3.64	Medium
$X_{1.2}$	I have an aspiration to be an entrepreneur	3.32	Medium
$X_{1.3}$	I tend to seek business opportunities	3.84	High
$X_{1.4}$	I can identify a business opportunity based on the needs of consumers in the market	3.57	Medium
<i>Entrepreneurial Mindset (X_1)</i>		3.59	Medium

Based on Table 3, it can be noted that the average value of the entrepreneurial mindset is 3.59. This means that the entrepreneurial mindset of students of public universities in Surabaya have value "medium". In addition from the table above can also be noted that the highest average value of the indicators is 3.84 which is contained in the statement "I tend to seek business opportunities". The lowest average value of the indicator is 3.32 which is contained on the statement "I have an aspiration to be an entrepreneur". These results indicate that respondents tend to seek business opportunities despite the aspiration to be an entrepreneur is not so great. This can be attributed to the respondent's efforts to earn an income or meet his needs. The difference between the statements "I tend to seek business opportunities" with the other statement also far enough to the point of being in the different category (high, medium, low). This indicates that most respondents tend to think more about how to get a business opportunity with a wide variety of ways no matter whether to become entrepreneurs or not.

Table 4. The Description of Innovativeness

Item	Statement	Mean	Remarks
$Z_{1.1}$	I tend to accept new things around me	3.31	Medium
$Z_{1.2}$	I have an innovative idea that can be implemented	3.50	Medium
$Z_{1.3}$	I have unique ideas that haven't been done before	3.34	Medium
$Z_{1.4}$	I can implement the unique ideas that I have	3.49	Medium
<i>Innovativeness (Z_1)</i>		3.41	Medium

Based on Table 4 can be noted that the average value of the innovativeness is 3.41. This means students' innovativeness in public universities in Surabaya have value "medium". In addition it can also be noted that the highest average value of the indicators is 3.50 which is contained in the statement "I have innovative ideas that can be implemented". The lowest average value of the indicator is 3.31 which is contained on the statement "I am likely to receive new things around me". These results indicate that respondents have different ideas to be applied in his business. The entire statement is in the category of "medium" which means that the innovativeness of the respondents could still be improved further.

Table 5. The Description of Risk Taking

Item	Statement	Mean	Remarks
$Z_{2.1}$	I dare go to an entirely new place for me all alone	3.65	Medium

Z _{2.2}	I have a willingness to try new things	3.66	Medium
Z _{2.3}	I have the courage to take the decision with minimal information	3.77	High
Z _{2.4}	I felt challenged to do things outside of my comfort zone	3.69	High
Z _{2.5}	I have the desire to conquer my greatest fear	3.71	High
<i>Risk Taking (Z₂)</i>		3.69	High

Based on Table 5 can be noted that the average value of the variable risk taking is 3.69. This means risk taking of students of public universities in Surabaya has a value of "high". In addition to that, it can also be noted that the highest average value of the indicator is of 3.77 which is contained on the statement " I have the courage to take the decision with minimal information ". The lowest average value of the indicator is 3.65 which is contained on the statement of " I dare go to an entirely new place for me all alone." These results indicate that respondents taking decisions with minimal information and illustrates that the respondent take their decisions quicker. The results of Table 5 also pointed out that the existence of the respondent towards new things still in the category "Medium" that is similar to variable description analysis of innovativeness. The respondents need to enhance adaptation to new things.

Table 6. The Description of the Competitive Aggressiveness

Item	Statement	Mean	Remarks
Z _{3.1}	I am trying to find information to know the existence of competitors for my business	3.42	Medium
Z _{3.2}	I am trying to find information about my business competitors	3.31	Medium
Z _{3.3}	I have the desire to grow bigger than competitors	3.37	Medium
Z _{3.4}	I made the difference in the ability with competitors as a motivation to compete	3.41	Medium
Z _{3.5}	I have the ability to compete with business competitors	3.35	Medium
Z _{3.6}	I can overtake the position of the competitors who have higher business position	3.37	Medium
<i>Competitive Aggressiveness (Z₃)</i>		3.37	Medium

Based on Table 6 can be noted that the average value of the variable competitive aggressiveness is 3.37. This means competitive aggressiveness of students of public universities in Surabaya has a value of "Medium". In addition to that, it can also be noted that the highest average value of the indicator is 3.42 which is contained on statement " I am trying to find information to know the existence of competitors for my business ". The lowest average value of the indicator is 3.31 which is obtained in statement "I am trying to find information about my business competitors". These results indicate that respondents tend to strive to recognize "the surrounding environment" despite the statement with the highest value remained in the category of "Medium". All Statements about the competitive aggressiveness is in the category of "Medium". This indicates that respondents tend to be less concerned with competitors to compete better. Lack of concern for the competitors to compete can come from ego and the focus of the responde for his own business.

Table 7. The Description of the Autonomy

Item	Statement	Mean	Remarks
Z _{4.1}	I work without relying on others	3.34	Medium
Z _{4.2}	I am working without affected by other people's assumptions	3.49	Medium
Z _{4.3}	I believe with the my ability to resolve the job	3.41	Medium
Z _{4.4}	I work in a field that I've mastered	3.50	Medium
Z _{4.5}	I can specify the time limit to finish the job	3.45	Medium
Z _{4.6}	I can determine the target of achievement for myself	3.55	Medium
<i>Autonomy (Z₅)</i>		3.46	Medium

Based on Table 7 can be noted that the average value of the variable autonomy is 3.46. This means autonomy of students of public universities in Surabaya has a value of "Medium". In addition to that, it can also be noted that the highest average value of the indicator is 3.55 which is contained on the statement "I can

determine the target of achievement for myself". The lowest average value of the indicator is 3.34 which is contained in statement "I work without relying on others". These results show that the determining the targets for oneself is easier to do than the other statements in this point. All statements regarding autonomy is on the category of Medium shows that the autonomy of the respondents need to be improved further especially regarding independence in work.

Table 8. The Description of Proactiveness

Item	Statement	Mean	Remarks
Z _{5.1}	I work with my own initiatives and without being asked	3.64	Medium
Z _{5.2}	I get the job done faster than the given time	3.56	Medium
Z _{5.3}	I prefer to face rather than avoid the problem	3.60	Medium
<i>Proactiveness (Z₅)</i>		3.60	Medium

Based on Table 8 above can be noted that the average value of the proactiveness is 3.60. This means that proactiveness of students of public universities in Surabaya has a value of "Medium". In addition to that, it can also be noted that the highest average value of the indicator is 3.64 which is contained on the statement "I am working with its own initiative without the need to be governed". The lowest average value of the indicator is 3.56 which is contained in statement "I get the job done faster than the given time". These results indicate that respondents may give rise the initiative from themselves to do something. All statements about proactiveness is in the category of "Medium". This indicates that respondents can enhance the initiative further in doing something, especially increasing the tendency to not delay the work and finish it sooner than the given time.

Table 9. The Description of Entrepreneurial Performance

Item	Statement	Mean	Remarks
Y ₁	I am trying to improve my business turnover	3.33	Medium
Y ₂	I am trying to hit the target that I set for my business	3.57	Medium
Y ₃	I have a high spirit in opening my business	3.55	Medium
Y ₄	I am very happy to have a new business	3.46	Medium
Y ₅	I feel excited when finding a new breakthrough for my business	3.50	Medium
Y ₆	I can apply the ideas of my effort into my business	3.59	Medium
<i>Entrepreneurial Performance (Y)</i>		3.50	Medium

Based on Table 9 can be noted that the average value of the variable entrepreneurial performance is 3.50. This means entrepreneurial performance of students of public universities in Surabaya has a value of "Medium". In addition to that, it can also be noted that the highest average value of the indicator is 3.59 which is contained on statement "I can apply the ideas of my effort into my efforts". The lowest average value of the indicator is 3.33 which is contained in statement "I am trying to improve my business turnover". These results indicate that respondents can reasonably implement ideas into their business. All statements regarding entrepreneurial performance are in the category of "Medium". This shows that entrepreneurial performance could still be improved, especially in terms of efforts on increasing turnover which could mean that more respondents need to pay close attention to the financial aspects.

Convergent Validity

Campbell and Fisk stated that convergent validity is agreement between measures of the same construct assessed by different methods (Guo et al., 2008). Convergent validity measurement is carried out using the value of the outer loading. An indicator is said to satisfy the convergent validity if it has the value of outer loading > 0.5 (Muafi & Roostika, 2014). Here are the values of outer loading indicator on each variable dimensions and research.

From Table 10 can be noted that all indicators that make up the research dimensions and variables have value of outer loading > 0.5. Based on these results it can be said that all indicators in this study have met the convergent validity, so that it can be used to do further analysis.

Table 10. Outer Loading Value of Each Indicator

	Autonomy	Competitive Aggressiveness	Entrepreneurial Mindset	Entrepreneurial Performance	Innovativeness	Proactiveness	Risk Taking
A1	0.795914						
A2	0.820101						
A3	0.766828						
A4	0.791210						
A5	0.815840						
A6	0.890515						
CA1		0.826384					
CA2		0.788390					
CA3		0.757231					
CA4		0.770411					
CA5		0.787101					
CA6		0.830609					
EM1			0.847068				
EM2			0.778124				
EM3			0.787740				
EM4			0.889122				
EP1				0.767887			
EP2				0.882425			
EP3				0.782284			
EP4				0.753799			
EP5				0.847037			
EP6				0.907086			
I1					0.833910		
I2					0.838759		
I3					0.828741		
I4					0.844424		
PA1						0.914802	
PA2						0.849710	
PA3						0.818392	
RT1							0.764520
RT2							0.847122
RT3							0.799130
RT4							0.813196
RT5							0.871995

Discriminant Validity

Campbell and Fisk stated that discriminant validity refers to the distinctiveness of different constructs (in Guo et al., 2008). The measurement of discriminant validity is carried out using value of cross loading (Henseler et al., 2015). An indicator is said to satisfy the discriminant validity if the indicator value of cross loading on dimensions or from the variables is the largest when it is compared with other variables or dimensions (Muafi & Roostika, 2014). Table 11 shows the value of cross loading each indicator.

Table 11. Cross Loading Value

	Autonomy	Competitive Aggressiveness	Entrepreneurial Mindset	Entrepreneurial Performance	Innovativeness	Proactiveness	Risk Taking
A1	0.795914	0.546739	0.546110	0.597485	0.517463	0.473654	0.482839
A2	0.820101	0.636932	0.567808	0.674356	0.653024	0.599733	0.474295
A3	0.766828	0.603595	0.533795	0.654978	0.623765	0.550383	0.508391
A4	0.791210	0.553146	0.516577	0.642986	0.536862	0.560568	0.494318
A5	0.815840	0.539068	0.481304	0.600802	0.541449	0.481319	0.464055
A6	0.890515	0.572540	0.504996	0.670452	0.568687	0.550442	0.465893
CA1	0.597251	0.826384	0.413458	0.588599	0.583278	0.449628	0.413075
CA2	0.568863	0.788390	0.515976	0.577079	0.548098	0.447603	0.453065
CA3	0.454781	0.757231	0.427850	0.508528	0.557980	0.397768	0.375940
CA4	0.581470	0.770411	0.429500	0.642631	0.630459	0.460988	0.419129
CA5	0.573336	0.787101	0.484007	0.611462	0.642640	0.434427	0.424887
CA6	0.587625	0.830609	0.503883	0.639402	0.593314	0.568785	0.520743
EM1	0.578223	0.523911	0.847068	0.601549	0.511237	0.576205	0.726098
EM2	0.469106	0.450495	0.778124	0.483172	0.390101	0.592348	0.646298
EM3	0.480377	0.414348	0.787740	0.586079	0.452395	0.664646	0.725289

EM4	0.600080	0.537760	0.889122	0.662212	0.549196	0.611439	0.803558
EP1	0.690985	0.629075	0.592925	0.767887	0.516021	0.581399	0.571018
EP2	0.710318	0.669900	0.667298	0.882425	0.657511	0.714472	0.665061
EP3	0.547919	0.592988	0.543400	0.782284	0.659590	0.595855	0.529508
EP4	0.575115	0.504559	0.465962	0.753799	0.527506	0.613374	0.534530
EP5	0.630194	0.648269	0.610477	0.847037	0.662474	0.616929	0.612048
EP6	0.734086	0.666199	0.615633	0.907086	0.663536	0.671315	0.634993
I1	0.580683	0.619670	0.491576	0.605705	0.833910	0.473129	0.401179
I2	0.612614	0.682626	0.522052	0.676580	0.838759	0.520045	0.490018
I3	0.519908	0.562908	0.421137	0.567804	0.828741	0.404254	0.387576
I4	0.642745	0.625403	0.494055	0.636961	0.844424	0.517415	0.448238
PA1	0.648007	0.535303	0.679524	0.713894	0.503103	0.914802	0.664298
PA2	0.506749	0.577421	0.652216	0.668834	0.532460	0.849710	0.655503
PA3	0.551079	0.379615	0.568926	0.594728	0.450296	0.818392	0.566120
RT1	0.466286	0.414258	0.692612	0.540781	0.372364	0.623311	0.764520
RT2	0.551430	0.533691	0.805747	0.607792	0.494341	0.593115	0.847122
RT3	0.370777	0.351081	0.637335	0.556424	0.358214	0.598761	0.799130
RT4	0.428922	0.377258	0.658522	0.561112	0.361990	0.625084	0.813196
RT5	0.584088	0.549996	0.793162	0.669312	0.516321	0.572851	0.871995

From Table 11 it can be noted that all indicators have the largest cross loading on its dimension or variables compared from other variables and dimensions. Based on these results it can be said that the indicators that are used in this study have had good validity discriminat in drawing up the each dimension or variable. Besides using the value of outer loading, testing validity can also be done by looking at the value of AVE (Henseler et al., 2015). The indicators used are said to be valid if the value of AVE is above 0.5. The value of AVE of indicators in this study can be found in Table 12.

Table 12. AVE Value

Variable	AVE
<i>Entrepreneurial Mindset</i>	0.683518
<i>Innovativeness</i>	0.699696
<i>Risk Taking</i>	0.672476
<i>Competitive Aggressiveness</i>	0.630140
<i>Autonomy</i>	0.663116
<i>Proactiveness</i>	0.742878
<i>Entrepreneurial Performance</i>	0.681464

From the Table 12 it can be noted that the value of AVE that is produced by all reflective indicators are above 0.5. Based on those results it can be said that all reflective indicators in this study meet the requirements of validity. Further examination of the convergent validity is construct reliability by looking at the output of the composite reliability or cronbach's alpha. Constucts can be said to be pretty reliable if the value of the composite reliability or cronbach's alpha is greater than or equal to 0.3 but better if above 0.7 (Muafi & Roostika, 2014). The Table 13 shows the output of the cronbach's alpha. The value of cronbach's alpha from all constructs are very good which are above 0.7. So it can be said that all reflective indicators are reliable or meet the test of reliability.

Table 13. Reliability Test

Variable	Composite Reliability	Cronbach's Alpha
Entrepreneurial Mindset	0.895975	0.844539
Innovativeness	0.903095	0.857253
Risk Taking	0.911069	0.878042
Competitive Aggressiveness	0.910798	0.882372
Autonomy	0.921775	0.897767
Proactiveness	0.896360	0.826114

From the Table 13 it can be noted that the value of cronbach's alpha from all constructs are very good which are above 0.7 so it can be said that all reflective indicators is reliable or meet the test of reliability. In addition the value of the composite reliability which are generated from all reflective constructs is also very good which is above 0.7 so it can be said that all the reflective indicators is reliable or meet the test of

reliability.

R-Square

Table 14 shows *R-Square* value of each variable. The two variables, which are risk-taking and proactiveness have quite big magnitude of the research model (77% and 54%). This result shows that the Indonesian students have strong entrepreneurial characteristics on those two. It may be the education of entrepreneurship has a positive contribution in building their entrepreneurship. Moreover, the *R-Square* value of Entrepreneurial Performance is very big. It means that the percentage of the magnitude of the entrepreneurial performance can be explained by autonomy, competitive aggressiveness, innovativeness, proactiveness, and risk taking is of 80.3%. The rest amounted of 19.7% are explained by other factors outside the model that is examined.

Table 14. *R-square* Value

Variable	<i>R-Square</i>
Entrepreneurial Mindset:	
Innovativeness	0.335497
Risk Taking	0.774349
Competitive Aggressiveness	0.341781
Autonomy	0.418010
Proactiveness	0.544001
Entrepreneurial Performance	0.803013

Hypothesis testing is a scientific process to examine if a hypothesis is plausible or not. Hypothesis testing is done by searching for the quantity and value of the influence coefficient also *t-statistic* (Park, 2008). Research hypothesis is acceptable if the value of the *t-statistic* > 1.96. Here are the coefficients of influence (original sample estimate) and the value of the *t-statistic* of each hypothesis on the inner model as shown in the Table 15. The results support positively the previous one done by Sutanto et al. (2019).

Entrepreneurial mindset has a coefficient of influence on the innovativeness of 0.579 with a *t-statistic* of 7.696 which is outweigh 1.96. These results indicate that entrepreneurial mindset give significant effects against innovativeness. Higher entrepreneurial mindset, it will increasing innovativeness of students of public universities. Based on these results H_1 is accepted. The result supports the earlier researches claimed that entrepreneurial mindset affect significantly to innovativeness. Herbig et al. (1994) stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (in Zhao, 2005). He indicated that entrepreneurial mindset affected innovativeness. Moreover, Slater (1980) stated that entrepreneurship tailored to the market-oriented culture will contribute significantly to the successful innovation (in Ndubisi, 2014) as well as the research by Wang and Zang (2005) which suggested entrepreneurship was one of the major areas that are relevant in the human resource and innovation.

Table 15. Coefficients of Influence and *t-statistic*

Hypothesis	Influence	Coefficient	<i>t-statistic</i>	Decision
H_1	EM --> I	0.579221	7.696174	Accepted
H_2	EM --> RT	0.879971	37.235113	Accepted
H_3	EM --> CA	0.584621	7.892138	Accepted
H_4	EM --> P	0.737564	14.584267	Accepted
H_5	EM --> A	0.646537	9.845969	Accepted
H_6	I --> EP	0.194541	2.039976	Accepted
H_7	RT --> EP	0.191298	2.68042	Accepted
H_8	CA --> EP	0.185336	2.152761	Accepted
H_9	P --> EP	0.247053	2.389091	Accepted
H_{10}	A --> EP	0.242796	2.112903	Accepted

Entrepreneurial mindset has a coefficient of influence on risk taking of 0.879 with *t-statistic* of 37.235 which is outweigh 1.96. These results indicate that entrepreneurial mindset gives significant influence towards risk taking. Higher entrepreneurial mindset, it will increasing risk taking of students of public universities. Based on these results the H_2 are accepted. It supports the earlier researches claimed that entrepreneurial mindset affects significantly to risk taking. Wenhong and Liuying (2010) stated systems thinking that was owned by the entrepreneur would affect their tendency in the conduct of risk taking.

Related with entrepreneur behavior in regard to family business, Zahra (1996) stated that the ownership of an industrial entrepreneur associated with risk taking (in Wang & Poutziouris, 2010). In his research, Segal et al. (2005) stated that an entrepreneur received personal financial risk existing in the ownership of a business but was also directly benefit from the potential success of that business. All these findings indicate that the entrepreneurial mindset has significant influence towards Risk taking.

Entrepreneurial mindset has a coefficient of influence on competitive aggressiveness of 0.585 with *t-statistic* of 7.89 which is greater than 1.96. These results indicate that entrepreneurial mindset give significant effects against competitive aggressiveness. Higher entrepreneurial mindset, it will increasing competitive aggressiveness of students of public universities. Based on this result H_3 is accepted. It supports previous research suggest that entrepreneurial mindset affect significant to competitive aggressiveness. Stevenson's research (1990), cited by Piperopoulos (2012) showed that entrepreneurship was somehow became synonymous with competitive aggressiveness. Through the internal factors influenced by the entrepreneurial mindset, competitive aggressiveness can be improved. Someone with high competitive aggressiveness will be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better competition. Neneh (2012) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization.

Entrepreneurial mindset has a coefficient of influence on autonomy of 0.647 with *t-statistic* of 9.846 which is greater than 1.96. These results indicate that entrepreneurial mindset gives significant effect towards autonomy. Higher entrepreneurial mindset, it will increasing autonomy of students of public universities. Based on the this results H_4 is accepted. The result supports research by McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies are not able to detect and/or control such acts.

Entrepreneurial mindset has a coefficient of influence on proactiveness of 0.738 with *t-statistic* of 14.584 which is greater than 1.96. These results indicate that entrepreneurial mindset give significant effects against proactiveness. Higher entrepreneurial mindset, it will give an increase in proactiveness of students of public universities. Based on this results H_5 is accepted. The result supports Mintzberg (1975) found that entrepreneurial companies tended to be more engaged in risk than other companies and more proactive in looking for new opportunities (in Zhang et al., 2014).

Innovativeness has a coefficient of influence on entrepreneurial performance of 0.195 with *t-statistic* of 2.0399 which is is greater than 1.96. The results showed that there is significant influence of innovativeness on entrepreneurial performance. Higher innovativeness, it will increasing entrepreneurial performance of students of public universities. Based on these results H_6 is accepted. The result supports previous scholars. Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with the entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, where in the entrepreneurial orientation there were dimensions of innovativeness. It shows that the innovativeness has an impact on performance. Khalili et al. (2013) and Sutanto et al. (2019) stated that innovativeness had a significant impact on performance.

Risk taking has a coefficient of influence on entrepreneurial performance of 0.191 with *t-statistic* of 2.68 which is greater than 1.96. The results show that risk taking providing significant effects against the entrepreneurial performance. Higher risk taking, it will increasing entrepreneurial performance of students of public universities. Based on the results of this H_7 is accepted. It supports the studies of Chen et al. (2007), Callaghan and Venter (2011), and Sutanto et al. (2019). This suggests that risk taking has an impact on performance.

Competitive aggressiveness has a coefficient of influence on entrepreneurial performance of 0.185 with *t-statistic* of 2.152 which is greater than 1.96. These results suggest that the competitive aggressiveness gives significant influence towards entrepreneurial performance. Higher competitive aggressiveness, it will increasing entrepreneurial performance in of students of public universities. Based on these results H_8 is accepted. The result supports the studies of Chen *et al.* (2007), Callaghan and Venter (2011), Khalili et al. (2013), and Sutanto et al. (2019). The competitive aggressiveness leads in performance.

Autonomy has a coefficient of influence on entrepreneurial performance of 0.247 with *t-statistic* of 2.389 which is greater than 1.96. The results showed that autonomy gives significant influence towards entrepreneurial performance. Higher autonomy, increasing entrepreneurial of students of public universities. Based on the results H_9 is accepted. It supports positively what found by Callaghan and Venter (2011), Chen et al.

(2007), and Sutanto et al. (2019) previously that the autonomy had an impact on performance.

Proactiveness has a coefficient of influence on entrepreneurial performance of 0.243 with a *t-statistic* of 2.112 which is outweigh 1.96. The result shows that proactiveness gives significant influence towards entrepreneurial performance. Higher proactiveness, it will increasing entrepreneurial performance of students of public universities. Based on the results H_{10} is accepted. It convinces the previous findings of Costa and McCrae (1992) (in Smith, 2013), Callaghan and Venter (2011), Chen et al. (2007), and Sutanto et al. (2019). It shows that the proactiveness have an impact on performance.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Based on the results of this research then it can be drawn the conclusions as follows:

- 1) Entrepreneurial mindset is found has positive and significant effect against innovativeness.
- 2) Entrepreneurial mindset is found has positive and significant effect against risk taking.
- 3) Entrepreneurial mindset is found has positive and significant effect against competitive aggressiveness.
- 4) Entrepreneurial mindset is found positive and significant effect against autonomy.
- 5) Entrepreneurial mindset is found has positive and significant effect against proactiveness.
- 6) Innovativeness is found has positive and significant effect against entrepreneurial performance.
- 7) Risk taking is found has positive and influential significant against entrepreneurial performance.
- 8) Competitive aggressiveness is found has positive and significant effect against entrepreneurial performance.
- 9) Autonomy is found has positive and significant effect against the entrepreneurial performance.
- 10) Proactiveness is found positive and significant effect against the entrepreneurial performance.

Considering medium mean of some variables such as entrepreneurial mindset, innovativeness, competitive aggressiveness, autonomy, proactiveness, as well as entrepreneurial performance of the Indonesian college students, some actions need to be done much more in the future. Improving the entrepreneurship curriculum is extremely necessary. Inviting and connecting to successful business leaders and entrepreneurs is a must in order to open and inspire students' mind and heart to create a startup business.

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ISSN 2087-3735 Macroeconomic and Bank-Specific ... (Suhartono)

5

Entrepreneurial Performance: Lesson Learnt of Indonesia

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ABSTRACT

This research had a purpose to seek an impact of entrepreneurial mindset on innovativeness, risk taking¹, competitive aggressiveness, autonomy and proactiveness of bachelor students of management program of public universities in Surabaya, Indonesia and to seek their impact on entrepreneurial performance of the students. Entrepreneurship had been popular in university all over the world including Indonesia. However, the entrepreneurial performance of Indonesian students had not increased

yet. How to increase it? This study explored the impact of entrepreneurial mindset on innovativeness, ² risk taking, competitive aggressiveness, autonomy, and proactiveness on ³ entrepreneurial performance of the students. This research was explanatory quantitative for the analyzing technique. It gathered data of 364 respondents, which were Indonesian bachelor students of management program of public universities. The results showed that entrepreneurial mindset had a significant impact to innovativeness, ⁴ risk taking, competitive aggressiveness, autonomy, and proactiveness which further had enhanced significant positive impact to entrepreneurial performance of the students.

⁵
Key words:

Autonomy, competitive aggressiveness, innovativeness, proactiveness, risk taking

ABSTRAK

Penelitian ini bertujuan untuk mengetahui dampak pola pikir kewirausahaan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian dan daya proaksi mahasiswa program sarjana manajemen perguruan tinggi negeri di Surabaya, Indonesia dan mencari dampaknya pada kinerja kewirausahaan mahasiswa. Kewirausahaan telah populer di berbagai universitas di seluruh dunia termasuk Indonesia. Namun demikian, kinerja kewirausahaan mahasiswa Indonesia belum meningkat. Bagaimana cara meningkatkannya? Studi ini menggali dampak pola pikir kewirausahaan terhadap inovasi, pengambilan risiko, agresivitas kompetitif, otonomi, dan daya proaksi terhadap kinerja kewirausahaan mahasiswa. Penelitian ini ialah

kuantitatif eksplanatif untuk teknik analisisnya. Penelitian ini mengumpulkan data dari 364 responden, yang merupakan mahasiswa sarjana management program of public universities. Hasil penelitian menunjukkan bahwa pola pikir kewirausahaan memiliki pengaruh yang signifikan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian, dan daya proaktif yang selanjutnya meningkatkan kinerja kewirausahaan mahasiswa secara positif signifikan.

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1. INTRODUCTION

Entrepreneurship is an interesting field as a career. World Economic Forum concludes that over a third of Indonesian young people want to be entrepreneurs (Wood, 2019). On the other hand, the choice as an entrepreneur as career stood at 26% from 20% in 2009 (GMAC, 2014). It adds what shown by the survey against 37,000 students from 14 countries by the International Survey of Collegiate Entrepreneurship in 2006, states that 15.4% students choose entrepreneur as a career within the first five years after graduation and for the next five years the number increased to 50.1% (Szerb & Imreh, 2007). In this study, we draw some lessons from Indonesia's experience with the focus of the public universities students. It offers an interesting case study due to the fact that growth of entrepreneurship in the country in general and universities students in particular do not tally to the entrepreneurial performance. Entrepreneurship which encouraged in university level education by various countries in the world and also in Indonesia, apparently has not been

followed by an increase in entrepreneurial performance of Indonesia's student.

Gustiawan et al. (2014) indicated that the entrepreneur in Indonesia was still small although the development of entrepreneurship is critical to the country. They stated that 2% was an ideal figure for entrepreneurs in any country from the total population. In the case of Indonesia, 400,000 entrepreneurs were identified of which about 0.08% were low comparatively to America (12%), Singapore (7%) and Malaysia (6%). From policy perspectives, entrepreneurship help to reduce unemployment while the ability of entrepreneurs needs to be developed and enhance particularly among the young people.

Motivated by the importance of entrepreneurial performance, this article set to explores the impact of entrepreneurial ¹³ mindset, innovation ¹⁴, risk taking ¹⁴, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance of undergraduate management students of public universities. The concept of entrepreneurial orientations which contains some variables such as innovation, risk taking ¹⁵, competitive aggressiveness, autonomy, and proactiveness is adopted from Miller (1983), Lumpkin and Dess (2001), and Rauch et al. (2009) who found that these variables have positive and significant relationships towards entrepreneurial performance. What happen ¹⁶ with students of Indonesia?

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Entrepreneurship starts from mindset. Dhliwayo and Van Vuuren (2011) stated that entrepreneurial mindset was a way of thinking about business and the opportunity to benefit from the uncertain circumstances ¹⁷. According to

Valerio et al. (2014)¹⁸ entrepreneurial mindset referred¹⁹ to socio-emotional abilities and overall awareness towards entrepreneurship which related with entrepreneurial motivation and the success that would come as an entrepreneur. Indicators used to describe the entrepreneurial mindset in this study are the ability to identify business opportunities and the amount of thinking²⁰ to entrepreneurship (Solesvik et al., 2013)²¹.

Innovativeness can be described as the ability to innovate. There are several definitions about innovativeness. According to the West and Anderson (1996), innovativeness could be defined as the ability to create effective implementation of new processes and products for the organization and was designed to give you an advantage for the organization and stakeholders in it (in Baregheh et al., 2009). Galunic and Rodan (1998) claimed that innovative²²ness was the ability to produce continuous innovation (in Quintane et al., 2011). Rogers (2003) defined innovativeness as how fast a person or organization in adopting innovations compared against another person or organization (in Yildiz et al., 2014). There are three indicators of Innovativeness, which are 1) Openness towards new things. Hurt et al. (1977) described innovativeness as a willingness to try new things (in Goldsmith & Foxall, 2003); 2) The level of creativity. Kirton (1976) declared that innovative people will search for and combine various information, examines problems they experienced, and²² produces a thought or idea that is unconventional (in Lee, 2008); and 3) The ability to innovate. The power of innovation is seen as a further phase of creativity, a comparison between the study in quickly manner with the embodiment of an innovation²³ practices, particularly practices that are socio-organized. The power of innovation is a person's ability to understand socially, accept, estimates, disseminate, implement, and use innovation (Mikhailova, 2015).

Byrnes (1998) stated that in some literature about development, risk taking²⁴ was defined as involvement in a variety of behaviours that are associated with some possibilities against unwanted results (in Boyer, 2006). According to Hyrzky and Tunnanen (undated)²⁵ the definition of risk taking²⁶ was a process of²⁷ decision making and act without enough knowledge about the results that will²⁸ be obtained (in Noer et al., 2013). Risk taking²⁹ according to Wenhong and Liuying (2010) was a tendency to take action against something that's rated as risky. There are several indicators to know Risk taking³⁰. These indicators include 1) The courage of facing new things. Sung and Hanna (1996) stated that young entrepreneurs were more willing to take risks. They have the urge to invest in new goods/services and enter into new markets (in Wang & Poutziouris, 2010); and 2) The courage of facing a difficult situation. Brockhaus (1980) declared that the tendency of risk-taking as a possibility to receive profit related to success in certain situations which was required by a person before that person puts himself on the consequences associated with failure, an alternative situation that provides a smaller benefit (in Wenhong & Liuying, 2010).

Competitive aggressiveness is associated with a way to confront the threats and challenges of the external environment (Gamble et al., 2013). Lumpkin and Dess (2001) stated that the competitive aggressiveness was the intensity of the desire to beat your opponent. Noer et al. (2013) stated that³¹ the competitive aggressiveness was³² responsive attitude³³ towards any threat as a form of resistance and effort to win the competition. According to Chen (1996)³⁴ there are three main indicators of competitive behaviour³⁵ (in Stambaugh et al., 2011): 1) Awareness of competitors. Awareness includes the analysis of the strength of the opponent, stalking the opponent's competitive actions, and the dissemination of information about the opponent. Awareness talk³⁶ about

awareness of the condition of your opponent that emerges from the information obtained; 2) Motivation to compete. There are two characteristics of motivation in the company that owns high competitive aggressiveness. The first is beating competitors which crucial for aggressive companies. Other companies might choose other things as references of motivation within the company such as its performance in the past, the internal purpose, and satisfied with the reached a target, but the aggressive companies seek information about the competitor company's performance and compare the performance of the own company with the performance of the competitor company. The second one, namely the position of opponents which put the oneself³⁷ company in difficult situation as appropriate and necessary steps to improve the performance of oneself; and 3) Capability to compete. The intended capability is the ability to deliver attacks to the opponent and reflect³⁸ the opponent's attack. Part of this ability is a resource that has existed as the funds resulting from the company's good performance in the past. The company is also aggressively identifying available resources and prioritize the resource to attack while the less aggressive company saw the same³⁹ resource base. Aggressive companies better use the available resources rather than waiting for the resource to achieve the optimal point to available.

According to Metaal (1992), a definition of autonomy was freedom of choice without depending on⁴⁰ other parties (in Van Gelderen & Jansen, 2006). In another study, Brooke (1984) also revealed almost the same definition that autonomy was the degree of freedom of a person without the need for approval from others (in Barnabas and Mekoth, 2010). Feinberg (1989) stated that autonomy had at least four meanings: the capacity to govern ourselves⁴¹, the conditions for setting up ourselves, the ideal state to regulate ourselves, and authority to rule ourselves (in Mitcham, 2005). There are several indicators of

autonomy, which are 1) Independent. The ability to do things without being influenced by other people (Van Gelderen & Jansen, 2006); 2) Self-learning. Ryan and Deci (2000) said that someone independent would involve himself to learn on an ongoing basis about himself (in Weinstein et al., 2012); and 3) Determination. The ability to set and decide whether the regulations, targets, and the process that occurs in his business (Van Gelderen & Jansen, 2006). Crant (1993) defined proactiveness as taking the initiative to improve the circumstances of (in Unsworth & Parker, 2003). According to Wiklund and Shepherd (2005) ⁴³ proactiveness was looking far ahead and have the determination to identify and respond to opportunities (in Wong, 2012). Teece (2000) stated that in the entrepreneurship literature, proactiveness had definitions as the ability to anticipate and feel a vague signs ⁴⁴ and act to the needs in the future ahead of existing competitors to gain a competitive advantage (in Sundqvist et al., 2012). Crant (2000) stated that proactiveness could be seen from some behaviors. The behaviors could be used as gauges or indicators for proactiveness: The ability to pick the opportunity quickly; ⁴⁵ Courage start a ⁴⁶ change; The desirability of creating favorable conditions.

Van Vuuren (1997) said that entrepreneurial performance was the achievement of a number of ⁴⁷ entrepreneurial objectives (in Sebikari, 2014). According to Dollinger (2008), ⁴⁸ entrepreneurial performance was something done by an entrepreneur with high initiative to obtain the goal of entrepreneurship (in Tseng, 2013). Callaghan and Venter (2011) mentioned that entrepreneurial performance was something that emphasizes on achieving something and provide continuous ⁴⁹ satisfaction. There are several indicators of entrepreneurial performance, which are 1) Need for achievement. McClelland (1961) stated that the need for achievement that was often described as a

passion to deliver good performance and gain a feeling of achievement, it is one of the specific character⁵⁰ of entrepreneurship and Collins et al. (2004) stated that the need for achievement had positive correlation with corporate success (in Khan et al., 2015). Successful entrepreneurs have high scores in need for achievement (Oosterbeek et al., 2010); 2) The enthusiasm for entrepreneurship. Empirical findings using non economic⁵¹ indicators to measure the performance namely enthusiasm in work, which represents positive⁵² aspect that belonging to someone (Leitao & Franco, 2008), and 3) The realization of the thinking to entrepreneurship. Dhliwayo and Van Vuuren (2011) stated that entrepreneurship would ultimately culminated⁵³ in the creation or realization of entrepreneurial and strategic management plan that would be resulting⁵⁴ the best performance.

Earlier research claimed that entrepreneurial mindset affect⁵⁵ significantly to innovativeness. Previous research by Herbig et al. (1994) stated that innovation required⁵⁶ three basic components, namely infrastructure, capital, and the ability of the entrepreneur (in Zhao, 2005). A statement from Herbig et al. indicated that entrepreneurial mindset affected innovativeness and other research by Slater (1980) stated that entrepreneurship that were⁵⁷ tailored to the market-oriented culture will contribute significantly to the successful innovation (in Ndubisi, 2014; Sutanto et al., 2019). Research by Wang and Zang (2005) stated that entrepreneurship was one of the major areas that were relevant in the human resource and innovation. Based on the statements, it can be formulated as the following hypothesis:

H1: Entrepreneurial mindset significantly affects innovativeness⁵⁸ of students of public universities in Indonesia.

Earlier researches claim that entrepreneurial mindset affect⁵⁹ significantly to risk taking⁶⁰. Wenhong and Liuying (2010) stated systems thinking that was

owned by the entrepreneur will affect their tendency in the conduct of risk taking⁶¹. Related with⁶² entrepreneur behavior in regard to⁶³ family business⁶⁴, Zahra (1996) stated that the ownership of an industrial entrepreneur associated with risk taking⁶⁵ (in Wang & Poutziouris, 2010). In his research, Segal et al. (2005) stated that an entrepreneur received personal financial risk existing in the ownership of a business but was also directly benefit from the potential success of that business. This indicates that the entrepreneurial mindset has significant⁶⁶ influence towards risk taking⁶⁷ (Sutanto et al., 2019). On the basis⁶⁸ of⁶⁹ the statement, it can be formulated as the following hypothesis:

H2: Entrepreneurial mindset significantly affects risk taking⁷⁰ of students of public universities in Indonesia.

Previous researches suggest that entrepreneurial mindset affects significant⁷¹ to competitive aggressiveness. Stevenson's research (1990) cited by Piperopoulos (2012) showed that entrepreneurship was somehow became⁷ synonymous with competitive aggressiveness. Through the internal factors that influenced by the entrepreneurial mindset, competitive aggressiveness could be improved. Someone with high⁷³ competitive aggressiveness would be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better competition. Neneh (2012) and Sutanto et al. (2019) said that setting⁷⁴ the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. On the basis of the⁷⁵ statement, it can be formulated as the following hypothesis:

H3: Entrepreneurial mindset significantly affects competitive aggressiveness of students of public universities in Indonesia.

Research by McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to

greater autonomy and attachment because of the policy of control in some multinational companies were not able to detect and/or control such acts. Moreover, Sutanto et al. (2019) found that the entrepreneurial mindset has ⁷⁶significant ⁷⁷effect on autonomy of college students in Malang City, Indonesia. ⁷⁸On the basis of the statement, it can be formulated as the following hypothesis:

H4: Entrepreneurial mindset significantly affects ⁷⁹autonomy of students of public universities in Indonesia.

Mintzberg (1975) said that in his research he found that entrepreneurial companies tend to be more engaged in risk than other companies and more proactive in looking for new opportunities (in Zhang et al., 2014). Moreover, Sutanto et al. (2019) found that the entrepreneurial mindset has ⁸⁰significant ⁸¹effect on proactiveness of college students in Malang City, Indonesia. ⁸²On the basis of the statement, it can be formulated as the following hypothesis:

H5: Entrepreneurial mindset significantly affects ⁸³proactiveness of students of public universities in Indonesia.

In their study, Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with the entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship ⁸⁴between entrepreneurial orientation and ⁸⁵performance, where in the entrepreneurial orientation there were dimensions of innovativeness. It shows that the innovativeness has an impact on performance. Moreover, Khalili et al. (2013) and Sutanto et al. (2019) stated that innovativeness had a significant impact on performance. ⁸⁶On the basis of the statement, it can be formulated as the following hypothesis:

H6: Innovativeness significantly affects ⁸⁷entrepreneurial performance of students of public universities in Indonesia.

Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that risk taking⁸⁸ was one of the dimensions associated with the entrepreneurial performance. On the other hand, Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, where in the entrepreneurial orientation there were dimensions of risk taking⁸⁹. This suggests that risk taking⁹¹ has an impact on performance. On the basis of⁹ the statement, it can be formulated as the following hypothesis:

H7: Risk taking⁹³ significantly affects entrepreneurial⁹⁴ performance of students of public universities in Indonesia.

Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that competitive aggressiveness was a dimension that was associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, where in the entrepreneurial orientation there was a dimension of the competitive aggressiveness⁹⁵. It shows that competitive aggressiveness has an impact on performance. Moreover, Khalili et al. (2013) mentioned that the competitive aggressiveness equaled as effort to lead in performance and beat your opponent^{96 97}. On the basis of⁹⁸ the statement, it can be formulated as the following hypothesis:

H8: Competitive aggressiveness significantly affects entrepreneurial⁹⁹ performance of students of public universities in Indonesia.

In their study, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that autonomy was one of the dimensions that associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial¹⁰⁰ orientation and performance, where in the entrepreneurial orientation there was a dimension of¹⁰¹

auto-no-my. It shows that the autonomy¹⁰² has an impact on performance. On the basis of the statement¹⁰³, it can be formulated as the following hypothesis:

H9: Autonomy significantly affects entrepreneurial¹⁰⁴ performance of students of public universities in Indonesia.

Costa and McCrae (1992) stated that openness¹⁰⁵ to experience was the proactive search and an appreciation for the experience itself as well as tolerance over the exploration of new things (in Smith, 2013). On the other hand, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that proactiveness was one dimension that was associated with the entrepreneurial performance. In the study, it was mentioned that openness¹⁰⁶ to experience is one of the factors influencing entrepreneurial performance. It can be concluded that proactiveness give an impact on entrepreneurial performance. Chen et al.

(2007) also stated that there was a positive relationship between entrepreneurial orientation taking action against performance, where in the entrepreneurial orientation there was a dimension of proactiveness¹⁰⁷. It shows that the proactiveness¹⁰⁸ have¹⁰⁹ an impact on performance. On the basis of the statement¹¹⁰, it can be formulated as the following hypothesis:

H10: Proactiveness significantly affects entrepreneurial¹¹¹ performance of students of public universities in Indonesia.

3. RESEARCH METHOD

The population of this research were¹¹² the bachelor students of management¹¹³ program of public universities in Surabaya, Indonesia. The total amount of it were¹¹⁴ 4,036 people as shown in Table 1. This study used a purposive sampling because in this study certain criteria were set out against the respondents in order to¹¹⁵ get the results in accordance with¹¹⁶ the research objectives. They were bachelor students of management¹¹⁷ program of public universities in Indonesia,

who were/are ever engaged in entrepreneurship. The 364 samples were taken from the population and determined using the Slovin's¹¹⁸ formula. The questionnaires were disseminated directly. Screening of respondents to conform with the criteria of the respondents in this research was conducted orally by asking the respondents one by one and strengthened with the existing questions in the questionnaire.

Table 1. Amounts of Bachelor Students of Management Program of Public Universities in Surabaya

University

Amounts of Bachelor Students of Management Program

Airlangga University Surabaya

2,026

Public University of Surabaya

997

Institute of Technology November 10th Surabaya

109

National Development University of Veteran East Java

Surabaya

904

TOTAL AMOUNT

4,036

4. DATA ANALYSIS AND DISCUSSION

Variable Descriptive Analysis

All responses of the respondents to each variable ¹¹⁹was designed by ^{120,121}likert scale from 1 to 5. ¹²²In order to describe them, it was set categories of variables by this

formula as shown ¹²³on ¹²⁴the Table 2.

Range = Maximum Value – Minimum Value [1]

Amounts of Category

Range = 5 - 1

3

Range = 1.33

Table 2. Interval of Mean Scores

Range

Remarks

1.00–2.33

Low

2.34–3.67

Medium

3.67–5.00

High

By using the category, then the evaluation of the answers ¹²⁵of respondents for each of ¹²⁶variables can be described as follows.

Table 3. The Description of Entrepreneurial Mindset

Item

Statement

Mean

Remark

X1.1

I want to create my ¹²⁷own workplace

3.64

Medium

X1.2

I have an aspiration to be an entrepreneur

3.32

Medium

X1.3

I tend to seek business opportunities

3.84

High

X1.4

I can identify a business opportunity based on the needs of consumers in the market

3.57

Medium

Entrepreneurial Mindset (X1)

3.59

Medium

Based on Table 3, it can be noted that the average value of the entrepreneurial mindset is 3.59. This means that the entrepreneurial mindset of students of public universities in Surabaya ¹²⁸have value "medium". ¹²⁹In addition from the table above can also be noted that the highest average value of the indicators is 3.84 which is contained in the statement " I tend to seek business opportunities ". The lowest average value of the indicator is 3.32 which is contained ¹³⁰on the statement " I have an aspiration to be an entrepreneur ". These results indicate

that respondents tend to seek business opportunities despite the aspiration to be an entrepreneur is not so great. This can be attributed to the respondent's efforts to earn an income or meet his needs. The difference between the statements "I tend to seek business opportunities" with the other statement ¹³¹ also far enough to the point of being in the different ¹³² category (high, medium, low). This indicates that most respondents tend to think more about how to get a business opportunity with ¹³³ a wide variety of ways no matter whether to become entrepreneurs or not.

Table 4. The Description of Innovativeness

Item

Statement

Mean

Remarks

Z1.1

I tend to accept new things around me

3.31

Medium

Z1.2

I have an innovative idea that can be implemented

3.50

Medium

Z1.3

I have unique ideas that haven't been done before

3.34

Medium

Z1.4

I can implement the unique ideas that I have

3.49

Medium

Innovativeness (Z1)

3.41

Medium

Based on Table 4 can be noted that the average value of the innovativeness ¹³⁴ is 3.41. This means students ' innovativeness in public universities in Surabaya have ¹³⁵ value "medium". In addition ^{136,137} it can also be noted that the highest average value of the indicators is 3.50 which is contained in the statement "I have innovative ideas that can be implemented". The lowest average value of the indicator is 3.31 which is contained on ¹³⁸ the statement "I am likely to receive new things around me". These results indicate that respondents have different ideas to be applied in his ¹³⁹ business. The entire statement is in the category of "medium" which means that the innovativeness of the respondents could still be improved further.

Table 5. The Description of Risk Taking ¹⁴⁰

Item

Statement

Mean

Remarks

Z2.1

I dare go to an entirely new place for me all alone

3.65

Medium

Z2.2

I have a willingness to try new things

3.66

Medium

Z2.3

I ¹⁴¹have the courage to ¹⁴²take the decision with minimal information

3.77

High

Z2.4

I felt challenged to do things outside of my comfort zone

3.69

High

Z2.5

I have the desire to conquer my greatest fear

3.71

High

¹⁴³Risk Taking (Z2)

3.69

High

Based on Table 5 can be noted that the average value of the variable risk taking¹ is 3.69. This means risk taking¹⁴⁵ of students of public universities in Surabaya has a value of "high". In addition to that, it can also be noted that the highest average value of the indicator is of 3.77¹⁴⁶ which is contained on¹⁴⁷ the statement " I have the courage to¹⁴⁸ take the decision¹⁴⁹ with minimal information ". The lowest average value of the indicator is 3.65 which is contained on the statement of " I dare go to an entirely new place for me all alone." These results indicate that

respondents taking decisions with minimal information and illustrates that the respondent ¹⁵⁰take their decisions quicker. The results of Table 5 also pointed out that the existence of the respondent towards new things still in the category "Medium" ¹⁵¹that is similar to ¹⁵²variable description analysis of innovativeness. The respondents need to enhance adaptation to new things.

Table 6. The Description of the Competitive Aggressiveness

Item

Statement

Mean

Remarks

Z3.1

I am trying to find information to know the existence of competitors for my business

3.42

Medium

Z3.2

I am trying to find information about my business competitors

3.31

Medium

Z3.3

I have the desire to grow bigger than ¹⁵³competitors

3.37

Medium

Z3.4

I made the difference in the ability with competitors as a motivation to compete

3.41

Medium

Z3.5

I have the ability to¹⁵⁴ compete with business competitors

3.35

Medium

Z3.6

I can overtake the position of the competitors who have higher¹⁵⁵ business position

3.37

Medium

Competitive Aggressiveness (Z3)

3.37

Medium

Based on Table 6 can be noted that the average value of the variable competitive aggressive¹⁵⁶ness is 3.37. This means competitive aggressiveness of students of public universities in Surabaya has a value of "Medium". In addition to that, it can also be noted that the highest average value of the indicator is 3.42 which is contained ¹⁵⁷on ¹⁵⁸statement "I am trying to find information to know the existence of competitors for my business ". The lowest average value of the indicator is 3.31 which is ¹⁵⁹ontained ¹⁶⁰in statement "I am trying to find information about my business competitors". These results indicate that respondents tend to strive to recognize "the surrounding environment" despite the statement with the highest value remained in the category of "Medium". All Statements about the competitive¹⁶¹ aggressiveness ¹⁶is in the category of "Medium". This indicates that respondents tend to be less concerned with competitors to compete better. Lack of concern for the

competitors to compete can come from ego and the focus of the responde¹⁶³ for his own business.

Table 7. The Description of the Autonomy

Item

Statement

Mean

Remarks

Z4.1

I work without relying on others

3.34

Medium

Z4.2

I am working without affected by other people's assumptions

3.49

Medium

Z4.3

I believe with the my¹⁶⁴ ability to resolve the job

3.41

Medium

Z4.4

I work in a field that I've mastered

3.50

Medium

Z4.5

I can specify the time limit to finish the job

3.45

Medium

Z4.6

I can determine the target of achievement for myself

3.55

Medium

Autonomy (Z5)

3.46

Medium

Based on Table 7 can be noted that the average value of the variable autonomy¹⁶ is 3.46. This means autonomy¹⁶⁶ of students of public universities in Surabaya has a value of "Medium". In addition to that, it can also be noted that the highest average value of the indicator is 3.55 which is contained on the statement "I can determine the target of achievement for myself". The lowest average value of the indicator is 3.34 which is contained in statement "I work without relying¹⁶⁷ on others". These results show that the determining¹⁶⁸ the targets for ourselves¹⁶⁹ is easier to do than the other statements in¹⁷⁰ this point. All statements regarding autonomy is¹⁷¹ on¹⁷² the category of Medium shows that the autonomy of the respondents need¹⁷³ to be improved further especially regarding independence in work.

Table 8. The Description of Proactiveness

Item

Statement

Mean

Remarks

Z5.1

I work with my ¹⁷⁴own initiatives and without being asked

3.64

Medium

Z5.2

I get the job done faster than the given time

3.56

Medium

Z5.3

I prefer to face rather than avoid the problem

3.60

Medium

Proactiveness (Z5)

3.60

Medium

Based on Table 8 above can be noted that the average value of the proactiveness is 3.60. This means that ¹⁷⁵proactiveness of students of public universities in Surabaya has a value of "Medium". In addition to that, it can also be noted that ¹⁷⁶the highest average ¹⁷⁷value of the indicator is 3.64 which is ¹⁷⁸contained on the statement "I am working with its ¹⁷⁹own initiative without the need to be governed". The lowest average value of the indicator is 3.56 which is contained in ¹⁸⁰statement "I get the job done faster than the given time". These results indicate that respondents may give rise ¹⁸¹the initiative from themselves to do something. All statements about proactiveness ¹⁸²is in the category of "Medium". This indicates that respondents can enhance the initiative further in

doing something, especially increasing the tendency to not delay the work and finish it sooner than the given time.

Table 9. The Description of Entrepreneurial Performance

Item

Statement

Mean

Remarks

Y1

I am trying to improve my business turnover

3.33

Medium

Y2

I am trying to hit the target that I set for my business

3.57

Medium

Y3

I have a high spirit in opening my business

3.55

Medium

Y4

I am very happy to have a new business

3.46

Medium

Y5

I feel excited when finding a ¹⁸³new breakthrough for my business

3.50

Medium

Y6

I can apply the ideas of my effort into my business

3.59

Medium

Entrepreneurial Performance (Y)

3.50

Medium

Based on Table 9 can be noted that the average value of the variable entrepreneurial performance is 3.50. This means entrepreneurial¹⁸⁴ performance of students of public universities in Surabaya has a value of "Medium". In addition to that, it can also be noted that the highest average value of the indicator is 3.59 which is contained on statement¹⁸⁵ "I can apply the ideas of my effort into my efforts"¹⁸⁶. The lowest average value of the indicator is 3.33 which is contained in statement¹⁸⁷ "I am trying to improve my business turnover". These results indicate that respondents can reasonably implement ideas into their business. All statements regarding entrepreneurial performance are in the category of "Medium". This shows that entrepreneurial performance could still be improved, especially in terms of efforts on increasing turnover which¹⁸⁸ could mean that more respondents need to pay close attention to the financial aspects.

Convergent Validity

Campbell and Fisk stated that convergent validity is agreement¹⁸⁹ between measures of the same construct assessed by different methods (Guo et al.,

2008). Convergent validity measurement is carried out using the value of the outer loading. An indicator is said to satisfy the convergent validity if it has the value of outer loading > 0.5 (Muafi & Roostika, 2014). Here are the values of ¹⁹⁰outer loading indicator on each variable dimensions and research.

From Table 10 can be noted that all indicators that make up the research dimensions and variables have ¹⁹¹value of outer loading > 0.5 . Based on these results it can be said that all indicators in this study have met the convergent ¹⁹²validity, so that ¹⁹³it can be used to do further analysis.

Table 10. Outer Loading Value of Each Indicator

Autonomy

Competitive Aggressiveness

Entrepreneurial Mindset

Entrepreneurial Performance

Innova

¹⁹⁴tiveness

Proactive

ness

¹⁹⁵Risk Taking

A1

0.795914

A2

0.820101

A3

0.766828

A4

0.791210

A5

0.815840

A6

0.890515

CA1

0.826384

CA2

0.788390

CA3

0.757231

CA4

0.770411

CA5

0.787101

CA6

0.830609

EM1

0.847068

EM2

0.778124

EM3

0.787740

EM4

0.889122

EP1

0.767887

EP2

0.882425

EP3

0.782284

EP4

0.753799

EP5

0.847037

EP6

0.907086

I1

0.833910

I2

0.838759

I3

0.828741

l4

0.844424

PA1

0.914802

PA2

0.849710

PA3

0.818392

RT1

0.764520

RT2

0.847122

RT3

0.799130

RT4

0.813196

RT5

0.871995

Discriminant Validity

Campbell and Fisk stated that discriminant validity refers to the distinctiveness of different constructs (in Guo et al., 2008). The measurement of discriminant validity is carried out using value¹⁹⁶ of cross loading¹⁹⁷ (Henseler et

al., 2015). An indicator is said to satisfy the discriminant validity ¹⁹⁸if the indicator value of cross loading ¹⁹⁹on dimensions or from the variables is the largest when it is compared with other variables or dimensions (Muafi & Roostika, 2014). Table 11 shows the value of cross loading ²⁰⁰each indicator.

Table 11. Cross Loading Value

Autonomy

Competitive Aggressiveness

Entrepreneurial Mindset

Entrepreneurial Performance

Innovativeness

Proactiveness

Risk Taking ²⁰¹

A1

0.795914

0.546739

0.546110

0.597485

0.517463

0.473654

0.482839

A2

0.820101

0.636932

0.567808

0.674356

0.653024

0.599733

0.474295

A3

0.766828

0.603595

0.533795

0.654978

0.623765

0.550383

0.508391

A4

0.791210

0.553146

0.516577

0.642986

0.536862

0.560568

0.494318

A5

0.815840

0.539068

0.481304

0.600802

0.541449

0.481319

0.464055

A6

0.890515

0.572540

0.504996

0.670452

0.568687

0.550442

0.465893

CA1

0.597251

0.826384

0.413458

0.588599

0.583278

0.449628

0.413075

CA2

0.568863

0.788390

0.515976

0.577079

0.548098

0.447603

0.453065

CA3

0.454781

0.757231

0.427850

0.508528

0.557980

0.397768

0.375940

CA4

0.581470

0.770411

0.429500

0.642631

0.630459

0.460988

0.419129

CA5

0.573336

0.787101

0.484007

0.611462

0.642640

0.434427

0.424887

CA6

0.587625

0.830609

0.503883

0.639402

0.593314

0.568785

0.520743

EM1

0.578223

0.523911

0.847068

0.601549

0.511237

0.576205

0.726098

EM2

0.469106

0.450495

0.778124

0.483172

0.390101

0.592348

0.646298

EM3

0.480377

0.414348

0.787740

0.586079

0.452395

0.664646

0.725289

EM4

0.600080

0.537760

0.889122

0.662212

0.549196

0.611439

0.803558

EP1

0.690985

0.629075

0.592925

0.767887

0.516021

0.581399

0.571018

EP2

0.710318

0.669900

0.667298

0.882425

0.657511

0.714472

0.665061

EP3

0.547919

0.592988

0.543400

0.782284

0.659590

0.595855

0.529508

EP4

0.575115

0.504559

0.465962

0.753799

0.527506

0.613374

0.534530

EP5

0.630194

0.648269

0.610477

0.847037

0.662474

0.616929

0.612048

EP6

0.734086

0.666199

0.615633

0.907086

0.663536

0.671315

0.634993

I1

0.580683

0.619670

0.491576

0.605705

0.833910

0.473129

0.401179

I2

0.612614

0.682626

0.522052

0.676580

0.838759

0.520045

0.490018

I3

0.519908

0.562908

0.421137

0.567804

0.828741

0.404254

0.387576

I4

0.642745

0.625403

0.494055

0.636961

0.844424

0.517415

0.448238

PA1

0.648007

0.535303

0.679524

0.713894

0.503103

0.914802

0.664298

PA2

0.506749

0.577421

0.652216

0.668834

0.532460

0.849710

0.655503

PA3

0.551079

0.379615

0.568926

0.594728

0.450296

0.818392

0.566120

RT1

0.466286

0.414258

0.692612

0.540781

0.372364

0.623311

0.764520

RT2

0.551430

0.533691

0.805747

0.607792

0.494341

0.593115

0.847122

RT3

0.370777

0.351081

0.637335

0.556424

0.358214

0.598761

0.799130

RT4

0.428922

0.377258

0.658522

0.561112

0.361990

0.625084

0.813196

RT5

0.584088

0.549996

0.793162

0.669312

0.516321

0.572851

0.871995

From Table 11 it can be noted that all indicators have the largest cross loading^{20:} on its²⁰³ dimension or variables compared from²⁰⁴ other variables and dimensions. Based on these results it can be said that the indicators that are used in this study have had good validity discriminat²⁰⁵ in drawing up the each²⁰⁶ dimension or variable. Besides using the value of outer loading, testing validity can also be done by looking at the value of AVE (Henseler et al., 2015). The indicators used are said to be valid if the value of AVE is above 0.5. The value of AVE²⁰⁷ of indicators in this study can be found in Table 12.

Table 12. AVE Value

Variable

AVE

Entrepreneurial Mindset

0.683518

Innovativeness

0.699696

²⁰⁸
Risk Taking

0.672476

Competitive Aggressiveness

0.630140

Autonomy

0.663116

Proactiveness

0.742878

Entrepreneurial Performance

0.681464

From the ²⁰⁹Table ²¹⁰12 it can be noted that the value of AVE that is produced by all reflective indicators ²¹¹are above 0.5. Based on those results it can be said that all reflective indicators in this study meet the requirements of validity. Further examination of the convergent validity ²¹²is construct reliability by looking at the output of the composite reliability or ²¹³cronbach's ²¹⁴alpha. Constucts can be said to be pretty reliable if the value of the composite reliability or ²¹⁵cronbach's alpha is greater than or equal to 0.3 but better if above 0.7 (Muafi & Roostika, 2014). ²¹⁶The Table 13 shows the output of the ²¹⁷cronbach's alpha. The value of cronbach's ²¹⁸alpha

alpha from all constructs ²¹⁹are ²²⁰very good which ²²⁰are above 0.7. So it can be said that all reflective indicators are reliable or meet the test of reliability.

Table 13. Reliability Test

Variable

Composite Reliability

Cronbach's Alpha

Entrepreneurial Mindset

0.895975

0.844539

Innovativeness

0.903095

0.857253

²²¹Risk Taking

0.911069

0.878042

Competitive Aggressiveness

0.910798

0.882372

Autonomy

0.921775

0.897767

Proactiveness

0.896360

0.826114

From the Table ²²² 13 ²²³ it can be noted that the value of cronbach's ²²⁴ alpha from all constructs ²²⁵ are very good which ²²⁶ are above 0.7 so it can be said that all reflective indicators ²²⁷ ²²⁸ is reliable or meet the test of reliability. In ^{229,230} addition the value of the composite reliability which ²³¹ are generated from all reflective constructs ²³² is also very good which is above 0.7 so it can be said that all the reflective indicators ²³³ is reliable or meet the test of reliability.

R-Square

Table 14 shows R-Square ²³⁴ value of each variable. The two variables, which are risk-taking and proactiveness have ²³⁵ quite big magnitude of the research model (77% and 54%). This result shows that the Indonesian students have strong entrepreneurial characteristics on those two. It may be the education of entrepreneurship has a positive contribution in building their entrepreneurship. Moreover, the R-Square value of Entrepreneurial Performance is very big. It means that the percentage of the magnitude of the entrepreneurial performance can be explained by autonomy, competitive aggressiveness, innovativeness, proactiveness, and risk taking ²³⁶ is of 80.3%. The rest amounted ²³⁷ of 19.7% are explained by other factors outside the model that is examined.

Table 14. R-square Value

Variable

R-Square

Entrepreneurial Mindset:

Innovativeness

0.335497

Risk Taking ²³⁸

0.774349

Competitive Aggressiveness

0.341781

Autonomy

0.418010

Proactiveness

0.544001

Entrepreneurial Performance

0.803013

Hypothesis testing is a scientific process to examine if a hypothesis is plausible or not. Hypothesis testing is done by searching for the quantity and value of the influence ²³⁹coefficient also t-statistic (Park, 2008). Research hypothe-sis is acceptable if the value of the t-statistic > 1.96 . Here are the coefficients of influence (original sample estimate) and the value of the t-statistic of each hypothe-sis on the inner model as shown in ²⁴⁰the Table 15. The results support positively the previous one done by Sutanto et al. (2019). ²⁴¹Entrepreneurial mindset has a coefficient of influence on the innovativeness of 0.579 with a t-statistic of 7.696 which ²⁴²is outweigh 1.96. These results indicate that entrepre-neurial mindset ²⁴³give significant effects against innovativeness. ²⁴⁴Higher entrepreneurial mindset, ²⁴⁵it will ²⁴⁶increasing inno-vativeness of students of public universities. Based on these results H1 is accepted. The result supports the earlier researches ²⁴⁷claimed that entrepre-neu-rial mindset ²⁴⁸affect significantly to inno-va-tiveness. Herbig et al. (1994) stated that innovation ²⁴⁹re-quired three basic com-ponents, namely ²⁵⁰in-fra-structure, capital, and the ability of the entrepreneur (in Zhao, 2005). He indicated that entrepre-neurial

mindset affected in innovativeness. Moreover, Slater (1980) stated that entrepreneurship tailored to the market-oriented culture will contribute significantly to the successful innovation (in Ndubisi, 2014) as well as the research by Wang and Zang (2005) which suggested entrepreneurship was one of the major areas that are relevant in the human resource and innovation.

Table 15. Coefficients of Influence and t-statistic

Hypothesis

Influence

Coefficient

t-statistic

Decision

H1

EM --> I

0.579221

7.696174

Accepted

H2

EM --> RT

0.879971

37.235113

Accepted

H3

EM --> CA

0.584621

7.892138

Accepted

H4

EM --> P

0.737564

14.584267

Accepted

H5

EM --> A

0.646537

9.845969

Accepted

H6

I --> EP

0.194541

2.039976

Accepted

H7

RT --> EP

0.191298

2.68042

Accepted

H8

CA --> EP

0.185336

2.152761

Accepted

H9

P --> EP

0.247053

2.389091

Accepted

H10

A --> EP

0.242796

2.112903

Accepted

Entrepreneurial²⁵¹ mindset has a coefficient of influence on risk taking²⁵² of 0.879 with t-statistic²⁵³ of 37.235 which is outweigh 1.96. These results indicate that entrepreneurial mindset gives significant influence towards risk taking²⁵⁴. Higher²⁵⁵ entrepreneurial mindset, it will increasing²⁵⁶ risk taking²⁵⁷ of students of public universities. Based on these results the H2²⁵⁸ are²⁵⁹ accepted. It supports the earlier researches²⁶⁰ claimed²⁶¹ that entrepreneurial mindset affects significantly²⁶² to risk taking²⁶³. Wenhong and Liuying (2010) stated systems thinking that was owned by the entrepreneur would affect their tendency in the conduct of risk taking²⁶⁴. Related²⁶⁵ with entrepreneur behavior in regard to family business, Zahra (1996) stated that the ownership of an industrial entrepreneur associated with risk taking²⁶⁶ (in Wang & Poutziouris, 2010). In his research, Segal et al. (2005) stated that an entrepreneur received personal financial risk existing in the ownership of a business but was also directly benefit from the potential success of that business. All these findings indicate that the entrepreneurial mindset has significant²⁶⁷ influence towards Risk²⁶⁸ taking²⁶⁹.

Entrepreneurial²⁷⁰ mindset has a coefficient of influence on competitive aggressiveness of 0.585 with t-statistic of 7.89 which is greater than 1.96.

These results indicate that entrepreneurial mindset ²⁷¹give significant effects against competitive aggressiveness. ²⁷²Higher entrepreneurial ²⁷³mindset, it will ²⁷⁴increasing competitive ²⁷⁵aggressiveness of students of public universities. Based on this result H3 is accepted. It supports previous research ²⁷⁶suggest that entrepreneurial mindset affect ²⁷⁷significant to competitive aggressiveness. Steven's research (1990), cited by Piperopoulos (2012) showed that entrepreneurship ²⁷⁸was somehow became synonymous with competitive aggressiveness. Through the internal factors influenced by the entrepreneurial mindset, competitive aggressiveness can be improved. ²⁷⁹Someone with high competitive aggressiveness will be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better competition. Neneh (2012) said that ²⁸⁰setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. ²⁸¹Entrepreneurial mindset has a coefficient of influence on ²⁸²autonomy of 0.647 with ²⁸³t-statistic of 9.846 which is greater than 1.96. These results indicate that entrepreneurial ²⁸⁴mindset gives significant effect towards autonomy. ²⁸Higher entrepreneurial mindset, ²⁸⁶it will ²⁸⁷increasing ²⁸⁸autonomy of students of public universities. Based on ²⁸⁹the ²⁹⁰this results H4 is accepted. The result supports research by McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies are not able to detect and/or control such acts. ²⁹¹Entrepreneurial mindset has a coefficient of influence on proactiveness of 0.738 with ²⁹²t-statistic of 14.584 which is greater than 1.96. These results indicate that entrepreneurial mindset ²⁹³give significant effects against proactiveness. ²⁹⁴Higher entrepreneurial ²⁹⁵mindset, it will give an increase in

proactiveness of students of public universities. Based on this results²⁹⁶ H5 is accepted. The result supports Mintzberg (1975) found that entrepreneurial companies tended to be more engaged in risk than other companies and more proactive in looking for new opportunities (in Zhang et al., 2014).

Innovativeness has a coefficient of influence on entrepreneurial²⁹⁷ performance of 0.195 with t-statistic²⁹⁸ of 2.0399 which is²⁹⁹ greater than 1.96. The results showed that there is significant³⁰⁰ influence of innovativeness on

entrepreneurial performance. Higher innovativeness, it will increasing entrepreneurial performance of students of public universities. Based on these results H6 is accepted. The result supports previous scholars.

Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with the entrepreneurial performance. Chen et al.

(2007) stated that there was a positive relationship between entrepreneurial

orientation³⁰¹ and performance³⁰², where in the entrepreneurial orientation there were dimensions of innovativeness. It shows that the innovativeness³⁰³ has an

impact on performance. Khalili et al. (2013) and Sutanto et al. (2019) stated that innovativeness had a significant impact on performance.

Risk taking³⁰⁴ has a coefficient of influence on entrepreneurial³⁰⁵ performance of 0.191 with t-statistic³⁰⁶ of 2.68 which is greater than 1.96. The results show that

risk taking³⁰⁷ providing significant effects against the entrepreneurial

performance. Higher risk taking^{308 309}, it will increasing entrepreneurial

performance of students of public³¹⁰ universities. Based on the results of this H7

is accepted. It supports the studies of Chen et al. (2007), Callaghan and Venter (2011), and Sutanto et al. (2019). This suggests that risk taking³¹¹ has an impact on performance.

Competitive aggressiveness has a coefficient of influence on entrepreneurial performance of 0.185 with t-statistic of 2.152³¹² which is greater than 1.96.

These results suggest that the competitive aggressiveness gives significant influence towards entrepreneurial performance. Higher competitive aggressiveness, ³¹³it will increase ³¹⁴entrepreneurial performance in of students of public universities. Based on these results H8 is accepted. The result supports the studies of Chen et al. (2007), Callaghan and Venter (2011), Khaqili et al. (2013), ³¹⁵and and Sutanto et al. (2019). The competitive aggressiveness leads in performance.

Autonomy has a coefficient of influence on entrepreneurial ³¹⁶performance of 0.247 with t-statistic ³¹⁷of 2.389 which is greater than 1.96. The results showed that autonomy gives significant influence towards entrepreneurial performance. Higher autonomy, increasing entrepreneurial ³¹⁸of students of public universities. Based on the results H9 is accepted. It supports positively what found ³¹⁹by Callaghan and Venter (2011), Chen et al. (2007), and Sutanto et al. (2019) previously that the autonomy ³²⁰had an impact on performance.

Proactiveness has a coefficient of influence on entrepreneurial ³²¹performance of 0.243 with a t-statistic of 2.112 which is outweigh ³²²1.96. The result shows that proactiveness gives significant influence towards entrepreneurial performance. Higher proactiveness, ³²³it will increase entrepreneurial performance of students of public universities. Based on the results H10 is accepted. It convinces the previous findings of Costa and McCrae (1992) (in Smith, 2013), Callaghan and Venter (2011), Chen et al. (2007), and Sutanto et al. (2019). It shows that the proactiveness ³²⁴have ³²⁵an impact on performance.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Based on the results of this research then ³²⁶it can be drawn the conclusions ³²⁷as follows:

Entrepreneurial mindset is found has ³²⁸positive and significant effect against innovative³²⁹ness.

Entrepreneurial mindset is found has positive and significant effect against ³²⁹risk taking.

³³⁰Entrepreneurial mindset is found ³³¹has ³³²positive and significant effect against competitive aggressiveness.

Entrepreneurial mindset is found positive and significant effect against autonomy.

³³³Entrepreneurial mindset is found ³³⁴has positive and significant effect against proactive³³⁵ness.

Innovativeness is found ³³⁵has ³³⁶positive and significant effect against entrepreneurial performance.

³³⁷Risk taking is found ³³⁸has positive and influential ³³⁹significant against entrepreneurial performance.

Competitive ³⁴⁰aggressiveness is found ³⁴¹has ³⁴²positive and significant effect against entrepreneurial performance.

Autonomy is found ³⁴³has ³⁴⁴positive and significant effect against the entrepreneurial performance.

Proactiveness is found positive and significant effect against the entrepreneurial performance.

Considering medium mean of some variables such as entrepreneurial mindset, innovative³²⁹ness, competitive aggressiveness, autonomy, proactive³³⁵ness, as well as entrepreneurial performance of the Indonesian college students, some actions need to be done much more in the future.

Improving the entrepreneurship curriculum is extremely necessary. Inviting and connecting to successful business leaders and entrepreneurs is a must in

³⁴⁵order to ³⁴⁶open and inspire students' ³⁴⁷mind and ³⁴⁸heart to create a startup business.

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1.	risk-taking → risk-taking	Misspelled words	Correctness
2.	risk-taking → risk-taking	Misspelled words	Correctness
3.	competitive	Confused words	Correctness
4.	risk-taking → risk-taking	Misspelled words	Correctness
5.	Key words → Keywords	Confused words	Correctness
6.	universities → university	Incorrect noun number	Correctness
7.	due to the fact that → because, since	Wordy sentences	Clarity
8.	the growth	Determiner use (a/an/the/this, etc.)	Correctness
9.	, in particular,	Comma misuse within clauses	Correctness
10.	is encouraged	Incorrect verb forms	Correctness
11.	university-level	Misspelled words	Correctness
12.	Indonesia,	Comma misuse within clauses	Correctness
13.	an entrepreneurial, or the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
14.	risk-taking → risk-taking	Misspelled words	Correctness
15.	risk-taking → risk-taking	Misspelled words	Correctness
16.	happen → happens	Faulty subject-verb agreement	Correctness
17.	opportunity	Confused words	Correctness
18.	2014),	Comma misuse within clauses	Correctness
19.	referred → referred	Misspelled words	Correctness

20.	of thinking → of thinking	Improper formatting	Correctness
21.	Selesvik et al., → opportunities	Confused words	Correctness
22.	,and → problems	Confused words	Correctness
23.	an innovation	Determiner use (a/an/the/this, etc.)	Correctness
24.	risk taking → risk-taking	Misspelled words	Correctness
25.	undated),	Comma misuse within clauses	Correctness
26.	risk taking → risk-taking	Misspelled words	Correctness
27.	was a → risk-taking	Misspelled words	Correctness
28.	results that → knowledge	Confused words	Correctness
29.	Risk taking → Risk-taking	Misspelled words	Correctness
30.	Risk taking → Risk-taking	Misspelled words	Correctness
31.	stated that the → stated	Confused words	Correctness
32.	the responsive, or a responsive	Determiner use (a/an/the/this, etc.)	Correctness
33.	a attitude	Determiner use (a/an/the/this, etc.)	Correctness
34.	1996),	Comma misuse within clauses	Correctness
35.	behaviour → behavior	Mixed dialects of English	Correctness
36.	talk → talks	Faulty subject-verb agreement	Correctness
37.	the oneself	Determiner use (a/an/the/this, etc.)	Correctness
38.	reflect → deflect	Confused words	Correctness

39.	the same → aggressive	Confused words	Correctness
40.	on	Wrong or missing prepositions	Correctness
41.	ourself → ourselves	Pronoun use	Correctness
42.	himself (in → himself	Confused words	Correctness
43.	2005),	Comma misuse within clauses	Correctness
44.	a vague signs → vague signs, a vague sign	Determiner use (a/an/the/this, etc.)	Correctness
45.	start → starts	Faulty subject-verb agreement	Correctness
46.	to change	Incorrect verb forms	Correctness
47.	a number of → several, some, many	Wordy sentences	Clarity
48.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
49.	provide continuous → achieving	Confused words	Correctness
50.	character → characters	Incorrect noun number	Correctness
51.	non economic → noneconomic, non-economic	Misspelled words	Correctness
52.	positive → positive	Misspelled words	Correctness
53.	culminated → culminate	Modal verbs	Correctness
54.	resulting in, or resulting from	Wrong or missing prepositions	Correctness
55.	affect → affects	Faulty subject-verb agreement	Correctness
56.	required → required, requires	Misspelled words	Correctness
57.	were → was	Faulty subject-verb agreement	Correctness

58.	the innovativeness	Determiner use (a/an/the/this, etc.)	Correctness
59.	affected → affects	Faulty subject-verb agreement	Correctness
60.	risk taking → risk-taking	Misspelled words	Correctness
61.	risk taking → risk-taking	Misspelled words	Correctness
62.	with → to	Wrong or missing prepositions	Correctness
63.	in regard to → regarding, concerning, about, with	Wordy sentences	Clarity
64.	the family, or a family	Determiner use (a/an/the/this, etc.)	Correctness
65.	risk taking → risk-taking	Misspelled words	Correctness
66.	a significant	Determiner use (a/an/the/this, etc.)	Correctness
67.	a risk	Determiner use (a/an/the/this, etc.)	Correctness
68.	risk taking → risk-taking	Misspelled words	Correctness
69.	On the basis of → Based on	Wordy sentences	Clarity
70.	risk taking → risk-taking	Misspelled words	Correctness
71.	significant → significantly	Misuse of modifiers	Correctness
72.	was somehow become, was somehow becoming	Incorrect verb forms	Correctness
73.	Someone with high → Someone	Confused words	Correctness
74.	setting → setting	Misspelled words	Correctness
75.	On the basis of → Based on	Wordy sentences	Clarity

76.	a significant	Determiner use (a/an/the/this, etc.)	Correctness
77.	the autonomy	Determiner use (a/an/the/this, etc.)	Correctness
78.	On the basis of → Based on	Wordy sentences	Clarity
79.	the autonomy	Determiner use (a/an/the/this, etc.)	Correctness
80.	a significant	Determiner use (a/an/the/this, etc.)	Correctness
81.	the proactiveness	Determiner use (a/an/the/this, etc.)	Correctness
82.	On the basis of → Based on	Wordy sentences	Clarity
83.	the proactiveness	Determiner use (a/an/the/this, etc.)	Correctness
84.	between	Confused words	Correctness
85.	where in → wherein	Confused words	Correctness
86.	On the basis of → Based on	Wordy sentences	Clarity
87.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
88.	risk taking → risk-taking	Misspelled words	Correctness
89.	where in → wherein	Confused words	Correctness
90.	risk taking → risk-taking	Misspelled words	Correctness
91.	risk taking → risk-taking	Misspelled words	Correctness
92.	On the basis of → Based on	Wordy sentences	Clarity
93.	Risk taking → Risk-taking	Misspelled words	Correctness

94.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
95.	where in → wherein	Confused words	Correctness
96.	an effort	Determiner use (a/an/the/this, etc.)	Correctness
97.	effort to → an to	Confused words	Correctness
98.	On the basis of → Based on	Wordy sentences	Clarity
99.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
100.	entrprenurial → entrepreneurial	Misspelled words	Correctness
101.	where in → wherein	Confused words	Correctness
102.	the autonomy	Determiner use (a/an/the/this, etc.)	Correctness
103.	On the basis of → Based on	Wordy sentences	Clarity
104.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
105.	openess → openness	Misspelled words	Correctness
106.	openess → openness	Misspelled words	Correctness
107.	where in → wherein	Confused words	Correctness
108.	the proactiveness	Determiner use (a/an/the/this, etc.)	Correctness
109.	have → has	Faulty subject-verb agreement	Correctness
110.	On the basis of → Based on	Wordy sentences	Clarity
111.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness

112.	were → was	Faulty subject-verb agreement	Correctness
113.	the management	Determiner use (a/an/the/this, etc.)	Correctness
114.	were → was	Faulty subject-verb agreement	Correctness
115.	in order to → to	Wordy sentences	Clarity
116.	in accordance with → by, following, per, under	Wordy sentences	Clarity
117.	the management	Determiner use (a/an/the/this, etc.)	Correctness
118.	the Slovin's	Determiner use (a/an/the/this, etc.)	Correctness
119.	was → were	Faulty subject-verb agreement	Correctness
120.	likert → Likert	Misspelled words	Correctness
121.	a likert	Determiner use (a/an/the/this, etc.)	Correctness
122.	In order to → To	Wordy sentences	Clarity
123.	on → in	Wrong or missing prepositions	Correctness
124.	the Table	Determiner use (a/an/the/this, etc.)	Correctness
125.	of respondents → of respondents	Improper formatting	Correctness
126.	the variables	Determiner use (a/an/the/this, etc.)	Correctness
127.	own	Wordy sentences	Clarity
128.	have → has	Faulty subject-verb agreement	Correctness
129.	In addition → Also, Besides	Wordy sentences	Clarity

130.	on → in	Wrong or missing prepositions	Correctness
131.	statement → states	Confused words	Correctness
132.	the different → a different	Determiner use (a/an/the/this, etc.)	Correctness
133.	with → in	Wrong or missing prepositions	Correctness
134.	the innovativeness	Determiner use (a/an/the/this, etc.)	Correctness
135.	have → has	Faulty subject-verb agreement	Correctness
136.	In addition → Also, Besides	Wordy sentences	Clarity
137.	addition,	Comma misuse within clauses	Correctness
138.	on → in	Wrong or missing prepositions	Correctness
139.	his → their	Pronoun use	Correctness
140.	Risk Taking → Risk-Taking	Misspelled words	Correctness
141.	have the courage to → dare to	Wordy sentences	Clarity
142.	take the decision → decide	Wordy sentences	Clarity
143.	Risk Taking → Risk-Taking	Misspelled words	Correctness
144.	risk taking → risk-taking	Misspelled words	Correctness
145.	risk taking → risk-taking	Misspelled words	Correctness
146.	of	Wrong or missing prepositions	Correctness
147.	on → in	Wrong or missing prepositions	Correctness
148.	have the courage to → dare to	Wordy sentences	Clarity

149.	take the decision → decide	Wordy sentences	Clarity
150.	take → takes	Faulty subject-verb agreement	Correctness
151.	that is → which is	Pronoun use	Correctness
152.	the variable	Determiner use (a/an/the/this, etc.)	Correctness
153.	my competitors	Pronoun use	Correctness
154.	have the ability to → can	Wordy sentences	Clarity
155.	a higher, or the higher	Determiner use (a/an/the/this, etc.)	Correctness
156.	the competitive	Determiner use (a/an/the/this, etc.)	Correctness
157.	on → in	Wrong or missing prepositions	Correctness
158.	the statement	Determiner use (a/an/the/this, etc.)	Correctness
159.	ontained → contained	Misspelled words	Correctness
160.	a statement, or the statement	Determiner use (a/an/the/this, etc.)	Correctness
161.	the competitive	Determiner use (a/an/the/this, etc.)	Correctness
162.	is → are	Faulty subject-verb agreement	Correctness
163.	responde → response, respondent	Misspelled words	Correctness
164.	the my	Determiner use (a/an/the/this, etc.)	Correctness
165.	variable autonomy	Improper formatting	Correctness

166.	the autonomy	Determiner use (a/an/the/this, etc.)	Correctness
167.	the " I	Determiner use (a/an/the/this, etc.)	Correctness
168.	the determining	Determiner use (a/an/the/this, etc.)	Correctness
169.	ourself → ourselves	Pronoun use	Correctness
170.	in → on	Wrong or missing prepositions	Correctness
171.	is → are	Faulty subject-verb agreement	Correctness
172.	on → in	Wrong or missing prepositions	Correctness
173.	need → needs	Faulty subject-verb agreement	Correctness
174.	own	Wordy sentences	Clarity
175.	the proactiveness	Determiner use (a/an/the/this, etc.)	Correctness
176.	thehighest → the highest	Misspelled words	Correctness
177.	thehighest average	Improper formatting	Correctness
178.	on → in	Wrong or missing prepositions	Correctness
179.	own	Wordy sentences	Clarity
180.	the statement	Determiner use (a/an/the/this, etc.)	Correctness
181.	to the	Wrong or missing prepositions	Correctness
182.	is → are	Faulty subject-verb agreement	Correctness
183.	new	Wordy sentences	Clarity
184.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness

		etc.)	
185.	on → in	Wrong or missing prepositions	Correctness
186.	the statement	Determiner use (a/an/the/this, etc.)	Correctness
187.	the statement	Determiner use (a/an/the/this, etc.)	Correctness
188.	turnover which → turnover which	Improper formatting	Correctness
189.	an agreement	Determiner use (a/an/the/this, etc.)	Correctness
190.	the outer	Determiner use (a/an/the/this, etc.)	Correctness
191.	a value, or the value	Determiner use (a/an/the/this, etc.)	Correctness
192.	validity,	Punctuation in compound/complex sentences	Correctness
193.	it → they	Pronoun use	Correctness
194.	tiveness → liveness	Misspelled words	Correctness
195.	Risk Taking → Risk-Taking	Misspelled words	Correctness
196.	the value	Determiner use (a/an/the/this, etc.)	Correctness
197.	cross loading → cross-loading	Misspelled words	Correctness
198.	if → of	Confused words	Correctness
199.	cross loading → cross-loading	Misspelled words	Correctness
200.	cross loading → cross-loading	Misspelled words	Correctness
201.	Risk Taking → Risk-Taking	Misspelled words	Correctness

202.	cross-loading → cross-loading	Misspelled words	Correctness
203.	its → their	Pronoun use	Correctness
204.	from → to	Wrong or missing prepositions	Correctness
205.	discriminat → discriminate	Misspelled words	Correctness
206.	the each	Determiner use (a/an/the/this, etc.)	Correctness
207.	the AVE	Determiner use (a/an/the/this, etc.)	Correctness
208.	Risk Taking → Risk-Taking	Misspelled words	Correctness
209.	the Table	Determiner use (a/an/the/this, etc.)	Correctness
210.	12,	Comma misuse within clauses	Correctness
211.	are → is	Faulty subject-verb agreement	Correctness
212.	is construct → is constructed, is constructing	Incorrect verb forms	Correctness
213.	eronbach's → Cronbach's	Misspelled words	Correctness
214.	Constucts → Constructs	Misspelled words	Correctness
215.	eronbach's → Cronbach's	Misspelled words	Correctness
216.	The Table	Determiner use (a/an/the/this, etc.)	Correctness
217.	eronbach's → Cronbach's	Misspelled words	Correctness
218.	eronbach's → Cronbach's	Misspelled words	Correctness
219.	are → is	Faulty subject-verb agreement	Correctness
220.	are → is	Faulty subject-verb agreement	Correctness

221.	Risk Taking → Risk-Taking	Misspelled words	Correctness
222.	the Table	Determiner use (a/an/the/this, etc.)	Correctness
223.	13,	Comma misuse within clauses	Correctness
224.	eronbach's → Cronbach's	Misspelled words	Correctness
225.	are → is	Faulty subject-verb agreement	Correctness
226.	are → is	Faulty subject-verb agreement	Correctness
227.	reflective indicators	Improper formatting	Correctness
228.	is → are	Faulty subject-verb agreement	Correctness
229.	In addition → Also, Besides	Wordy sentences	Clarity
230.	addition,	Comma misuse within clauses	Correctness
231.	are → is	Faulty subject-verb agreement	Correctness
232.	eonstructs is → constructs is	Improper formatting	Correctness
233.	is → are	Faulty subject-verb agreement	Correctness
234.	the R-Square	Determiner use (a/an/the/this, etc.)	Correctness
235.	quite → quite a, a quite	Determiner use (a/an/the/this, etc.)	Correctness
236.	risk taking → risk-taking	Misspelled words	Correctness
237.	ef → to	Wrong or missing prepositions	Correctness
238.	Risk Taking → Risk-Taking	Misspelled words	Correctness
239.	coefficient also	Improper formatting	Correctness
240.	the Table	Determiner use (a/an/the/this, etc.)	Correctness

		etc.)	
241.	The entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
242.	is outweigh → outweighs	Incorrect verb forms	Correctness
243.	give → gives	Faulty subject-verb agreement	Correctness
244.	A higher	Determiner use (a/an/the/this, etc.)	Correctness
245.	it	Pronoun use	Correctness
246.	increasing → increase, be increasing	Modal verbs	Correctness
247.	that claimed	Pronoun use	Correctness
248.	affect → affects	Faulty subject-verb agreement	Correctness
249.	required three basic → required	Confused words	Correctness
250.	infrastructure, → components	Confused words	Correctness
251.	The entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
252.	risk-taking → risk-taking	Misspelled words	Correctness
253.	a t-statistic	Determiner use (a/an/the/this, etc.)	Correctness
254.	risk-taking → risk-taking	Misspelled words	Correctness
255.	A higher	Determiner use (a/an/the/this, etc.)	Correctness
256.	it	Pronoun use	Correctness
257.	increasing → increase, be increasing	Modal verbs	Correctness

258.	risk taking → risk-taking	Misspelled words	Correctness
259.	are → is	Faulty subject-verb agreement	Correctness
260.	that claimed	Pronoun use	Correctness
261.	to	Incorrect verb forms	Correctness
262.	risk taking → risk-taking	Misspelled words	Correctness
263.	risk taking → risk-taking	Misspelled words	Correctness
264.	with → to	Wrong or missing prepositions	Correctness
265.	in regard to → regarding, concerning, about, with	Wordy sentences	Clarity
266.	risk taking → risk-taking	Misspelled words	Correctness
267.	a significant	Determiner use (a/an/the/this, etc.)	Correctness
268.	a Risk	Determiner use (a/an/the/this, etc.)	Correctness
269.	Risk taking → Risk-taking	Misspelled words	Correctness
270.	The entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
271.	give → gives	Faulty subject-verb agreement	Correctness
272.	A higher	Determiner use (a/an/the/this, etc.)	Correctness
273.	mindset, it → mindset	Confused words	Correctness
274.	increasing → increase, be increasing	Modal verbs	Correctness
275.	the aggressive ^{ness}	Determiner use (a/an/the/this, etc.)	Correctness

276.	suggest → suggests	Faulty subject-verb agreement	Correctness
277.	significant → significantly	Misuse of modifiers	Correctness
278.	was somehow become, was somehow becoming	Incorrect verb forms	Correctness
279.	Someone with high → Someone	Confused words	Correctness
280.	settting → setting	Misspelled words	Correctness
281.	The entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
282.	the autonomy	Determiner use (a/an/the/this, etc.)	Correctness
283.	a t-statistic	Determiner use (a/an/the/this, etc.)	Correctness
284.	mindset	Confused words	Correctness
285.	A higher	Determiner use (a/an/the/this, etc.)	Correctness
286.	it	Pronoun use	Correctness
287.	increasing → increase, be increasing	Modal verbs	Correctness
288.	the autonomy	Determiner use (a/an/the/this, etc.)	Correctness
289.	the this	Determiner use (a/an/the/this, etc.)	Correctness
290.	this results → these results	Pronoun use	Correctness
291.	The entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
292.	a t-statistic	Determiner use (a/an/the/this, etc.)	Correctness

293.	give → gives	Faulty subject-verb agreement	Correctness
294.	A higher	Determiner use (a/an/the/this, etc.)	Correctness
295.	mind set, it → mindset	Confused words	Correctness
296.	this results → these results	Determiner use (a/an/the/this, etc.)	Correctness
297.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
298.	a t-statistic	Determiner use (a/an/the/this, etc.)	Correctness
299.	is	Misspelled words	Correctness
300.	a significant	Determiner use (a/an/the/this, etc.)	Correctness
301.	between	Confused words	Correctness
302.	where in → wherein	Confused words	Correctness
303.	the innovativeness	Determiner use (a/an/the/this, etc.)	Correctness
304.	Risk taking → Risk-taking	Misspelled words	Correctness
305.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
306.	a t-statistic	Determiner use (a/an/the/this, etc.)	Correctness
307.	risk taking → risk-taking	Misspelled words	Correctness
308.	risk taking → risk-taking	Misspelled words	Correctness
309.	it	Pronoun use	Correctness

310.	of public → performance	Confused words	Correctness
311.	risk taking → risk-taking	Misspelled words	Correctness
312.	a 2.152	Determiner use (a/an/the/this, etc.)	Correctness
313.	it	Pronoun use	Correctness
314.	public universities → performance	Confused words	Correctness
315.	andand	Misspelled words	Correctness
316.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
317.	a t-statistic	Determiner use (a/an/the/this, etc.)	Correctness
318.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
319.	was found	Incorrect verb forms	Correctness
320.	the autonomy	Determiner use (a/an/the/this, etc.)	Correctness
321.	the entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
322.	is outweigh → outweighs	Incorrect verb forms	Correctness
323.	it	Pronoun use	Correctness
324.	the proactiveness	Determiner use (a/an/the/this, etc.)	Correctness
325.	have → has	Faulty subject-verb agreement	Correctness
326.	it	Pronoun use	Correctness
327.	drawn the conclusions →	Wordy sentences	Clarity

	concluded		
328.	a positive	Determiner use (a/an/the/this, etc.)	Correctness
329.	risk-taking → risk-taking	Misspelled words	Correctness
330.	The entrepreneurial, or An entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
331.	has → to have	Incorrect verb forms	Correctness
332.	a positive	Determiner use (a/an/the/this, etc.)	Correctness
333.	The entrepreneurial, or An entrepreneurial	Determiner use (a/an/the/this, etc.)	Correctness
334.	has → to have	Incorrect verb forms	Correctness
335.	has → to have	Incorrect verb forms	Correctness
336.	a positive	Determiner use (a/an/the/this, etc.)	Correctness
337.	Risk-taking → Risk-taking	Misspelled words	Correctness
338.	has → to have	Incorrect verb forms	Correctness
339.	significant → significance	Confused words	Correctness
340.	agressiveness → aggressiveness	Misspelled words	Correctness
341.	has → to have	Incorrect verb forms	Correctness
342.	a positive	Determiner use (a/an/the/this, etc.)	Correctness
343.	has → to have	Incorrect verb forms	Correctness
344.	a positive	Determiner use (a/an/the/this, etc.)	Correctness

345.	in order to → to	Wordy sentences	Clarity
346.	mind → minds	Incorrect noun number	Correctness
347.	heart → hearts	Incorrect noun number	Correctness
348.	, and	Comma misuse within clauses	Correctness
349.	the need	Determiner use (a/an/the/this, etc.)	Correctness
350.	foreign-owned → foreign-owned	Misspelled words	Correctness
351.	pir	Unknown words	Correctness
352.	muse → misc, music	Misspelled words	Correctness
353.	risk taking → risk-taking	Misspelled words	Correctness
354.	2020,	Comma misuse within clauses	Correctness
355.	, and	Comma misuse within clauses	Correctness
356.	2020,	Comma misuse within clauses	Correctness
357.	jebav	Unknown words	Correctness
358.	2020,	Comma misuse within clauses	Correctness
359.	doi → DOI	Misspelled words	Correctness
360.	2020,	Comma misuse within clauses	Correctness
361.	risk taking → risk-taking	Misspelled words	Correctness
362.	, and	Comma misuse within clauses	Correctness
363.	fit:	Misuse of semicolons, quotation marks, etc.	Correctness
364.	2020,	Comma misuse within clauses	Correctness

**3. Bukti Kirim Revisi, Respon kepada Penelaah,
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(27/03/2021)**

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Entrepreneurial Performance: Lesson Learnt of Indonesia

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ABSTRACT

This research had a purpose to seek an impact of entrepreneurial mindset on innovativeness, risk-taking, competitive aggressiveness, autonomy and proactiveness of bachelor students of management program of public university in Surabaya, Indonesia and to seek their impact on entrepreneurial performance of the students. Entrepreneurship had been popular in university all over the world including Indonesia. However, the entrepreneurial performance of Indonesian students had not increased yet. How to increase it? This study explored the impact of entrepreneurial mindset on innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance of the students. This research was explanatory quantitative for the analyzing technique. It gathered data of 364 respondents, which were Indonesian bachelor students of management program of public university. The results showed that entrepreneurial mindset had a significant impact to innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness which further had enhanced significant positive impact to entrepreneurial performance of the students.

Keywords:

Autonomy, competitive aggressiveness, innovativeness, proactiveness, risk-taking

ABSTRAK

Penelitian ini bertujuan untuk mengetahui dampak pola pikir kewirausahaan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian dan daya proaksi mahasiswa program sarjana manajemen perguruan tinggi negeri di Surabaya, Indonesia dan mencari dampaknya pada kinerja kewirausahaan mahasiswa. Kewirausahaan telah populer di berbagai universitas di seluruh dunia termasuk Indonesia. Namun demikian, kinerja kewirausahaan mahasiswa Indonesia belum meningkat. Bagaimana cara meningkatkannya? Studi ini menggali dampak pola pikir kewirausahaan terhadap inovasi, pengambilan risiko, agresivitas kompetitif, otonomi, dan daya proaksi terhadap kinerja kewirausahaan mahasiswa. Penelitian ini ialah kuantitatif eksplanatif untuk teknik analisisnya. Penelitian ini mengumpulkan data dari 364 responden, yang merupakan mahasiswa sarjana manajemen program of public university. Hasil penelitian menunjukkan bahwa pola pikir kewirausahaan memiliki pengaruh yang signifikan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian, dan daya proaktif yang selanjutnya meningkatkan kinerja kewirausahaan mahasiswa secara positif signifikan.

1. INTRODUCTION

Entrepreneurship is an interesting field as a career. World Economic Forum concludes that over a third of Indonesian young people want to be entrepreneurs (Wood, 2019). On the other hand, the choice as an entrepreneur as career stood at 26% from 20% in 2009 (GMAC, 2014). It adds what shown by the survey against 37,000 students from 14 countries by the International Survey of Collegiate Entrepreneurship in 2006, states that 15.4% of students choose entrepreneur as a career within the first five years after graduation and for the next five years the number increased to 50.1% (Szerb & Imreh, 2007). In this study, we draw some lessons from Indonesia's experience with the focus of the public university students. It offers an interesting case study because the growth of entrepreneurship in the country in general and university students, in particular, do not tally to the entrepreneurial performance. Entrepreneurship which is encouraged in university-level education by various countries in the world and also in Indonesia has not been followed by an increase in entrepreneurial performance of Indonesia's students.

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Gustiawan et al. (2014) indicated that the entrepreneur in Indonesia was still small although the development of entrepreneurship is critical to the country. They stated that 2% was an ideal figure for entrepreneurs in any country from the total population. In the case of Indonesia, 400,000 entrepreneurs were identified of which about 0.08% were low comparatively to America (12%), Singapore (7%), and Malaysia (6%). From policy perspectives, entrepreneurship help to reduce unemployment while the ability of entrepreneurs needs to be developed and enhance particularly among the young people.

Motivated by the importance of entrepreneurial performance, this article set to explores the impact of an entrepreneurial mindset, innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance of undergraduate management students of public universities. The concept of entrepreneurial orientations which contains some variables such as innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are adopted from Miller (1983), Lumpkin and Dess (2001), and Rauch et al. (2009) who found that these variables have positive and significant relationships towards entrepreneurial performance. What happens with students of Indonesia?

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Entrepreneurship starts from mindset. Dhliwayo and Van Vuuren (2011) stated that entrepreneurial mindset was a way of thinking about business and the opportunity to benefit from the uncertain circumstances. According to Valerio et al. (2014), entrepreneurial mindset referred to socio-emotional abilities and overall awareness towards entrepreneurship which related with entrepreneurial motivation and the success that would come as an entrepreneur. Indicators used to describe the entrepreneurial mindset in this study are the ability to identify business opportunities and the amount of thinking to entrepreneurship (Solesvik et al., 2013).

Innovativeness is the ability to innovate. There are several definitions of innovativeness. According to the West and Anderson, innovativeness could be defined as the ability to create effective implementation of new processes and products for the organization and was designed to give you an advantage for the organization and stakeholders in it (Baregheh et al., 2009). Galunic and Rodan claimed that innovativeness was the ability to produce continuous innovation (Quintane et al., 2011). Rogers defined innovativeness as how fast a person or organization in adopting innovations compared against another person or organization (Yildiz et al., 2014). There are three indicators of Innovativeness, which are 1) Openness towards new things. Hurt et al. (1977) described innovativeness as a willingness to try new things (Goldsmith & Foxall, 2003); 2) The level of creativity. Kirton declared that innovative people would search for and combine various information, examines problems they experienced, and produces a thought or idea that is unconventional (Lee, 2008); and 3) The ability to innovate. The power to innovate is a further phase of creativity. It is a comparison between the study in quickly manner with the embodiment of innovation practices, particularly socio-organized practices. The power of innovation is an ability to understand socially, accept, estimates, disseminate, implement, and use innovation (Mikhailova, 2015).

Byrnes (1998) stated that risk-taking is an involvement in a variety of behaviors that were associated with some possibilities against unwanted results (Boyer, 2006). According to Hyrzky and Tunnanen, the definition of risk-taking was a process of decision making and an act without enough knowledge about the obtained results (Noer et al., 2013). According to Wenhong and Liuying (2010), risk-taking was a tendency to take action against something that's rated as risky. There are several indicators to know risk-taking. These indicators include 1) The courage of facing new things. Sung and Hanna stated that young entrepreneurs were more willing to take risks. They have the urge to invest in new goods/services and enter into new markets (Wang & Poutziouris, 2010); and 2) The courage of facing a difficult situation. Brockhaus declared that the tendency of risk-taking is a possibility to receive profit related to success in certain situations. It is required by a person before putting himself on the consequences associated with failure (Wenhong & Liuying, 2010).

Competitive aggressiveness is associated with a way to confront the threats and challenges of the external environment (Gamble et al., 2013). Lumpkin and Dess (2001) stated that the competitive aggressiveness was the intensity of the desire to beat your opponent. Noer et al. (2013) stated that competitive aggressiveness was a responsive attitude towards any threat as a form of resistance and effort to win the competition. According to Chen (1996), there are three indicators of competitive behavior (Stambaugh et al., 2011): 1) Awareness of competitors. Awareness includes analysis of the opponents' strength, stalking the

opponents' competitive actions, and the dissemination of information about the opponent. It is about knowing the condition of opponents; 2) Motivation to compete. There are two characteristics of motivation in the company that owns high competitive aggressiveness. The first is beating competitors who are crucial for aggressive companies. Other companies might choose different things as references. They want to know their performance, internal purpose, and satisfaction with the reached target. The aggressive companies seek information of their competitor. They also compare the performance of their own with the others. The second one is a position of opponents which put oneself in difficult situation as appropriate and necessary steps to improve its performance; and 3) Capability to compete. The intended capability is the ability to deliver attacks to the opponent and deflect the opponent's attack. Part of this ability is an existed resource as funds resulting from past good performance. The company is also aggressively identifying available resources and prioritize the resource to attack while the less aggressive company saw the same resource base. Aggressive companies are better to use the available resources rather than to wait for achieving an optimal point.

According to Metaal, a definition of autonomy was freedom of choice without depending on other parties (Van Gelderen & Jansen, 2006). In another study, Brooke also revealed almost a similar definition that autonomy was the degree of freedom of a person without the need for approval from others (Barnabas and Mekoth, 2010). Feinberg stated that autonomy had at least four meanings: the capacity to govern ourselves, the conditions to set up ourselves, the ideal state to regulate ourselves, and the authority to rule ourselves (Mitcham, 2005). There are several indicators of autonomy, which are 1) Independent. The ability to do things without being effected by other people (Van Gelderen & Jansen, 2006); 2) Self-learning. Ryan and Deci (2000) said that someone independent would involve himself to learn on an ongoing basis about himself (Weinstein et al., 2012); and 3) Determination. It is the ability to set and to decide whether the regulations, targets, and processes that occur in his business (Van Gelderen & Jansen, 2006).

Crant defined proactiveness as taking the initiative to improve the circumstances of (Unsworth & Parker, 2003). According to Wiklund and Shepherd proactiveness was looking far ahead and have the determination to identify and respond to opportunities (Wong, 2012). Teece stated that in the entrepreneurship literatures, proactiveness had definitions as the ability to anticipate and feel a vague signs and act to the needs in the future ahead of existing competitors to gain a competitive advantage (Sundqvist et al., 2012). Crant (2000) stated that proactiveness could be seen from some behaviors. The behaviors could be used as gauges or indicators for proactiveness: The ability to pick the opportunity quickly; Courage start a change; The desirability of creating favorable conditions.

Van Vuuren said that entrepreneurial performance was the achievement of several entrepreneurial objectives (Sebikari, 2014). According to Dollinger, the entrepreneurial performance was something done by an entrepreneur with high initiative to obtain the goal of entrepreneurship (Tseng, 2013). Callaghan and Venter (2011) mentioned that entrepreneurial performance was something that emphasizes on achieving something and provide continous satisfaction. There are several indicators of entrepreneurial performance, which are 1) Need for achievement. McClelland stated that the need for achievement that was often described as a passion to deliver good performance and to gain a feeling of achievement. It is one of the specific characters of entrepreneurship. Collins et al. stated that the need for achievement had a positive correlation with corporate success (Khan et al., 2015). Successful entrepreneurs have high scores in need for achievement (Oosterbeek et al., 2010); 2) The enthusiasm for entrepreneurship. Empirical findings using non-economic indicators to measure the performance namely enthusiasm in work, which represents positive aspect that belonging to someone (Leitao & Franco, 2008), and 3) The realization of the thinking to entrepreneurship. Dhliwayo and Van Vuuren (2011) stated that entrepreneurship would ultimately culminate in the creation or realization of entrepreneurial and strategic management plan that would be resulting in the best performance.

Earlier research claimed that entrepreneurial mindset affects significantly innovativeness. Previous research by Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). Herbig et al. indicate that entrepreneurial mindset affects innovativeness. Other research by Slater states that entrepreneurship tailored to the market-oriented culture will contribute significantly to successful innovation (Ndubisi, 2014; Sutanto et al., 2019). Research by Wang and Zang state that entrepreneurship is one of the major areas relevant in human resource and innovation. Based on the statements, it can be formulated as the following hypothesis:

H_1 : Entrepreneurial mindset significantly affects the innovativeness of students of public universities in Indonesia.

Earlier researches claim that entrepreneurial mindset affect significantly to risk-taking. Wenhong and Liuying stated systems thinking owned by the entrepreneur would affect the tendency of risk-taking. Related to entrepreneur behavior concerning the family business, Zahra states that ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. state that an entrepreneur receives personal financial risk existing but directly benefits from the potential success. It indicates that the entrepreneurial mindset has a significant effect on risk-taking (Sutanto et al., 2019). Base on the statement, it can be formulated as the following hypothesis:

H₂: Entrepreneurial mindset significantly affects the risk-taking of students of the public universities in Indonesia.

Previous researches suggest that entrepreneurial mindset affects significantly competitive aggressiveness. Stevenson's research cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors that effected by the entrepreneurial mindset, competitive aggressiveness could be improved. Someone with high competitive aggressiveness would be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better competition. Neneh (2012) and Sutanto et al. (2019) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. Based on the statement, it can be formulated as the following hypothesis:

H₃: Entrepreneurial mindset significantly affects competitive aggressiveness of students of public universities in Indonesia.

Research by McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies were not able to detect and/or control such acts. Moreover, Sutanto et al. (2019) found that the entrepreneurial mindset had a significant effect on the autonomy of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

H₄: Entrepreneurial mindset significantly affects autonomy of students of the public universities in Indonesia.

Mintzberg said entrepreneurial companies tend to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014). Moreover, Sutanto et al. (2019) found entrepreneurial mindset had a significant effect on the proactiveness of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

H₅: Entrepreneurial mindset significantly affects the proactiveness of students of the public universities in Indonesia.

In their study, Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with the entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It shows that the innovativeness has an impact on performance. Moreover, Khalili et al. (2013) and Sutanto et al. (2019) stated that innovativeness had a significant impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H₆: Innovativeness significantly affects the entrepreneurial performance of students of the public universities in Indonesia.

Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that risk-taking was one of the dimensions associated with the entrepreneurial performance. On the other hand, Chen et al. (2007) stated entrepreneurial orientation had a positive relationship to performance. In the entrepreneurial orientation, there were dimensions of risk-taking. It suggests that risk-taking has an impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H₇: Risk-taking significantly affects the entrepreneurial performance of students of the public universities in Indonesia.

Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that competitive aggressiveness was a dimension that was associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of the competitive aggressiveness. It shows that competitive aggressiveness has an impact on performance. Moreover, Khalili et al. (2013) mentioned that competitive aggressiveness equaled as an effort to lead in performance and beat your opponent. Based on the statement, it can be formulated as the following hypothesis:

H₈: Competitive aggressiveness significantly affects the entrepreneurial performance of students of public

universities in Indonesia.

In their study, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that autonomy was one of the dimensions that associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of autonomy. It shows that autonomy has an impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H₉: Autonomy significantly affects the entrepreneurial performance of students of the public universities in Indonesia.

Costa and McCrae stated that openness to experience was the proactive search and an appreciation for the experience itself as well as tolerance over the exploration of new things (Smith, 2013). On the other hand, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that proactiveness was one dimension that was associated with the entrepreneurial performance. In the study, it was mentioned that openness to experience is one of the factors influencing entrepreneurial performance. It can be concluded that proactiveness has an impact on entrepreneurial performance. Chen et al. (2007) also stated it had a positive relationship between entrepreneurial orientation taking action against performance, wherein the entrepreneurial orientation there was a dimension of proactiveness. It shows that proactiveness has an impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H₁₀: Proactiveness significantly affects the entrepreneurial performance of students of the public universities in Indonesia.

3. RESEARCH METHOD

The population was the bachelor students of the management program of the public universities, Indonesia. The total amount was 4,036 shown in Table 1. It used a purposive sampling. The criteria set out against the respondents to get the results by the research objectives. They were bachelor students of the management program of the public universities in Indonesia, who were/are ever engaged in entrepreneurship. The 364 samples were taken from the population and determined using Slovin's formula. The questionnaires were disseminated directly. Screening of respondents was conducted orally by asking the respondents one by one and strengthened with the existing questions in the questionnaire.

Table 1. Amounts of Bachelor Students of Management Program of Public Universities in Indonesia

University	Amounts of Bachelor Students of Management Program
Airlangga University	2,026
Public University of Surabaya	997
Institute of Technology November 10 th Surabaya	109
National Development University of Veteran East Java	904
TOTAL AMOUNT	4,036

4. DATA ANALYSIS AND DISCUSSION

Variable Descriptive Analysis

All responses of the respondents to each variable were designed by Likert scale from 1 to 5. It was set categories of variables by this formula as shown in Table 2.

$$\text{Range} = \frac{\text{Maximum Value} - \text{Minimum Value}}{\text{Amounts of Category}} \quad [1]$$

$$\text{Range} = \frac{5 - 1}{3}$$

$$\text{Range} = 1.33$$

Table 2. Interval of Mean Scores

Range	Remarks
1.00–2.33	Low
2.34–3.67	Medium
3.67–5.00	High

By using the category, then the evaluation of the answers for each of the variables can be described as follows.

Table 3. The Description of Entrepreneurial Mindset

Item	Statement	Mean	Remark
X _{1.1}	I want to create my own workplace	3.64	Medium
X _{1.2}	I have an aspiration to be an entrepreneur	3.32	Medium
X _{1.3}	I tend to seek business opportunities	3.84	High
X _{1.4}	I can identify a business opportunity based on the needs of consumers in the market	3.57	Medium
<i>Entrepreneurial Mindset (X₁)</i>		3.59	Medium

Table 3 notes that the average value of the entrepreneurial mindset is 3.59. It means that the entrepreneurial mindset of students of the public universities in Surabaya has value medium. Table 3 also notes that the highest average value of the indicators is 3.84 in the statement "I tend to seek business opportunities." The lowest average value of the indicator is 3.32 in the statement "I have an aspiration to be an entrepreneur." These results indicate that respondents tend to seek business opportunities despite the aspiration to be an entrepreneur is not so great. It attributes to the respondent's efforts to earn an income or meet his needs. The difference between the statements "I tend to seek business opportunities" with the other states also far enough to the point of being in the different categories (high, medium, low). It indicates that most respondents tend to think more about how to get a business opportunity in a wide variety of way whether to become entrepreneurs or not.

Table 4. The Description of Innovativeness

Item	Statement	Mean	Remarks
Z _{1.1}	I tend to accept new things around me	3.31	Medium
Z _{1.2}	I have an innovative idea that can be implemented	3.50	Medium
Z _{1.3}	I have unique ideas that haven't been done before	3.34	Medium
Z _{1.4}	I can implement the unique ideas that I have	3.49	Medium
<i>Innovativeness (Z₁)</i>		3.41	Medium

Table 4 shows the average value of innovativeness is 3.41. It means students' innovativeness in the public universities in Surabaya has value medium. Besides, the highest average value of the indicators is 3.50 "I have innovative ideas to be implemented." The lowest average value of the indicator is 3.31 in "I am likely to receive new things around me." These results indicate that respondents have different ideas to be applied in their business. The entire statement is in the category of the medium. It means that innovativeness possibly is improved further.

Table 5. The Description of Risk-Taking

Item	Statement	Mean	Remarks
Z _{2.1}	I dare go to an entirely new place for me all alone	3.65	Medium
Z _{2.2}	I have a willingness to try new things	3.66	Medium
Z _{2.3}	I have the courage to take the decision with minimal information	3.77	High
Z _{2.4}	I felt challenged to do things outside of my comfort zone	3.69	High
Z _{2.5}	I have the desire to conquer my greatest fear	3.71	High
<i>Risk-taking (Z₂)</i>		3.69	High

Based on Table 5 can be noted that the average value of the variable risk-taking is 3.69. It means the risk-taking of students of the public universities in Surabaya has a value of high. The highest average value of the indicator is 3.77 in the statement I dare to decide with minimal information. The lowest average value of the indicator is 3.65 on the statement of I dare go to an entirely new place for me all alone. Respondents take decisions with minimal information and illustrate that the respondent takes their decision quicker. Table 5 also pointed out that the existence of the respondent towards new things is medium. It is similar to the variable description analysis of innovativeness. The respondents need to enhance adaptation to new things.

Table 6. The Description of the Competitive Aggressiveness

Item	Statement	Mean	Remarks
Z _{3.1}	I am trying to find information to know the existence of competitors for my business	3.42	Medium
Z _{3.2}	I am trying to find information about my business competitors	3.31	Medium
Z _{3.3}	I have the desire to grow bigger than competitors	3.37	Medium
Z _{3.4}	I made the difference in the ability with competitors as a motivation to compete	3.41	Medium
Z _{3.5}	I have the ability to compete with business competitors	3.35	Medium
Z _{3.6}	I can overtake the position of the competitors who have higher business position	3.37	Medium
Competitive Aggressiveness (Z ₃)		3.37	Medium

Based on Table 6 can be noted that the average value of the variable competitive aggressiveness is 3.37. It means the competitive aggressiveness of students of the public universities in Surabaya has a value the medium. Besides, the highest average value of the indicator is 3.42 in the statement I am trying to find information to know the existence of competitors for my business. The lowest average value is 3.31 on I am trying to find information about my business competitors. Respondents tend to strive to recognize the surrounding environment despite the statement with the highest value remained in the category of "Medium". All Statements about competitive aggressiveness are medium. It indicates that respondents tend to be less concerned with competitors to compete better. Lack of concern for the competitors to compete can come from ego and focus on their own business.

Table 7. The Description of the Autonomy

Item	Statement	Mean	Remarks
Z _{4.1}	I work without relying on others	3.34	Medium
Z _{4.2}	I am working without affected by other people's assumptions	3.49	Medium
Z _{4.3}	I believe with the my ability to resolve the job	3.41	Medium
Z _{4.4}	I work in a field that I've mastered	3.50	Medium
Z _{4.5}	I can specify the time limit to finish the job	3.45	Medium
Z _{4.6}	I can determine the target of achievement for myself	3.55	Medium
Autonomy (Z ₅)		3.46	Medium

Based on Table 7 can be noted that the average value of the variable autonomy is 3.46. It means the autonomy of students of the public universities in Surabaya is medium. Besides, the highest average value of the indicator is 3.55 can determine the achievement target. The lowest average is 3.34 of I work without relying on others. These results show that determine the targets for ourselves is easier to do than the other statements. All statements regarding autonomy are in the category of the medium. It shows that the autonomy of the respondents needs to improve regarding independence in work.

Table 8. The Description of Proactiveness

Item	Statement	Mean	Remarks
Z _{5.1}	I work with my own initiatives and without being asked	3.64	Medium
Z _{5.2}	I get the job done faster than the given time	3.56	Medium
Z _{5.3}	I prefer to face rather than avoid the problem	3.60	Medium
Proactiveness (Z ₅)		3.60	Medium

Based on Table 8 can be noted that the average value of the proactiveness is 3.60. It means that the proactiveness of students of the public universities in Surabaya is medium. Also, the highest average value of the indicator is 3.64 I am working with the initiative. The lowest average is 3.56 I get the job done faster than the given time. These results indicate that respondents may give rise to the initiative from themselves

to do something. All statements about proactiveness are in the category of the medium. It indicates that respondents can enhance the initiative. Tend to work on time and finish it sooner than the given time.

Table 9. The Description of Entrepreneurial Performance

Item	Statement	Mean	Remarks
Y ₁	I am trying to improve my business turnover	3.33	Medium
Y ₂	I am trying to hit the target that I set for my business	3.57	Medium
Y ₃	I have a high spirit in opening my business	3.55	Medium
Y ₄	I am very happy to have a new business	3.46	Medium
Y ₅	I feel excited when finding a new breakthrough for my business	3.50	Medium
Y ₆	I can apply the ideas of my effort into my business	3.59	Medium
<i>Entrepreneurial Performance (Y)</i>		3.50	Medium

Based on Table 9 can be noted that the average value of the variable entrepreneurial performance is 3.50. It means the entrepreneurial performance of students of the public universities in Surabaya has a value of the medium. Besides, the highest average value of the indicator is 3.59 I can apply the ideas of my effort into my efforts. The lowest average is 3.33 I am trying to improve my business turnover. These results indicate that respondents can reasonably implement ideas into their business. All statements regarding entrepreneurial performance are in the category of the medium. It shows that entrepreneurial performance could still be improved, especially in terms of efforts on increasing turnover. More respondents need to pay close attention to the financial aspects.

Convergent Validity

Campbell and Fisk stated that convergent validity is an agreement between measures of the same construct assessed by different methods (Guo et al., 2008). Convergent validity measurement carries out using the value of the outer-loading. An indicator is said to satisfy the convergent validity if it has the value of outer-loading > 0.5 (Muafi & Roostika, 2014). Here are the values of the outer-loading indicator on each variable dimensions and research.

From Table 10 can be noted that all indicators that make up the research dimensions and variables have a value of outer-loading > 0.5. Based on these results, all indicators have met the convergent validity. They can be used to do further analysis.

Table 10. Outer-Loading Value of Each Indicator

	Autonomy	Competitive Aggressiveness	Entrepreneurial Mindset	Entrepreneurial Performance	Innovativeness	Proactiveness	Risk-taking
A1	0.795914						
A2	0.820101						
A3	0.766828						
A4	0.791210						
A5	0.815840						
A6	0.890515						
CA1		0.826384					
CA2		0.788390					
CA3		0.757231					
CA4		0.770411					
CA5		0.787101					
CA6		0.830609					
EM1			0.847068				
EM2			0.778124				
EM3			0.787740				
EM4			0.889122				
EP1				0.767887			
EP2				0.882425			
EP3				0.782284			
EP4				0.753799			
EP5				0.847037			
EP6				0.907086			
I1					0.833910		

I2	0.838759	
I3	0.828741	
I4	0.844424	
PA1		0.914802
PA2		0.849710
PA3		0.818392
RT1		0.764520
RT2		0.847122
RT3		0.799130
RT4		0.813196
RT5		0.871995

Discriminant Validity

Campbell and Fisk stated that discriminant validity was the distinctiveness of different constructs (Guo et al., 2008). The measurement of discriminant validity carries out using cross-loading value (Henseler et al., 2015). An indicator that satisfies to discriminant validity of the indicator value of cross-loading on dimensions or from the variables is the largest when compared with other variables or dimensions (Muafi & Roostika, 2014). Table 11 shows the value of cross-loading each indicator.

Table 11. Cross-Loading Value

	Autonomy	Competitive Aggressiveness	Entrepreneurial Mindset	Entrepreneurial Performance	Innovativeness	Proactiveness	Risk-taking
A1	0.795914	0.546739	0.546110	0.597485	0.517463	0.473654	0.482839
A2	0.820101	0.636932	0.567808	0.674356	0.653024	0.599733	0.474295
A3	0.766828	0.603595	0.533795	0.654978	0.623765	0.550383	0.508391
A4	0.791210	0.553146	0.516577	0.642986	0.536862	0.560568	0.494318
A5	0.815840	0.539068	0.481304	0.600802	0.541449	0.481319	0.464055
A6	0.890515	0.572540	0.504996	0.670452	0.568687	0.550442	0.465893
CA1	0.597251	0.826384	0.413458	0.588599	0.583278	0.449628	0.413075
CA2	0.568863	0.788390	0.515976	0.577079	0.548098	0.447603	0.453065
CA3	0.454781	0.757231	0.427850	0.508528	0.557980	0.397768	0.375940
CA4	0.581470	0.770411	0.429500	0.642631	0.630459	0.460988	0.419129
CA5	0.573336	0.787101	0.484007	0.611462	0.642640	0.434427	0.424887
CA6	0.587625	0.830609	0.503883	0.639402	0.593314	0.568785	0.520743
EM1	0.578223	0.523911	0.847068	0.601549	0.511237	0.576205	0.726098
EM2	0.469106	0.450495	0.778124	0.483172	0.390101	0.592348	0.646298
EM3	0.480377	0.414348	0.787740	0.586079	0.452395	0.664646	0.725289
EM4	0.600080	0.537760	0.889122	0.662212	0.549196	0.611439	0.803558
EP1	0.690985	0.629075	0.592925	0.767887	0.516021	0.581399	0.571018
EP2	0.710318	0.669900	0.667298	0.882425	0.657511	0.714472	0.665061
EP3	0.547919	0.592988	0.543400	0.782284	0.659590	0.595855	0.529508
EP4	0.575115	0.504559	0.465962	0.753799	0.527506	0.613374	0.534530
EP5	0.630194	0.648269	0.610477	0.847037	0.662474	0.616929	0.612048
EP6	0.734086	0.666199	0.615633	0.907086	0.663536	0.671315	0.634993
I1	0.580683	0.619670	0.491576	0.605705	0.833910	0.473129	0.401179
I2	0.612614	0.682626	0.522052	0.676580	0.838759	0.520045	0.490018
I3	0.519908	0.562908	0.421137	0.567804	0.828741	0.404254	0.387576
I4	0.642745	0.625403	0.494055	0.636961	0.844424	0.517415	0.448238
PA1	0.648007	0.535303	0.679524	0.713894	0.503103	0.914802	0.664298
PA2	0.506749	0.577421	0.652216	0.668834	0.532460	0.849710	0.655503
PA3	0.551079	0.379615	0.568926	0.594728	0.450296	0.818392	0.566120
RT1	0.466286	0.414258	0.692612	0.540781	0.372364	0.623311	0.764520
RT2	0.551430	0.533691	0.805747	0.607792	0.494341	0.593115	0.847122
RT3	0.370777	0.351081	0.637335	0.556424	0.358214	0.598761	0.799130
RT4	0.428922	0.377258	0.658522	0.561112	0.361990	0.625084	0.813196
RT5	0.584088	0.549996	0.793162	0.669312	0.516321	0.572851	0.871995

Table 11 shows that all indicators have the largest cross-loading on their dimension or variables compared to others. Based on these results, the indicators used in this study have had good discriminant validity in drawing up each dimension or variable. Besides using the value of outer loading, testing validity can also be done by looking at the AVE value (Henseler et al., 2015). The indicators used are said to be valid if the value of AVE is above 0.5. The AVE value of indicators are shown in Table 12.

Table 12. AVE Value

Variable	AVE
<i>Entrepreneurial Mindset</i>	0.683518
<i>Innovativeness</i>	0.699696
<i>Risk-taking</i>	0.672476
<i>Competitive Aggressiveness</i>	0.630140
<i>Autonomy</i>	0.663116
<i>Proactiveness</i>	0.742878
<i>Entrepreneurial Performance</i>	0.681464

Table 12 shows the AVE value produced by all reflective indicators is above 0.5. Based on those results, all reflective indicators meet the validity requirements. Further examination is construct-reliability by looking at the output of the composite reliability or Cronbach's alpha. Constructs are pretty reliable if the value of the composite reliability or Cronbach's alpha is greater than or equal to 0.3. But better if above 0.7 (Muafi & Roostika, 2014). Table 13 shows the output of the Cronbach's alpha. The Cronbach's alpha values of all constructs are good if above 0.7. So all reflective indicators are reliable or meet the reliability test.

Table 13. Reliability Test

Variable	Composite Reliability	Cronbach's Alpha
Entrepreneurial Mindset	0.895975	0.844539
Innovativeness	0.903095	0.857253
Risk-taking	0.911069	0.878042
Competitive Aggressiveness	0.910798	0.882372
Autonomy	0.921775	0.897767
Proactiveness	0.896360	0.826114

Table 13 shows the value of Cronbach's alpha of all constructs is good if above 0.7. So all reflective indicators are reliable or meet the reliability test. Besides, the composite-reliability values of all reflective constructs are also good. So all the reflective indicators are reliable or meet the test of reliability.

R-Square

Table 14 shows the *R-Square* value of each variable. Risk-taking and proactiveness have a high magnitude of the research model (77% and 54%). This result explains that the Indonesian students have strong entrepreneurial characteristics on those two. It may be the education of entrepreneurship has a positive contribution in building their entrepreneurship. Moreover, the *R-Square* value of Entrepreneurial Performance is very high. It means that the magnitude of entrepreneurial performance is 80.3%. Autonomy, competitive aggressiveness, innovativeness, proactiveness, and risk-taking explain it. The rest amounted of 19.7% are explained by other factors outside the model that is examined.

Table 14. R-square Value

Variable	R-Square
Entrepreneurial Mindset:	
Innovativeness	0.335497
Risk-taking	0.774349
Competitive Aggressiveness	0.341781
Autonomy	0.418010
Proactiveness	0.544001
Entrepreneurial Performance	0.803013

Hypothesis testing is a scientific process to examine if a hypothesis is plausible or not. Hypothesis testing is calculated by searching for the quantity and value of the effect coefficient also *t-statistic* (Park, 2008). Research hypothesis is acceptable if the value of the *t-statistic* > 1.96. Here are the coefficients of effect (original sample estimate) and the value of the *t-statistic* of each hypothesis on the inner model shown in Table 15. The results support positively the previous one done by Sutanto et al. (2019).

The entrepreneurial mindset has a coefficient of effect on the innovativeness of 0.579 with a *t-statistic* of 7.696 outweighs 1.96. This result indicates that entrepreneurial mindset has significant effects against

innovativeness. A higher entrepreneurial mindset will increase the innovativeness of students of public universities. Based on this result, H_1 is accepted. It supports the earlier researches claimed that entrepreneurial mindset affects significantly to innovativeness. Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). He indicated that entrepreneurial mindset affected innovativeness. Moreover, Slater stated that entrepreneurship tailored to the market-oriented culture contribute significantly to the successful innovation (Ndubisi, 2014) as well as the research by Wang and Zang (2005) which suggested entrepreneurship was one of the many areas that are relevant in the human resource and innovation.

Table 15. Coefficients of Effect and *t*-statistic

Hypothesis	Effect	Coefficient	<i>t</i> -statistic	Decision
H_1	EM --> I	0.579221	7.696174	Accepted
H_2	EM --> RT	0.879971	37.235113	Accepted
H_3	EM --> CA	0.584621	7.892138	Accepted
H_4	EM --> P	0.737564	14.584267	Accepted
H_5	EM --> A	0.646537	9.845969	Accepted
H_6	I --> EP	0.194541	2.039976	Accepted
H_7	RT --> EP	0.191298	2.68042	Accepted
H_8	CA --> EP	0.185336	2.152761	Accepted
H_9	P --> EP	0.247053	2.389091	Accepted
H_{10}	A --> EP	0.242796	2.112903	Accepted

The entrepreneurial mindset has a coefficient of effect on risk-taking of 0.879 with a *t*-statistic of 37.235 outweighs 1.96. This result indicates that entrepreneurial mindset has a significant effect towards risk-taking. A higher entrepreneurial mindset increases the risk-taking of students of public universities. Based on this result, H_2 is accepted. It supports the earlier researches that claimed that entrepreneurial mindset affects risk-taking. Wenhong and Liuying (2010) stated systems thinking owned by entrepreneurs would affect their tendency in risk-taking. Zahra says industrial entrepreneur ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. (2005) stated that an entrepreneur received personal financial risk existing in the ownership of a business but was also directly benefit from the potential success of that business. All these findings indicate that the entrepreneurial mindset has a significant effect on risk-taking.

The entrepreneurial mindset has a coefficient of effect on competitive aggressiveness of 0.585 with a *t*-statistic of 7.89 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against competitive aggressiveness. A higher entrepreneurial mindset increases the competitive aggressiveness of students of public universities. Based on this result, H_3 is accepted. It supports previous research that suggests that entrepreneurial mindset affects competitive aggressiveness. Stevenson's research (1990), cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors, the entrepreneurial mindset improves competitive aggressiveness. Someone with high competitive aggressiveness will be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better performance. Neneh (2012) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization.

The entrepreneurial mindset has a coefficient of effect on the autonomy of 0.647 with *t*-statistic of 9.846 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect on autonomy. A higher entrepreneurial mindset increases the autonomy of students of public universities. Based on this result, H_4 is accepted. This result supports research of McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies are not able to detect and or control such acts.

The entrepreneurial mindset has a coefficient of effect on the proactiveness of 0.738 with a *t*-statistic of 14.584 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against proactiveness. A higher entrepreneurial mindset increases the proactiveness of students of public universities. Based on this result, H_5 is accepted. This result supports what Mintzberg found that entrepreneurial companies tended to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014).

The innovativeness has a coefficient of effect on the entrepreneurial performance of 0.195 with *t-statistic* of 2.0399 greater than 1.96. This result shows that there is a significant effect of innovativeness on entrepreneurial performance. A higher innovativeness increases the entrepreneurial performance of students of public universities. Based on this result, H_6 is accepted. This result supports previous scholars. Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It shows that innovativeness has an impact on performance. Khalili et al. (2013) and Sutanto et al. (2019) said innovativeness had a significant effect on performance.

The risk-taking has a coefficient of effect on the entrepreneurial performance of 0.191 with *t-statistic* of 2.68 greater than 1.96. This result shows that risk-taking providing a significant effect against the entrepreneurial performance. A higher risk-taking increases the entrepreneurial performance of students of public universities. Based on this result, H_7 is accepted. It supports the studies of Chen et al. (2007), Callaghan and Venter (2011), and Sutanto et al. (2019). It suggests that risk-taking has an impact on performance.

The competitive aggressiveness has a coefficient of effect on the entrepreneurial performance of 0.185 with *t-statistic* of 2.152 greater than 1.96. This result suggests that the competitive aggressiveness has a significant effect on entrepreneurial performance. A higher competitive aggressiveness increases the entrepreneurial performance in of students of public universities. Based on this result, H_8 is accepted. The result supports the studies of Chen *et al.* (2007), Callaghan and Venter (2011), Khalili et al. (2013), and and Sutanto et al. (2019). The competitive aggressiveness leads in performance.

Autonomy has a coefficient of effect on the entrepreneurial performance of 0.247 with *t-statistic* of 2.389 greater than 1.96. This result explains that autonomy has a significant effect on entrepreneurial performance. A higher autonomy increases the entrepreneurial of students of public universities. Based on this result, H_9 is accepted. It supports positively what was found by Callaghan and Venter (2011), Chen et al. (2007), and Sutanto et al. (2019) previously that autonomy had an impact on performance.

The proactiveness has a coefficient of effect on the entrepreneurial performance of 0.243 with a *t-statistic* of 2.112 outweighs 1.96. This result explains that the proactiveness has a significant effect on entrepreneurial performance. A higher proactiveness increases the entrepreneurial performance of students of public universities. Based on this result, H_{10} is accepted. It convinces the previous findings of Costa and McCrae (1992) (in Smith, 2013), Callaghan and Venter (2011), Chen et al. (2007), and Sutanto et al. (2019). It shows that proactiveness has an impact on performance.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Based on the results of this research then it can be concluded the conclusions as follows:

- 1) Entrepreneurial mindset has a positive and significant effect against innovativeness.
- 2) Entrepreneurial mindset has a positive and significant effect against risk-taking.
- 3) Entrepreneurial mindset has a positive and significant effect against competitive aggressiveness.
- 4) Entrepreneurial mindset has a positive and significant effect against autonomy.
- 5) Entrepreneurial mindset has a positive and significant effect against proactiveness.
- 6) Innovativeness is found has and significant effect against entrepreneurial performance.
- 7) Risk-taking has a positive and influential significance against entrepreneurial performance.
- 8) Competitive aggressiveness has a positive and significant effect against entrepreneurial performance.
- 9) Autonomy has a positive and significant effect against the entrepreneurial performance.
- 10) Proactiveness has a positive and significant effect against the entrepreneurial performance.

Some variables such as entrepreneurial mindset, innovativeness, competitive aggressiveness, autonomy, proactiveness, as well as entrepreneurial performance of the Indonesian college students have medium mean. Some actions need to be done much more in the future. Improving the entrepreneurship curriculum is extremely necessary. Inviting and connecting to successful business leaders and entrepreneurs is a must. It will open and inspire students' minds and hearts to create a startup business.

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▪ **Entrepreneurial Performance: Lesson Learnt of Indonesia (1481)**

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The manuscript fit the journal's scope and aim	V	
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D. EDITOR COMMENT

Why this study focus on that variables (entrepreneurial mindset, innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness)? How the originality of this study?

Lack of implication for management practices and suggestion especially for future research directions.

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Literature Review			√		
Methodology			√		
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Title

- Considering that this study specify student as the main object, revising the title using word “student” is needed.
- I think there is grammatical (wording error) in the title. Please address the issue!

Abstract

- It is better to use a present tense in abstract, except research methodology section (past tense). The authors mostly used past or past perfect tenses and it is quite unsuitable.
- Please include a brief overview regarding the theoretical and practical contributions of this study in the abstract.

Introduction

- The motivation of this study is clear but the contributions of this study is still hidden.

- Therefore, the authors are motivated to give more detail regarding the contribution of the current research both theoretically and practically.

Theoretical framework and hypotheses

- I think the authors have done a great job in this section by citing relevant sources to support the argumentations. However, most of the resources are needed to be updated, particularly after 2016. Please address these issues!
- I suggest the authors divide this section into two subsections: Theoretical development and hypotheses development.
- Then, in order to give a clear highlight of the main constructs of this study, the authors are encouraged to provide a figure of conceptual model of the current research.

Research method

- The research methodology part is too short and need more detail explanation in some points:
 - a. Regarding the population, please provide the source of the data.
 - b. Why the authors collect the data in Surabaya only? Does it represent the total population?
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Data analysis and discussion

- In presenting the reliability and validity test, the authors can combine Table 10 – Table 13 into one table. It will be more efficient and easier to understand.
- To ascertain the robustness of the model, providing a report of the model fit evaluation is a must. Please address the issue!

Conclusion, implication, suggestion, and limitations

The authors have missed several key points in the sections:

- Please clearly explain both theoretical contributions and practical implication of this research.
- As we know that there is no perfect research, then please provide a discussion of limitation study and future research directions.

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- Please use a reference management tool to organize the reference list to make it more consistent.
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- The communication quality is fair but there are many grammatical errors found in the current version, please send it to a professional English proofreader to ascertain no language issues found after revision process.

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Entrepreneurial Performance: Lesson Learnt of Indonesia

ABSTRACT

This research had a purpose to seek an impact of entrepreneurial mindset on innovativeness, risk-taking, competitive aggressiveness, autonomy and proactiveness of bachelor students of management program of public university in Surabaya, Indonesia and to seek their impact on entrepreneurial performance of the students. Entrepreneurship had been popular in university all over the world including Indonesia. However, the entrepreneurial performance of Indonesian students had not increased yet. How to increase it? This study explored the impact of entrepreneurial mindset on innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance of the students. This research was explanatory quantitative for the analyzing technique. It gathered data of 364 respondents, which were Indonesian bachelor students of management program of public university. The results showed that entrepreneurial mindset had a significant impact to innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness which further had enhanced significant positive impact to entrepreneurial performance of the students.

Keywords:

Autonomy, competitive aggressiveness, innovativeness, proactiveness, risk-taking

ABSTRAK

Penelitian ini bertujuan untuk mengetahui dampak pola pikir kewirausahaan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian dan daya proaksi mahasiswa program sarjana manajemen perguruan tinggi negeri di Surabaya, Indonesia dan mencari dampaknya pada kinerja kewirausahaan mahasiswa. Kewirausahaan telah populer di berbagai universitas di seluruh dunia termasuk Indonesia. Namun demikian, kinerja kewirausahaan mahasiswa Indonesia belum meningkat. Bagaimana cara meningkatkannya? Studi ini menggali dampak pola pikir kewirausahaan terhadap inovasi, pengambilan risiko, agresivitas kompetitif, otonomi, dan daya proaksi terhadap kinerja kewirausahaan mahasiswa. Penelitian ini ialah kuantitatif eksplanatif untuk teknik analisisnya. Penelitian ini mengumpulkan data dari 364 responden, yang merupakan mahasiswa sarjana manajemen program of public university. Hasil penelitian menunjukkan bahwa pola pikir kewirausahaan memiliki pengaruh yang signifikan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian, dan daya proaktif yang selanjutnya meningkatkan kinerja kewirausahaan mahasiswa secara positif signifikan.

1. INTRODUCTION

Entrepreneurship is an interesting field as a career. World Economic Forum concludes that over a third of Indonesian young people want to be entrepreneurs (Wood, 2019). On the other hand, the choice as an entrepreneur as career stood at 26% from 20% in 2009 (GMAC, 2014). It adds what shown by the survey against 37,000 students from 14 countries by the International Survey of Collegiate Entrepreneurship in 2006, states that 15.4% of students choose entrepreneur as a career within the first five years after graduation and for the next five years the number increased to 50.1% (Szerb & Imreh, 2007). In this study, we draw some lessons from Indonesia's experience with the focus of the public university students. It offers an interesting case study because the growth of entrepreneurship in the country in general and university students, in particular, do not tally to the entrepreneurial performance. Entrepreneurship which is encouraged in university-level education by various countries in the world and also in Indonesia has not been followed by an increase in entrepreneurial performance of Indonesia's students.

Gustiawan et al. (2014) indicated that the entrepreneur in Indonesia was still small although the development of entrepreneurship is critical to the country. They stated that 2% was an ideal figure for entrepreneurs in any country from the total population. In the case of Indonesia, 400,000 entrepreneurs were identified of which about 0.08% were low comparatively to America (12%), Singapore (7%), and Malaysia (6%). From policy perspectives, entrepreneurship help to reduce unemployment while the ability of entrepreneurs needs to be developed and enhance particularly among the young people.

Motivated by the importance of entrepreneurial performance, this article set to explores the impact of an entrepreneurial mindset, innovativeness, risk-taking, competitive aggressiveness, autonomy, and proac-

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* Corresponding author, email address: esutanto@petra.ac.id

tiveness on entrepreneurial performance of undergraduate management students of public universities. The concept of entrepreneurial orientations which contains some variables such as innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are adopted from Miller (1983), Lumpkin and Dess (2001), and Rauch et al. (2009) who found that these variables have positive and significant relationships towards entrepreneurial performance. What happens with students of Indonesia?

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Entrepreneurship starts from mindset. Dhliwayo and Van Vuuren (2011) stated that entrepreneurial mindset was a way of thinking about business and the opportunity to benefit from the uncertain circumstances. According to Valerio et al. (2014), entrepreneurial mindset referred to socio-emotional abilities and overall awareness towards entrepreneurship which related with entrepreneurial motivation and the success that would come as an entrepreneur. Indicators used to describe the entrepreneurial mindset in this study are the ability to identify business opportunities and the amount of thinking to entrepreneurship (Solevik et al., 2013).

Innovativeness is the ability to innovate. There are several definitions of innovativeness. According to the West and Anderson, innovativeness could be defined as the ability to create effective implementation of new processes and products for the organization and was designed to give you an advantage for the organization and stakeholders in it (Baregheh et al., 2009). Galunic and Rodan claimed that innovativeness was the ability to produce continuous innovation (Quintane et al., 2011). Rogers defined innovativeness as how fast a person or organization in adopting innovations compared against another person or organization (Yildiz et al., 2014). There are three indicators of Innovativeness, which are 1) Openness towards new things. Hurt et al. (1977) described innovativeness as a willingness to try new things (Goldsmith & Foxall, 2003); 2) The level of creativity. Kirton declared that innovative people would search for and combine various information, examines problems they experienced, and produces a thought or idea that is unconventional (Lee, 2008); and 3) The ability to innovate. The power to innovate is a further phase of creativity. It is a comparison between the study in quickly manner with the embodiment of innovation practices, particularly socio-organized practices. The power of innovation is an ability to understand socially, accept, estimates, disseminate, implement, and use innovation (Mikhailova, 2015).

Byrnes (1998) stated that risk-taking is an involvement in a variety of behaviors that were associated with some possibilities against unwanted results (Boyer, 2006). According to Hyrsky and Tunnanen, the definition of risk-taking was a process of decision making and an act without enough knowledge about the obtained results (Noer et al., 2013). According to Wenhong and Liuying (2010), risk-taking was a tendency to take action against something that's rated as risky. There are several indicators to know risk-taking. These indicators include 1) The courage of facing new things. Sung and Hanna stated that young entrepreneurs were more willing to take risks. They have the urge to invest in new goods/services and enter into new markets (Wang & Poutziouris, 2010); and 2) The courage of facing a difficult situation. Brockhaus declared that the tendency of risk-taking is a possibility to receive profit related to success in certain situations. It is required by a person before putting himself on the consequences associated with failure (Wenhong & Liuying, 2010).

Competitive aggressiveness is associated with a way to confront the threats and challenges of the external environment (Gamble et al., 2013). Lumpkin and Dess (2001) stated that the competitive aggressiveness was the intensity of the desire to beat your opponent. Noer et al. (2013) stated that competitive aggressiveness was a responsive attitude towards any threat as a form of resistance and effort to win the competition. According to Chen (1996), there are three indicators of competitive behavior (Stambaugh et al., 2011): 1) Awareness of competitors. Awareness includes analysis of the opponents' strength, stalking the opponents' competitive actions, and the dissemination of information about the opponent. It is about knowing the condition of opponents; 2) Motivation to compete. There are two characteristics of motivation in the company that owns high competitive aggressiveness. The first is beating competitors who are crucial for aggressive companies. Other companies might choose different things as references. They want to know their performance, internal purpose, and satisfaction with the reached target. The aggressive companies seek information of their competitor. They also compare the performance of their own with the others. The second one is a position of opponents which put oneself in difficult situation as appropriate and necessary steps to improve its performance; and 3) Capability to compete. The intended capability is the ability to deliver attacks to the opponent and deflect the opponent's attack. Part of this ability is an existed resource

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as funds resulting from past good performance. The company is also aggressively identifying available resources and prioritize the resource to attack while the less aggressive company saw the same resource base. Aggressive companies are better to use the available resources rather than to wait for achieving an optimal point.

According to Metaal, a definition of autonomy was freedom of choice without depending on other parties (Van Gelderen & Jansen, 2006). In another study, Brooke also revealed almost a similar definition that autonomy was the degree of freedom of a person without the need for approval from others (Barnabas and Mekoth, 2010). Feinberg stated that autonomy had at least four meanings: the capacity to govern ourselves, the conditions to set up ourselves, the ideal state to regulate ourselves, and the authority to rule ourselves (Mitcham, 2005). There are several indicators of autonomy, which are 1) Independent. The ability to do things without being effected by other people (Van Gelderen & Jansen, 2006); 2) Self-learning. Ryan and Deci (2000) said that someone independent would involve himself to learn on an ongoing basis about himself (Weinstein et al., 2012); and 3) Determination. It is the ability to set and to decide whether the regulations, targets, and processes that occur in his business (Van Gelderen & Jansen, 2006).

Crant defined proactiveness as taking the initiative to improve the circumstances of (Unsworth & Parker, 2003). According to Wiklund and Shepherd proactiveness was looking far ahead and have the determination to identify and respond to opportunities (Wong, 2012). Teece stated that in the entrepreneurship literatures, proactiveness had definitions as the ability to anticipate and feel a vague signs and act to the needs in the future ahead of existing competitors to gain a competitive advantage (Sundqvist et al., 2012). Crant (2000) stated that proactiveness could be seen from some behaviors. The behaviors could be used as gauges or indicators for proactiveness: The ability to pick the opportunity quickly; Courage start a change; The desirability of creating favorable conditions.

Van Vuuren said that entrepreneurial performance was the achievement of several entrepreneurial objectives (Sebikari, 2014). According to Dollinger, the entrepreneurial performance was something done by an entrepreneur with high initiative to obtain the goal of entrepreneurship (Tseng, 2013). Callaghan and Venter (2011) mentioned that entrepreneurial performance was something that emphasizes on achieving something and provide continuous satisfaction. There are several indicators of entrepreneurial performance, which are 1) Need for achievement. McClelland stated that the need for achievement that was often described as a passion to deliver good performance and to gain a feeling of achievement. It is one of the specific characters of entrepreneurship. Collins et al. stated that the need for achievement had a positive correlation with corporate success (Khan et al., 2015). Successful entrepreneurs have high scores in need for achievement (Oosterbeek et al., 2010); 2) The enthusiasm for entrepreneurship. Empirical findings using non-economic indicators to measure the performance namely enthusiasm in work, which represents positive aspect that belonging to someone (Leitao & Franco, 2008), and 3) The realization of the thinking to entrepreneurship. Dhliwayo and Van Vuuren (2011) stated that entrepreneurship would ultimately culminate in the creation or realization of entrepreneurial and strategic management plan that would be resulting in the best performance.

Earlier research claimed that entrepreneurial mindset affects significantly innovativeness. Previous research by Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). Herbig et al. indicate that entrepreneurial mindset affects innovativeness. Other research by Slater states that entrepreneurship tailored to the market-oriented culture will contribute significantly to successful innovation (Ndubisi, 2014; Sutanto et al., 2019). Research by Wang and Zang state that entrepreneurship is one of the major areas relevant in human resource and innovation. Based on the statements, it can be formulated as the following hypothesis:

H₁: Entrepreneurial mindset significantly affects the innovativeness of students of public universities in Indonesia.

Earlier researches claim that entrepreneurial mindset affect significantly to risk-taking. Wenhong and Liuying stated systems thinking owned by the entrepreneur would affect the tendency of risk-taking. Related to entrepreneur behavior concerning the family business, Zahra states that ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. state that an entrepreneur receives personal financial risk existing but directly benefits from the potential success. It indicates that the entrepreneurial mindset has a significant effect on risk-taking (Sutanto et al., 2019). Based on the statement, it can be formulated as the following hypothesis:

H₂: Entrepreneurial mindset significantly affects the risk-taking of students of the public universities in In-

donesia.

Previous researches suggest that entrepreneurial mindset affects significantly competitive aggressiveness. Stevenson's research cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors that effected by the entrepreneurial mindset, competitive aggressiveness could be improved. Someone with high competitive aggressiveness would be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better competition. Neneh (2012) and Sutanto et al. (2019) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. Based on the statement, it can be formulated as the following hypothesis:

H₃: Entrepreneurial mindset significantly affects competitive aggressiveness of students of public universities in Indonesia.

Research by McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies were not able to detect and/or control such acts. Moreover, Sutanto et al. (2019) found that the entrepreneurial mindset had a significant effect on the autonomy of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

H₄: Entrepreneurial mindset significantly affects autonomy of students of the public universities in Indonesia.

Mintzberg said entrepreneurial companies tend to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014). Moreover, Sutanto et al. (2019) found entrepreneurial mindset had a significant effect on the proactiveness of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

H₅: Entrepreneurial mindset significantly affects the proactiveness of students of the public universities in Indonesia.

In their study, Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with the entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It shows that the innovativeness has an impact on performance. Moreover, Khalili et al. (2013) and Sutanto et al. (2019) stated that innovativeness had a significant impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H₆: Innovativeness significantly affects the entrepreneurial performance of students of the public universities in Indonesia.

Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that risk-taking was one of the dimensions associated with the entrepreneurial performance. On the other hand, Chen et al. (2007) stated entrepreneurial orientation had a positive relationship to performance. In the entrepreneurial orientation, there were dimensions of risk-taking. It suggests that risk-taking has an impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H₇: Risk-taking significantly affects the entrepreneurial performance of students of the public universities in Indonesia.

Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that competitive aggressiveness was a dimension that was associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of the competitive aggressiveness. It shows that competitive aggressiveness has an impact on performance. Moreover, Khalili et al. (2013) mentioned that competitive aggressiveness equaled as an effort to lead in performance and beat your opponent. Based on the statement, it can be formulated as the following hypothesis:

H₈: Competitive aggressiveness significantly affects the entrepreneurial performance of students of public universities in Indonesia.

In their study, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that autonomy was one of the dimensions that associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of autonomy. It shows that autonomy has an impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H_9 : Autonomy significantly affects the entrepreneurial performance of students of the public universities in Indonesia.

Costa and McCrae stated that openness to experience was the proactive search and an appreciation for the experience itself as well as tolerance over the exploration of new things (Smith, 2013). On the other hand, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that proactiveness was one dimension that was associated with the entrepreneurial performance. In the study, it was mentioned that openness to experience is one of the factors influencing entrepreneurial performance. It can be concluded that proactiveness has an impact on entrepreneurial performance. Chen et al. (2007) also stated it had a positive relationship between entrepreneurial orientation taking action against performance, wherein the entrepreneurial orientation there was a dimension of proactiveness. It shows that proactiveness has an impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H_{10} : Proactiveness significantly affects the entrepreneurial performance of students of the public universities in Indonesia.

3. RESEARCH METHOD

The population was the bachelor students of the management program of the public universities, Indonesia. The total amount was 4,036 shown in Table 1. It used a purposive sampling. The criteria set out against the respondents to get the results by the research objectives. They were bachelor students of the management program of the public universities in Indonesia, who were/are ever engaged in entrepreneurship. The 364 samples were taken from the population and determined using Slovin's formula. The questionnaires were disseminated directly. Screening of respondents was conducted orally by asking the respondents one by one and strengthened with the existing questions in the questionnaire.

Table 1. Amounts of Bachelor Students of Management Program of Public Universities in Indonesia

University	Amounts of Bachelor Students of Management Program
Airlangga University	2,026
Public University of Surabaya	997
Institute of Technology November 10 th Surabaya	109
National Development University of Veteran East Java	904
TOTAL AMOUNT	4,036

4. DATA ANALYSIS AND DISCUSSION

Variable Descriptive Analysis

All responses of the respondents to each variable were designed by Likert scale from 1 to 5. It was set categories of variables by this formula as shown in Table 2.

$$\text{Range} = \frac{\text{Maximum Value} - \text{Minimum Value}}{\text{Amounts of Category}} \quad [1]$$

$$\text{Range} = \frac{5 - 1}{3}$$

$$\text{Range} = 1.33$$

Table 2. Interval of Mean Scores

Range	Remarks
1.00–2.33	Low
2.34–3.67	Medium
3.67–5.00	High

By using the category, then the evaluation of the answers for each of the variables can be described as follows.

Table 3. The Description of Entrepreneurial Mindset

I	Statement	M	Re-
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Commented [K4]:

Commented [K5R4]: The presentation of data on the table needs to be fixed there are some items are not yet clear. Elaboration of the results of this study is required with the latest research results

Item	Statement	Mean	Mark
1.1	X I want to create my own workplace	.64	3 m
1.2	X I have an aspiration to be an entrepreneur	.32	3 m
1.3	X I tend to seek business opportunities	.84	3 High
1.4	X I can identify a business opportunity based on the needs of consumers in the market	.57	3 m
Entrepreneurial Mindset (X_1)		.59	3 m

Table 3 notes that the average value of the entrepreneurial mindset is 3.59. It means that the entrepreneurial mindset of students of the public universities in Surabaya has value medium. Table 3 also notes that the highest average value of the indicators is 3.84 in the statement "I tend to seek business opportunities." The lowest average value of the indicator is 3.32 in the statement "I have an aspiration to be an entrepreneur." These results indicate that respondents tend to seek business opportunities despite the aspiration to be an entrepreneur is not so great. It attributes to the respondent's efforts to earn an income or meet his needs. The difference between the statements "I tend to seek business opportunities" with the other states also far enough to the point of being in the different categories (high, medium, low). It indicates that most respondents tend to think more about how to get a business opportunity in a wide variety of way whether to become entrepreneurs or not.

Table 4. The Description of Innovativeness

I	Statement	Mean	Remarks
1.1	Z I tend to accept new things around me	.31	3 Me dium
1.2	Z I have an innovative idea that can be implemented	.50	3 Me dium
1.3	Z I have unique ideas that haven't been done before	.34	3 Me dium
1.4	Z I can implement the unique ideas that I have	.49	3 Me dium
Innovativeness (Z_1)		.41	3 Me dium

Table 4 shows the average value of innovativeness is 3.41. It means students' innovativeness in the public universities in Surabaya has value medium. Besides, the highest average value of the indicators is 3.50 "I have innovative ideas to be implemented." The lowest average value of the indicator is 3.31 in "I am likely to receive new things around me." These results indicate that respondents have different ideas to be applied in their business. The entire statement is in the category of the medium. It means that innovativeness possibly is improved further.

Table 5. The Description of Risk-Taking

I	Statement	Mean	Remarks
2.1	Z I dare go to an entirely new place for me all alone	.65	3 Me dium
2.2	Z I have a willingness to try new things	.66	3 Me dium
2.3	Z I have the courage to take the decision with minimal information	.77	3 Hig h
2.4	Z I felt challenged to do things outside of my comfort zone	.69	3 Hig h
2.5	Z I have the desire to conquer my greatest fear	.71	3 Hig h
Risk-taking (Z_2)		3	Hig h

.69 h

Based on Table 5 can be noted that the average value of the variable risk-taking is 3.69. It means the risk-taking of students of the public universities in Surabaya has a value of high. The highest average value of the indicator is 3.77 in the statement I dare to decide with minimal information. The lowest average value of the indicator is 3.65 on the statement of I dare go to an entirely new place for me all alone. Respondents take decisions with minimal information and illustrate that the respondent takes their decision quicker. Table 5 also pointed out that the existence of the respondent towards new things is medium. It is similar to the variable description analysis of innovativeness. The respondents need to enhance adaptation to new things.

Table 6. The Description of the Competitive Aggressiveness

Item	Statement	Mean	Remarks
Z _{3.1}	I am trying to find information to know the existence of competitors for my business	3.42	Medium
Z _{3.2}	I am trying to find information about my business competitors	3.31	Medium
Z _{3.3}	I have the desire to grow bigger than competitors	3.37	Medium
Z _{3.4}	I made the difference in the ability with competitors as a motivation to compete	3.41	Medium
Z _{3.5}	I have the ability to compete with business competitors	3.35	Medium
Z _{3.6}	I can overtake the position of the competitors who have higher business position	3.37	Medium
Competitive Aggressiveness (Z ₃)		3.37	Medium

Based on Table 6 can be noted that the average value of the variable competitive aggressiveness is 3.37. It means the competitive aggressiveness of students of the public universities in Surabaya has a value the medium. Besides, the highest average value of the indicator is 3.42 in the statement I am trying to find information to know the existence of competitors for my business. The lowest average value is 3.31 on I am trying to find information about my business competitors. Respondents tend to strive to recognize the surrounding environment despite the statement with the highest value remained in the category of "Medium". All Statements about competitive aggressiveness are medium. It indicates that respondents tend to be less concerned with competitors to compete better. Lack of concern for the competitors to compete can come from ego and focus on their own business.

Table 7. The Description of the Autonomy

Item	Statement	Mean	Remarks
Z _{4.1}	I work without relying on others	3.34	Medium
Z _{4.2}	I am working without affected by other people's assumptions	3.49	Medium
Z _{4.3}	I believe with the my ability to resolve the job	3.41	Medium
Z _{4.4}	I work in a field that I've mastered	3.50	Medium
Z _{4.5}	I can specify the time limit to finish the job	3.45	Medium
Z _{4.6}	I can determine the target of achievement for myself	3.55	Medium
Autonomy (Z ₅)		3.46	Medium

Based on Table 7 can be noted that the average value of the variable autonomy is 3.46. It means the autonomy of students of the public universities in Surabaya is medium. Besides, the highest average value of the indicator is 3.55 can determine the achievement target. The lowest average is 3.34 of I work without relying on others. These results show that determine the targets for ourselves is easier to do than the other statements. All statements regarding autonomy are in the category of the medium. It shows that the autonomy of the respondents needs to improve regarding independence in work.

Table 8. The Description of Proactiveness

Item	Statement	Mean	Remarks
Z _{5.1}	I work with my own initiatives and without being asked	3.64	Medium
Z _{5.2}	I get the job done faster than the given time	3.56	Medium
Z _{5.3}	I prefer to face rather than avoid the problem	3.60	Medium
Proactiveness (Z ₅)		3.60	Medium

Based on Table 8 can be noted that the average value of the proactiveness is 3.60. It means that the proactiveness of students of the public universities in Surabaya is medium. Also, the highest average value of the indicator is 3.64 I am working with the initiative. The lowest average is 3.56 I get the job done faster than the given time. These results indicate that respondents may give rise to the initiative from themselves to do something. All statements about proactiveness are in the category of the medium. It indicates that respondents can enhance the initiative. Tend to work on time and finish it sooner than the given time.

Table 9. The Description of Entrepreneurial Performance

Item	Statement	Mean	Remarks
Y ₁	I am trying to improve my business turnover	3.33	Medium
Y ₂	I am trying to hit the target that I set for my business	3.57	Medium
Y ₃	I have a high spirit in opening my business	3.55	Medium
Y ₄	I am very happy to have a new business	3.46	Medium
Y ₅	I feel excited when finding a new breakthrough for my business	3.50	Medium
Y ₆	I can apply the ideas of my effort into my business	3.59	Medium
Entrepreneurial Performance (Y)		3.50	Medium

Based on Table 9 can be noted that the average value of the variable entrepreneurial performance is 3.50. It means the entrepreneurial performance of students of the public universities in Surabaya has a value of the medium. Besides, the highest average value of the indicator is 3.59 I can apply the ideas of my effort into my efforts. The lowest average is 3.33 I am trying to improve my business turnover. These results indicate that respondents can reasonably implement ideas into their business. All statements regarding entrepreneurial performance are in the category of the medium. It shows that entrepreneurial performance could still be improved, especially in terms of efforts on increasing turnover. More respondents need to pay close attention to the financial aspects.

Convergent Validity

Campbell and Fisk stated that convergent validity is an agreement between measures of the same construct assessed by different methods (Guo et al., 2008). Convergent validity measurement carries out using the value of the outer-loading. An indicator is said to satisfy the convergent validity if it has the value of outer-loading > 0.5 (Muafi & Roostika, 2014). Here are the values of the outer-loading indicator on each variable

dimensions and research.

From Table 10 can be noted that all indicators that make up the research dimensions and variables have a value of outer-loading > 0.5. Based on these results, all indicators have met the convergent validity. They can be used to do further analysis.

Table 10. Outer-Loading Value of Each Indicator

	Autonomy	Competitive Aggressiveness	Entrepreneurial Mindset	Entrepreneurial Performance	Innovativeness	Proactiveness	Risk-taking
A1	0.795914						
A2	0.820101						
A3	0.766828						
A4	0.791210						
A5	0.815840						
A6	0.890515						
CA1		0.826384					
CA2		0.788390					
CA3		0.757231					
CA4		0.770411					
CA5		0.787101					
CA6		0.830609					
EM1			0.847068				
EM2			0.778124				
EM3			0.787740				
EM4			0.889122				
EP1				0.767887			
EP2				0.882425			
EP3				0.782284			
EP4				0.753799			
EP5				0.847037			
EP6				0.907086			
I1					0.833910		
I2					0.838759		
I3					0.828741		
I4					0.844424		
PA1						0.914802	
PA2						0.849710	
PA3						0.818392	
RT1							0.764520
RT2							0.847122
RT3							0.799130
RT4							0.813196
RT5							0.871995

Discriminant Validity

Campbell and Fisk stated that discriminant validity was the distinctiveness of different constructs (Guo et al., 2008). The measurement of discriminant validity carries out using cross-loading value (Henseler et al., 2015). An indicator that satisfies to discriminant validity of the indicator value of cross-loading on dimensions or from the variables is the largest when compared with other variables or dimensions (Muafi & Roostika, 2014). Table 11 shows the value of cross-loading each indicator.

Table 11. Cross-Loading Value

	Autonomy	Competitive Aggressiveness	Entrepreneurial Mindset	Entrepreneurial Performance	Innovativeness	Proactiveness	Risk-taking
A1	0.795914	0.546739	0.546110	0.597485	0.517463	0.473654	0.482839
A2	0.820101	0.636932	0.567808	0.674356	0.653024	0.599733	0.474295
A3	0.766828	0.603595	0.533795	0.654978	0.623765	0.550383	0.508391
A4	0.791210	0.553146	0.516577	0.642986	0.536862	0.560568	0.494318
A5	0.815840	0.539068	0.481304	0.600802	0.541449	0.481319	0.464055
A6	0.890515	0.572540	0.504996	0.670452	0.568687	0.550442	0.465893
CA1	0.597251	0.826384	0.413458	0.588599	0.583278	0.449628	0.413075
CA2	0.568863	0.788390	0.515976	0.577079	0.548098	0.447603	0.453065

CA3	0.454781	0.757231	0.427850	0.508528	0.557980	0.397768	0.375940
CA4	0.581470	0.770411	0.429500	0.642631	0.630459	0.460988	0.419129
CA5	0.573336	0.787101	0.484007	0.611462	0.642640	0.434427	0.424887
CA6	0.587625	0.830609	0.503883	0.639402	0.593314	0.568785	0.520743
EM1	0.578223	0.523911	0.847068	0.601549	0.511237	0.576205	0.726098
EM2	0.469106	0.450495	0.778124	0.483172	0.390101	0.592348	0.646298
EM3	0.480377	0.414348	0.787740	0.586079	0.452395	0.664646	0.725289
EM4	0.600080	0.537760	0.889122	0.662212	0.549196	0.611439	0.803558
EP1	0.690985	0.629075	0.592925	0.767887	0.516021	0.581399	0.571018
EP2	0.710318	0.669900	0.667298	0.882425	0.657511	0.714472	0.665061
EP3	0.547919	0.592988	0.543400	0.782284	0.659590	0.595855	0.529508
EP4	0.575115	0.504559	0.465962	0.753799	0.527506	0.613374	0.534530
EP5	0.630194	0.648269	0.610477	0.847037	0.662474	0.616929	0.612048
EP6	0.734086	0.666199	0.615633	0.907086	0.663536	0.671315	0.634993
I1	0.580683	0.619670	0.491576	0.605705	0.833910	0.473129	0.401179
I2	0.612614	0.682626	0.522052	0.676580	0.838759	0.520045	0.490018
I3	0.519908	0.562908	0.421137	0.567804	0.828741	0.404254	0.387576
I4	0.642745	0.625403	0.494055	0.636961	0.844424	0.517415	0.448238
PA1	0.648007	0.535303	0.679524	0.713894	0.503103	0.914802	0.664298
PA2	0.506749	0.577421	0.652216	0.668834	0.532460	0.849710	0.655503
PA3	0.551079	0.379615	0.568926	0.594728	0.450296	0.818392	0.566120
RT1	0.466286	0.414258	0.692612	0.540781	0.372364	0.623311	0.764520
RT2	0.551430	0.533691	0.805747	0.607792	0.494341	0.593115	0.847122
RT3	0.370777	0.351081	0.637335	0.556424	0.358214	0.598761	0.799130
RT4	0.428922	0.377258	0.658522	0.561112	0.361990	0.625084	0.813196
RT5	0.584088	0.549996	0.793162	0.669312	0.516321	0.572851	0.871995

Table 11 shows that all indicators have the largest cross-loading on their dimension or variables compared to others. Based on these results, the indicators used in this study have had good discriminant validity in drawing up each dimension or variable. Besides using the value of outer loading, testing validity can also be done by looking at the AVE value (Henseler et al., 2015). The indicators used are said to be valid if the value of AVE is above 0.5. The AVE value of indicators are shown in Table 12.

Table 12. AVE Value	
Variable	A VE
<i>Entrepreneurial Mindset</i>	0.6 83518
<i>Innovativeness</i>	0.6 99696
<i>Risk-taking</i>	0.6 72476
<i>Competitive Aggressiveness</i>	0.6 30140
<i>Autonomy</i>	0.6 63116
<i>Proactiveness</i>	0.7 42878
<i>Entrepreneurial Performance</i>	0.6 81464

Table 12 shows the AVE value produced by all reflective indicators is above 0.5. Based on those results, all reflective indicators meet the validity requirements. Further examination is construct-reliability by looking at the output of the composite reliability or Cronbach's alpha. Constructs are pretty reliable if the value of the composite reliability or Cronbach's alpha is greater than or equal to 0.3. But better if above 0.7 (Muafi & Roostika, 2014). Table 13 shows the output of the Cronbach's alpha. The Cronbach's alpha values of all constructs are good if above 0.7. So all reflective indicators are reliable or meet the reliability test.

Table 13. Reliability Test		
Variable	Composite Reli-	Cronbach's Alpha

	ability	
Entrepreneurial Mindset	0.895975	0.844539
Innovativeness	0.903095	0.857253
Risk-taking	0.911069	0.878042
Competitive Aggressiveness	0.910798	0.882372
Autonomy	0.921775	0.897767
Proactiveness	0.896360	0.826114

Table 13 shows the value of Cronbach's alpha of all constructs is good if above 0.7. So all reflective indicators are reliable or meet the reliability test. Besides, the composite-reliability values of all reflective constructs are also good. So all the reflective indicators are reliable or meet the test of reliability.

R-Square

Table 14 shows the *R-Square* value of each variable. Risk-taking and proactiveness have a high magnitude of the research model (77% and 54%). This result explains that the Indonesian students have strong entrepreneurial characteristics on those two. It may be the education of entrepreneurship has a positive contribution in building their entrepreneurship. Moreover, the *R-Square* value of Entrepreneurial Performance is very high. It means that the magnitude of entrepreneurial performance is 80.3%. Autonomy, competitive aggressiveness, innovativeness, proactiveness, and risk-taking explain it. The rest amounted of 19.7% are explained by other factors outside the model that is examined.

Table 14. *R-square* Value

Variable	<i>R-Square</i>
Entrepreneurial Mindset:	
Innovativeness	0.335497
Risk-taking	0.774349
Competitive Aggressiveness	0.341781
Autonomy	0.418010
Proactiveness	0.544001
Entrepreneurial Performance	0.803013

Hypothesis testing is a scientific process to examine if a hypothesis is plausible or not. Hypothesis testing is calculated by searching for the quantity and value of the effect coefficient also *t-statistic* (Park, 2008). Research hypothesis is acceptable if the value of the *t-statistic* > 1.96. Here are the coefficients of effect (original sample estimate) and the value of the *t-statistic* of each hypothesis on the inner model shown in Table 15. The results support positively the previous one done by Sutanto et al. (2019).

The entrepreneurial mindset has a coefficient of effect on the innovativeness of 0.579 with a *t-statistic* of 7.696 outweighs 1.96. This result indicates that entrepreneurial mindset has significant effects against innovativeness. A higher entrepreneurial mindset will increase the innovativeness of students of public universities. Based on this result, H_1 is accepted. It supports the earlier researches claimed that entrepreneurial mindset affects significantly to innovativeness. Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). He indicated that entrepreneurial mindset affected innovativeness. Moreover, Slater stated that entrepreneurship tailored to the market-oriented culture contribute significantly to the successful innovation (Ndubisi, 2014) as well as the research by Wang and Zang (2005) which suggested entrepreneurship was one of the many areas that are relevant in the human resource and innovation.

Table 15. Coefficients of Effect and *t-statistic*

Hypothesis	Effect	Coefficient	<i>t-statistic</i>	Decision
H_1	EM --> I	0.579221	7.696174	Accepted
H_2	EM --> RT	0.879971	37.235113	Accepted
H_3	EM --> CA	0.584621	7.892138	Accepted
H_4	EM --> P	0.737564	14.584267	Accepted
H_5	EM --> A	0.646537	9.845969	Accepted
H_6	I --> EP	0.194541	2.039976	Accepted
H_7	RT --> EP	0.191298	2.68042	Accepted

H_8	CA --> EP	0.185336	2.152761	Accepted
H_9	P --> EP	0.247053	2.389091	Accepted
H_{10}	A --> EP	0.242796	2.112903	Accepted

The entrepreneurial mindset has a coefficient of effect on risk-taking of 0.879 with a *t-statistic* of 37.235 outweighs 1.96. This result indicates that entrepreneurial mindset has a significant effect towards risk-taking. A higher entrepreneurial mindset increases the risk-taking of students of public universities. Based on this result, H_2 is accepted. It supports the earlier researches that claimed that entrepreneurial mindset affects risk-taking. Wenhong and Liuying (2010) stated systems thinking owned by entrepreneurs would affect their tendency in risk-taking. Zahra says industrial entrepreneur ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. (2005) stated that an entrepreneur received personal financial risk existing in the ownership of a business but was also directly benefit from the potential success of that business. All these findings indicate that the entrepreneurial mindset has a significant effect on risk-taking.

The entrepreneurial mindset has a coefficient of effect on competitive aggressiveness of 0.585 with a *t-statistic* of 7.89 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against competitive aggressiveness. A higher entrepreneurial mindset increases the competitive aggressiveness of students of public universities. Based on this result, H_3 is accepted. It supports previous research that suggests that entrepreneurial mindset affects competitive aggressiveness. Stevenson's research (1990), cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors, the entrepreneurial mindset improves competitive aggressiveness. Someone with high competitive aggressiveness will be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better performance. Neneh (2012) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization.

The entrepreneurial mindset has a coefficient of effect on the autonomy of 0.647 with *t-statistic* of 9.846 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect on autonomy. A higher entrepreneurial mindset increases the autonomy of students of public universities. Based on this result, H_4 is accepted. This result supports research of McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies are not able to detect and or control such acts.

The entrepreneurial mindset has a coefficient of effect on the proactiveness of 0.738 with a *t-statistic* of 14.584 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against proactiveness. A higher entrepreneurial mindset increases the proactiveness of students of public universities. Based on this result, H_5 is accepted. This result supports what Mintzberg found that entrepreneurial companies tended to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014).

The innovativeness has a coefficient of effect on the entrepreneurial performance of 0.195 with *t-statistic* of 2.0399 greater than 1.96. This result shows that there is a significant effect of innovativeness on entrepreneurial performance. A higher innovativeness increases the entrepreneurial performance of students of public universities. Based on this result, H_6 is accepted. This result supports previous scholars. Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It shows that innovativeness has an impact on performance. Khalili et al. (2013) and Sutanto et al. (2019) said innovativeness had a significant effect on performance.

The risk-taking has a coefficient of effect on the entrepreneurial performance of 0.191 with *t-statistic* of 2.68 greater than 1.96. This result shows that risk-taking providing a significant effect against the entrepreneurial performance. A higher risk-taking increases the entrepreneurial performance of students of public universities. Based on this result, H_7 is accepted. It supports the studies of Chen et al. (2007), Callaghan and Venter (2011), and Sutanto et al. (2019). It suggests that risk-taking has an impact on performance.

The competitive aggressiveness has a coefficient of effect on the entrepreneurial performance of 0.185 with *t-statistic* of 2.152 greater than 1.96. This result suggests that the competitive aggressiveness has a

significant effect on entrepreneurial performance. A higher competitive aggressiveness increases the entrepreneurial performance in of students of public universities. Based on this result, H_8 is accepted. The result supports the studies of Chen *et al.* (2007), Callaghan and Venter (2011), Khalili *et al.* (2013), and and Sutanto *et al.* (2019). The competitive aggressiveness leads in performance.

Autonomy has a coefficient of effect on the entrepreneurial performance of 0.247 with *t*-statistic of 2.389 greater than 1.96. This result explains that autonomy has a significant effect on entrepreneurial performance. A higher autonomy increases the entrepreneurial of students of public universities. Based on this result, H_9 is accepted. It supports positively what was found by Callaghan and Venter (2011), Chen *et al.* (2007), and Sutanto *et al.* (2019) previously that autonomy had an impact on performance.

The proactiveness has a coefficient of effect on the entrepreneurial performance of 0.243 with a *t*-statistic of 2.112 outweighs 1.96. This result explains that the proactiveness has a significant effect on entrepreneurial performance. A higher proactiveness increases the entrepreneurial performance of students of public universities. Based on this result, H_{10} is accepted. It convinces the previous findings of Costa and McCrae (1992) (in Smith, 2013), Callaghan and Venter (2011), Chen *et al.* (2007), and Sutanto *et al.* (2019). It shows that proactiveness has an impact on performance.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Based on the results of this research then it can be concluded the conclusions as follows:

- 1) Entrepreneurial mindset has a positive and significant effect against innovativeness.
- 2) Entrepreneurial mindset has a positive and significant effect against risk-taking.
- 3) Entrepreneurial mindset has a positive and significant effect against competitive aggressiveness.
- 4) Entrepreneurial mindset has a positive and significant effect against autonomy.
- 5) Entrepreneurial mindset has a positive and significant effect against proactiveness.
- 6) Innovativeness is found has and significant effect against entrepreneurial performance.
- 7) Risk-taking has a positive and influential significance against entrepreneurial performance.
- 8) Competitive aggressiveness has a positive and significant effect against entrepreneurial performance.
- 9) Autonomy has a positive and significant effect against the entrepreneurial performance.
- 10) Proactiveness has a positive and significant effect against the entrepreneurial performance.

Some variables such as entrepreneurial mindset, innovativeness, competitive aggressiveness, autonomy, proactiveness, as well as entrepreneurial performance of the Indonesian college students have medium mean. Some actions need to be done much more in the future. Improving the entrepreneurship curriculum is extremely necessary. Inviting and connecting to successful business leaders and entrepreneurs is a must. It will open and inspire students' minds and hearts to create a startup business.

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Commented [K6]: The results of the study should provide an explanation of the existing hypothesis by explaining the meaning of significant rather than the same as the hypothetical answer quantitatively

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Author¹, Author² ← 12pt, Book Antiqua, Regular

¹ *Author Institution, City, Province/State, Country ←10pt, Times New Roman, Italic*

² *Author Institution, City, Province/State, Country ←10pt, Times New Roman, Italic*

A B S T R A C T ← 11

Abstract should include research objectives, methods, results, and implications and be written in one paragraph consisting of 150 – 200 words using Book Antiqua font, 9-pt size, italic, and justified paragraph. It should be written in both English and Indonesian. For authors who are unable to write abstract in Indonesian version, the editor will provide assistance.

Key words:

Two until five keywords, 9-pt size, and in italic

A B S T R A K

Abstrak harus memuat tujuan penelitian, metode, hasil, dan implikasi serta ditulis dalam satu paragraf yang terdiri dari 150 - 200 kata dengan menggunakan font Book Antiqua, ukuran 9 pt, italic, dan paragraf justified. Abstrak harus ditulis dalam bahasa Inggris dan Indonesia. Bagi penulis yang tidak dapat menulis abstrak dalam versi bahasa Indonesia, editor akan membantunya.

1. INTRODUCTION

It should be about one page containing the background, brief review of previous literature, research gap, and urgency and novelty of the study. It is written without subheading in Book Antiqua font, 10-pt size, with regular type. It should be about one page containing the background, brief review of previous literature, research gap, and urgency and novelty of the study. It is written without subheading in Book Antiqua font, 10-pt size, with regular type.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

It describes the previously related studies as the primary sources. The use of secondary sources of references should not dominate the total references. Quotation should be maximally one paragraph and/ or the gist of the quoted sources. It describes the previously related studies as the primary sources. The use of secondary sources of references should not dominate the total references (Hansen, Slagsvold, & Moum, 2008). Quotation should be maximally one paragraph and/ or the gist of the quoted sources. It describes the previously related studies as the primary sources (Garðarsdóttir & Dittmar, 2012; Hansen et al., 2008) . The use of secondary sources of references should not dominate the total references. Quotation should be maximally one paragraph and/or the gist of the quoted sources (Hsieh, 2004).

3. RESEARCH METHOD

It contains the research procedures, sampling and data collection techniques, and data analysis methods which are presented briefly and concisely and written in Book Antiqua font, 10-pt size, with regular type (Ghozali & Latan, 2015; Hair Jr, Hult, Ringle, & Sarstedt, 2016). It contains the research procedures, sampling and data collection techniques, and data analysis methods which are presented briefly and concisely and written in Book Antiqua font, 10-pt size, with regular type.

* *Corresponding author, email address: author_email@domain.ac.id*

4. DATA ANALYSIS AND DISCUSSION

This segment presents the analysis of the related results, theories, and hypotheses (if any) based on the author's reasoning. Data analysis and discussion should be presented briefly and clearly and not be dominated by the presentation of tables. The discussion includes the presentation and interpretation of results that are conveyed logically and are linked to relevant reference sources. The discussion presents the findings or analysis of research results by comparing with the theory or previous relevant research, or with reality in the field. The discussion also includes the author's views related to the research findings. The tables, figures, and charts presented should not be the rough output but in the processed and brief summary written in Book Antiqua font, 10-pt size, with regular type.

The tables should be numbered according to the order in which they are presented (e.g. Table 1. etc.). The source of the table is written below the table, while the number and title of the table are written above the table. The table number is written in Book Antiqua font, 9-pt size, with bold type, while the table name is written in Book Antiqua font, 9-pt size, with regular type, and centered.

Table 1. Variance ratio test results

Variable	Period = J	2	4	8	16
JKAGRI	VR(J)	0.6284	0.2646	0.1411	0.0716
JKBIND	VR(J)	0.6952	0.3098	0.1787	0.0852
JKCONS	VR(J)	0.6741	0.2865	0.1618	0.0885
JKFINA	VR(J)	0.6163	0.2809	0.1449	0.0816
JKMING	VR(J)	0.5751	0.2685	0.1621	0.0899
JKMISC	VR(J)	0.5724	0.3082	0.1429	0.0853
JKPROP	VR(J)	0.6245	0.3152	0.1631	0.0976
JKTRAD	VR(J)	0.7296	0.3761	0.1835	0.1099

The figures should be numbered according to the order in which they are presented (e.g. Figure 1. etc.). The source, number and title of the figure are written below the figure. The figure number is written in Book Antiqua font, 9-pt size, with bold type, while the figure name is written in Book Antiqua, 9pt, with regular type, and centered.

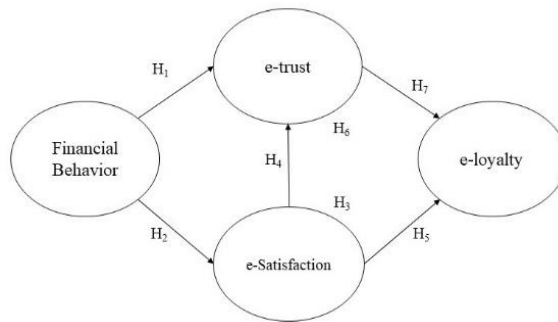


Figure. 1. Conceptual Framework

Mathematical equations should be written clearly using Ms. Office or other applications that can be edited (not images that are the result of cropping). The formula is numbered on the right side in Book Antiqua font, 10-pt size, with regular type.

$$VR(j) = \frac{\frac{1}{nq-1} \sum_{t=1}^{nq} \left(Pt - Pt - q - \frac{1}{nq} (Pnq - P0) \right)^2}{\sigma_a^2} \quad (1)$$

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

The conclusion is the closing of the article which contains the essence and reasons for the author to conduct the research. The conclusion should be based on evidence taken and presented by the author and written in paragraphs. Implications, limitations, and suggestions are also presented in paragraphs without numbering and written in Book Antiqua font, 10-pt size, with regular type.

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APPENDICES (If any)

Appendices consist of research instruments, supporting data, pictures, and others that support the articles and help readers understand the research articles

**5. Bukti Kirim Revisi dan Artikel Revisi Kedua
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Yth. Ibu Tritutik

Bersama ini saya sampaikan revisi artikel sesuai dengan catatan para penelaah dan template JEBAV. Judul dan semua catatan penelaah telah direvisi sebagaimana yang berwarna Kuning.

Judul baru ialah Entrepreneurial Mindset, Orientation, and Performance of Public University Students in Surabaya, Indonesia.

Demikian dan semoga sesuai harapan. Terima kasih banyak atas segala bantuannya.

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Entrepreneurial Mindset, Orientation, and Performance of Public University Students in Surabaya, Indonesia

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ABSTRACT

This study aims to explore the impact of entrepreneurial mindset on innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance. This research is an explanatory quantitative for the analyzing technique. It gathered data of 364 respondents, which were the bachelor students of management program of public universities in Surabaya, Indonesia. The results find that entrepreneurial mindset has a significant impact to innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness. It also enhances positive and significant impact to entrepreneurial performance of the students. It implies that the entrepreneurship education of public universities in Surabaya, Indonesia succeeds to change the students' mindset and orientation.

Key words:

Autonomy, competitive aggressiveness, innovativeness, proactiveness, risk-taking

ABSTRAK

Studi ini menggali dampak pola pikir kewirausahaan terhadap inovasi, pengambilan risiko, agresivitas kompetitif, otonomi, dan daya proaksi terhadap kinerja kewirausahaan mahasiswa. Penelitian ini ialah kuantitatif eksplanatif untuk analisisnya. Penelitian ini mengumpulkan data dari 364 responden, yang merupakan mahasiswa sarjana program manajemen dari universitas negeri di Surabaya, Indonesia. Hasil penelitian menunjukkan bahwa pola pikir kewirausahaan memiliki pengaruh yang signifikan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian, dan daya proaktif. Hal ini juga meningkatkan kinerja kewirausahaan mahasiswa secara positif signifikan. Implikasinya ialah pendidikan kewirausahaan di perguruan tinggi negeri di Kota Surabaya, Indonesia telah berhasil mengubah pola pikir dan orientasi mahasiswa.

1. INTRODUCTION

Entrepreneurship is an interesting field as a career. World Economic Forum concludes that over a third of Indonesian young people want to be entrepreneurs (Wood, 2019). On the other hand, the choice as an entrepreneur as career stood at 26% from 20% in 2009 (GMAC, 2014). It adds what shown by the survey against 37,000 students from 14 countries by the International Survey of Collegiate Entrepreneurship in 2006, states that 15.4% of students choose entrepreneur as a career within the first five years after graduation and for the next five years the number increased to 50.1% (Szerb & Imreh, 2007). In this study, we draw some lessons from Indonesia's experience with the focus of the public university students. It offers an interesting case study because the growth of entrepreneurship in the country in general and university students, in particular, do not tally to the entrepreneurial performance. Entrepreneurship which is encouraged in university-level education by various countries in the world and also in Indonesia has not been followed by an increase in entrepreneurial performance of Indonesia's students.

Gustiawan et al. (2014) indicated that the entrepreneur in Indonesia was still small although the development of entrepreneurship is critical to the country. They stated that 2% was an ideal figure for entrepreneurs in any country from the total population. In the case of Indonesia, 400,000 entrepreneurs were identified of which about 0.08% were low comparatively to America (12%), Singapore (7%), and Malaysia (6%). From policy perspectives, entrepreneurship help to reduce unemployment while the ability of entrepreneurs needs to be developed and enhance particularly among the young people.

Motivated by the importance of entrepreneurial performance, this article is set to explore the impact of an entrepreneurial mindset, innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance of undergraduate management students of public universities.

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The concept of entrepreneurial orientations which contains some variables such as innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are adopted from Miller (1983), Lumpkin and Dess (2001), and Rauch et al. (2009) who found that these variables have positive and significant relationships towards entrepreneurial performance. What do happen with university students of Indonesia who have been studying entrepreneurship? Has the entrepreneurship education in Indonesia universities succeeded to change their mindset and orientation? University students are potential generation in the future of a country. All efforts to create a wonderful generation need to be done seriously and consistently. Entrepreneurship is one of the best solution. This study aims and benefits to improve the entrepreneurship education in Indonesia universities.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Entrepreneurship starts from mindset. Dhliwayo and Van Vuuren (2011) stated that entrepreneurial mindset was a way of thinking about business and the opportunity to benefit from the uncertain circumstances. According to Valerio et al. (2014), entrepreneurial mindset referred to socio-emotional abilities and overall awareness towards entrepreneurship which related with entrepreneurial motivation and the success that would come as an entrepreneur. Indicators used to describe the entrepreneurial mindset in this study are the ability to identify business opportunities and the amount of thinking to entrepreneurship (Solesvik et al., 2013). One possible outcome of entrepreneurship education is a change in students' entrepreneurial mindset (Jung & Lee, 2020). Kouakou, Li, Akolgo, and Tchamekwen (2019) highlighted the importance of an entrepreneurial mindset to students at their youngest age. By doing so, they develop entrepreneurial experiences, skills, and abilities to overcome entrepreneurial challenges. This article offers a clear insight into the topic of an entrepreneurial mindset to ease individuals and organization involved in interactive entrepreneurial activities continuously.

2.1 Innovativeness

Innovativeness is the ability to innovate. There are several definitions of innovativeness. According to the West and Anderson, innovativeness could be defined as the ability to create effective implementation of new processes and products for the organization and was designed to give you an advantage for the organization and stakeholders in it (Baregheh et al., 2009). Galunic and Rodan claimed that innovativeness was the ability to produce continuous innovation (Quintane et al., 2011). Rogers defined innovativeness as how fast a person or organization in adopting innovations compared against another person or organization (Yildiz et al., 2014).

There are three indicators of Innovativeness, which are 1) Openness towards new things. Hurt et al. (1977) described innovativeness as a willingness to try new things (Goldsmith & Foxall, 2003); 2) The level of creativity. Kirton declared that innovative people would search for and combine various information, examines problems they experienced, and produces a thought or idea that is unconventional (Lee, 2008); and 3) The ability to innovate. The power to innovate is a further phase of creativity. It is a comparison between the study in quickly manner with the embodiment of innovation practices, particularly socio-organized practices. The power of innovation is an ability to understand socially, accept, estimates, disseminate, implement, and use innovation (Mikhailova, 2015).

2.2 Risk-Taking

Byrnes (1998) stated that risk-taking is an involvement in a variety of behaviors that were associated with some possibilities against unwanted results (Boyer, 2006). According to Hyrzky and Tunnanen, the definition of risk-taking was a process of decision making and an act without enough knowledge about the obtained results (Noer et al., 2013). According to Wenhong and Liuying (2010), risk-taking was a tendency to take action against something that's rated as risky.

There are several indicators to know risk-taking. These indicators include 1) The courage of facing new things. Sung and Hanna stated that young entrepreneurs were more willing to take risks. They have the urge to invest in new goods/services and enter into new markets (Wang & Poutziouris, 2010); and 2) The courage of facing a difficult situation. Brockhaus declared that the tendency of risk-taking is a possibility to receive profit related to success in certain situations. It is required by a person before putting himself on the consequences associated with failure (Wenhong & Liuying, 2010).

2.3 Competitive Aggressiveness

Competitive aggressiveness is associated with a way to confront the threats and challenges of the external environment (Gamble et al., 2013). Lumpkin and Dess (2001) stated that the competitive aggressiveness was the intensity of the desire to beat your opponent. Noer et al. (2013) stated that competitive aggressiveness was a responsive attitude towards any threat as a form of resistance and effort to win the competition.

According to Chen (1996), there are three indicators of competitive behavior (Stambaugh et al., 2011): 1) Awareness of competitors. Awareness includes analysis of the opponents' strength, stalking the opponents' competitive actions, and the dissemination of information about the opponent. It is about knowing the condition of opponents; 2) Motivation to compete. There are two characteristics of motivation in the company that owns high competitive aggressiveness. The first is beating competitors who are crucial for aggressive companies. Other companies might choose different things as references. They want to know their performance, internal purpose, and satisfaction with the reached target. The aggressive companies seek information of their competitor. They also compare the performance of their own with the others. The second one is a position of opponents which put oneself in difficult situation as appropriate and necessary steps to improve its performance; and 3) Capability to compete. The intended capability is the ability to deliver attacks to the opponent and deflect the opponent's attack. Part of this ability is an existed resource as funds resulting from past good performance. The company is also aggressively identifying available resources and prioritize the resource to attack while the less aggressive company saw the same resource base. Aggressive companies are better to use the available resources rather than to wait for achieving an optimal point.

2.4 Autonomy

According to Metaal, a definition of autonomy was freedom of choice without depending on other parties (Van Gelderen & Jansen, 2006). In another study, Brooke also revealed almost a similar definition that autonomy was the degree of freedom of a person without the need for approval from others (Barnabas and Mekoth, 2010). Feinberg stated that autonomy had at least four meanings: the capacity to govern ourselves, the conditions to set up ourselves, the ideal state to regulate ourselves, and the authority to rule ourselves (Mitcham, 2005).

There are several indicators of autonomy, which are 1) Independent. The ability to do things without being effected by other people (Van Gelderen & Jansen, 2006); 2) Self-learning. Ryan and Deci (2000) said that someone independent would involve himself to learn on an ongoing basis about himself (Weinstein et al., 2012); and 3) Determination. It is the ability to set and to decide whether the regulations, targets, and processes that occur in his business (Van Gelderen & Jansen, 2006).

2.5 Proactiveness

Crant defined proactiveness as taking the initiative to improve the circumstances of (Unsworth & Parker, 2003). According to Wiklund and Shepherd proactiveness was looking far ahead and have the determination to identify and respond to opportunities (Wong, 2012). Teece stated that in the entrepreneurship literatures, proactiveness had definitions as the ability to anticipate and feel a vague signs and act to the needs in the future ahead of existing competitors to gain a competitive advantage (Sundqvist et al., 2012). Crant (2000) stated that proactiveness could be seen from some behaviors. The behaviors could be used as gauges or indicators for proactiveness: The ability to pick the opportunity quickly; Courage start a change; The desirability of creating favorable conditions.

2.6 Entrepreneurial Performance

Van Vuuren said that entrepreneurial performance was the achievement of several entrepreneurial objectives (Sebikari, 2014). According to Dollinger, the entrepreneurial performance was something done by an entrepreneur with high initiative to obtain the goal of entrepreneurship (Tseng, 2013). Callaghan and Venter (2011) mentioned that entrepreneurial performance was something that emphasizes on achieving something and provide continous satisfaction.

There are several indicators of entrepreneurial performance, which are 1) Need for achievement. McClelland stated that the need for achievement that was often described as a passion to deliver good performance and to gain a feeling of achievement. It is one of the specific characters of entrepreneurship. Collins et al. stated that the need for achievement had a positive correlation with corporate success (Khan et al., 2015).

Successful entrepreneurs have high scores in need for achievement (Oosterbeek et al., 2010); 2) The enthusiasm for entrepreneurship. Empirical findings using non-economic indicators to measure the performance namely enthusiasm in work, which represents positive aspect that belonging to someone (Leitao & Franco, 2008), and 3) The realization of the thinking to entrepreneurship. Dhliwayo and Van Vuuren (2011) stated that entrepreneurship would ultimately culminate in the creation or realization of entrepreneurial and strategic management plan that would be resulting in the best performance.

2.7 Entrepreneurial Mindset and Innovativeness

Earlier research claimed that entrepreneurial mindset affects significantly innovativeness. Previous research by Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). Herbig et al. indicate that entrepreneurial mindset affects innovativeness. Other research by Slater states that entrepreneurship tailored to the market-oriented culture will contribute significantly to successful innovation (Ndubisi, 2014; Sutanto et al., 2019). Research by Wang and Zang (2005) state that entrepreneurship is one of the major areas relevant in human resource and innovation. Gonthier and Chirita (2019) found that several factors that enable the entrepreneurial spirit fostered by corporate incubators to boost the innovation capability in their parent companies. Based on the statements, it can be formulated as the following hypothesis:

H_1 : Entrepreneurial mindset significantly affects the innovativeness of students of public universities in Surabaya, Indonesia.

2.8 Entrepreneurial Mindset and Risk-Taking

Earlier researches claim that entrepreneurial mindset affect significantly to risk-taking. Wenhong and Liuying stated systems thinking owned by the entrepreneur would affect the tendency of risk-taking. Related to entrepreneur behavior concerning the family business, Zahra states that ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. state that an entrepreneur receives personal financial risk existing but directly benefits from the potential success. It indicates that the entrepreneurial mindset has a significant effect on risk-taking (Sutanto et al., 2019). Further, Jemal (2020) found that entrepreneurial mindset affects positively and significantly the performance of SMEs and parameters includes: seeking opportunity, creativity, innovation, risk taking, pro-activeness, and alertness to take action. Based on the statement, it can be formulated as the following hypothesis:

H_2 : Entrepreneurial mindset significantly affects the risk-taking of students of the public universities in Surabaya, Indonesia.

2.9 Entrepreneurial Mindset and Competitive Aggressiveness

Previous researches suggest that entrepreneurial mindset affects significantly competitive aggressiveness. Stevenson's research cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors that effected by the entrepreneurial mindset, competitive aggressiveness could be improved. Someone with high competitive aggressiveness would be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better competition. Neneh (2012) and Sutanto et al. (2019) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. Moreover, Paek and Lee (2017) suggested that the dimensions of strategic entrepreneurship, which are environmental sensing, opportunity seizing, strategic flexibility and entrepreneurial orientation play a critical role in competitive advantage of firms. Based on the statement, it can be formulated as the following hypothesis:

H_3 : Entrepreneurial mindset significantly affects competitive aggressiveness of students of public universities in Surabaya, Indonesia.

2.10 Entrepreneurial Mindset and Autonomy

Research by McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies were not able to detect and/or control such acts. Moreover, Sutanto et al. (2019) found that the entrepreneurial mindset had a significant effect on the autonomy of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

*H*₄: Entrepreneurial mindset significantly affects autonomy of students of the public universities in Surabaya, Indonesia.

2.11 Entrepreneurial Mindset and Proactiveness

Mintzberg said entrepreneurial companies tend to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014). Moreover, Sutanto et al. (2019) found entrepreneurial mindset had a significant effect on the proactiveness of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

*H*₅: Entrepreneurial mindset significantly affects the proactiveness of students of the public universities in Surabaya, Indonesia.

2.12 Innovativeness and Entrepreneurial Performance

In their study, Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with the entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It shows that the innovativeness has an impact on performance. Prihandono and Utami (2018) also consider to explore the entrepreneurial in higher education and innovative potential. Moreover, Khalili et al. (2013) and Sutanto et al. (2019) stated that innovativeness had a significant impact on performance. Further, Bor (2018) revealed that entrepreneurial innovativeness has a direct positive relationship with performance of mid-sized firms. Falahat, Tehseen, and van Horne (2018) also revealed that there was a significant positive impact of entrepreneurial innovativeness on three types of business performances namely perceived non-financial, perceived business growth, and perceived performance relative competitors except on financial performance. Further, Linton (2019) highlighted that innovativeness can be meaningfully divided between the attributes of process and outcome. Based on the statement, it can be formulated as the following hypothesis:

*H*₆: Innovativeness significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.13 Risk-taking and Entrepreneurial Performance

Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that risk-taking was one of the dimensions associated with the entrepreneurial performance. On the other hand, Chen et al. (2007) stated entrepreneurial orientation had a positive relationship to performance. In the entrepreneurial orientation, there were dimensions of risk-taking. It suggests that risk-taking has an impact on performance. Guo and Jiang (2020) also found that a focal firm's new product success benefits most from adopting a concurrently high level of sensing risk-taking and seizing risk-taking when market growth is high but a high level of sensing risk-taking with a low level of seizing risk-taking when market growth is low. Moreover, Linton (2019) highlighted that risk-taking can be meaningfully divided between the attributes of process and outcome. Based on the statement, it can be formulated as the following hypothesis:

*H*₇: Risk-taking significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.14 Competitive Aggressiveness and Entrepreneurial Performance

Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that competitive aggressiveness was a dimension that was associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of the competitive aggressiveness. It shows that competitive aggressiveness has an impact on performance. Moreover, Khalili et al. (2013) mentioned that competitive aggressiveness equaled as an effort to lead in performance and beat your opponent. Abdullahi, Kunya, Bustani, and Usman (2019) also concluded that competitive aggressive impacts positively on the financial performance of Nigerian CSMES. On the other hand, Fadda (2018) showed that innovativeness, proactiveness and autonomy were significantly associated with tourism firm performance, whereas risk-taking and competitiveness were not. While, Kosa, Mohammad, and Ajibie (2018) found the level of influence is increasing as firms are being established in larger cities because the firms in cities have more customers and competitors causing them to generate unique strategies that lead them to outstanding performance. Based on the statement, it can be

formulated as the following hypothesis:

H₈: Competitive aggressiveness significantly affects the entrepreneurial performance of students of public universities in Surabaya, Indonesia.

2.15 Autonomy and Entrepreneurial Performance

In their study, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that autonomy was one of the dimensions that associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of autonomy. It shows that autonomy has an impact on performance. While, Yu, Lumpkin, Parboteeah, and Stambaugh (2019) found that in dynamic environments, autonomy is associated with improved performance in the United States, while in Taiwan, firms in dynamic environments fared worse with increasing autonomy. Based on the statement, it can be formulated as the following hypothesis:

H₉: Autonomy significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.16 Proactiveness and Entrepreneurial Performance

Costa and McCrae stated that openness to experience was the proactive search and an appreciation for the experience itself as well as tolerance over the exploration of new things (Smith, 2013). On the other hand, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that proactiveness was one dimension that was associated with the entrepreneurial performance. In the study, it was mentioned that openness to experience is one of the factors influencing entrepreneurial performance. It can be concluded that proactiveness has an impact on entrepreneurial performance. Chen et al. (2007) also stated it had a positive relationship between entrepreneurial orientation taking action against performance, wherein the entrepreneurial orientation there was a dimension of proactiveness. Linton (2019) highlighted that proactiveness can be meaningfully divided between the attributes of process and outcome. It shows that proactiveness has an impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H₁₀: Proactiveness significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.17 Research Framework

All the developed hypotheses are shown in Figure 1.

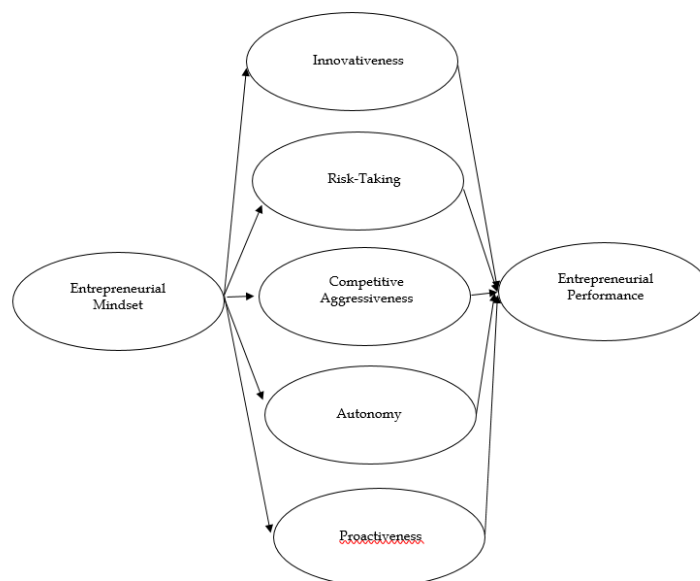


Figure 1. Research Framework

3. RESEARCH METHOD

The population was the bachelor students of the management program of the public universities in Surabaya, Indonesia. There were four establish public universities in Surabaya, which had been offering an entrepreneurship education for their students. The total amount was 4,036 shown in Table 1. It used a purposive sampling.

The criteria set out against the respondents to get the results by the research objectives. They were bachelor students of the management program of the public universities in Surabaya, Indonesia, who were/ are ever engaged in entrepreneurship. The 364 samples were taken from the population and determined using Slovin's formula. The questionnaires were disseminated directly to the students of the universities. In order to control bias, the questionnaires was tried out in advance on some respondents. Screening of respondents was conducted orally by asking the respondents one by one and strengthened with the existing questions in the questionnaire.

The study utilized the PLS-SEM to analyze the data. The Partial Least Square function is divided into two groups, namely the inner model and the outer model. The outer model is more towards testing the validity and reliability. While the inner model is more towards regression, which is to assess the effect of one variable on other variables. Model fit on Partial Least Square is not like SEM where there is a global match, such as RMSEA, AGFI, PGFI, PNFI, CMIN / DF, etc. In PLS there are only two criteria for assessing the fit of the model, namely the fit of the outer model which is called the outer model and the inner fit which is called the inner model (Ghozali, 2014).

Table 1. Amounts of bachelor students of management program of public universities in Surabaya

University	Amounts of Bachelor Students of Management Program
Universitas Airlangga	2,026
Universitas Negeri Surabaya	997
Institut Teknologi 10 November Surabaya	109
Universitas Pembangunan Negeri Veteran Jawa Timur	904
TOTAL AMOUNT	4,036

Source: <http://forlap.dikti.go.id/>

4. DATA ANALYSIS AND DISCUSSION

4.1 Variable Descriptive Analysis

All responses of the respondents to each variable were designed by Likert scale from 1 to 5. It was set categories of variables by this formula as shown in Table 2.

$$\text{Range} = \frac{\text{Maximum Value} - \text{Minimum Value}}{\text{Amounts of Category}} \quad [1]$$

$$\text{Range} = \frac{5 - 1}{3}$$

$$\text{Range} = 1.33$$

Table 2. Interval of mean scores

Range	Remarks
1.00–2.33	Low
2.34–3.67	Medium
3.67–5.00	High

By using the category, then the evaluation of the answers for each of the variables can be described as follows.

Table 3. The description of entrepreneurial mindset

Item	Statement	Mean	Remark
X _{1.1}	I want to create my own workplace	3.64	Medium
X _{1.2}	I have an aspiration to be an entrepreneur	3.32	Medium
X _{1.3}	I tend to seek business opportunities	3.84	High
X _{1.4}	I can identify a business opportunity based on the needs of consumers in the market	3.57	Medium
<i>Entrepreneurial Mindset (X₁)</i>		3.59	Medium

Table 3 notes that the average value of the entrepreneurial mindset is 3.59. It means that the entrepreneurial mindset of students of the public universities in Surabaya has value medium. Table 3 also notes that the highest average value of the indicators is 3.84 in the statement "I tend to seek business opportunities." The lowest average value of the indicator is 3.32 in the statement "I have an aspiration to be an entrepreneur." These results indicate that respondents tend to seek business opportunities despite the aspiration to be an entrepreneur is not so great. It attributes to the respondent's efforts to earn an income or meet his needs. The difference between the statements "I tend to seek business opportunities" with the other states also far enough to the point of being in the different categories (high, medium, low). It indicates that most respondents tend to think more about how to get a business opportunity in a wide variety of way whether to become entrepreneurs or not. It implies that the education succeeds to change the students' mindset of entrepreneurship (Jung & Lee, 2020; Wardana et al., 2020).

Table 4. The description of innovativeness

Item	Statement	Mean	Remarks
Z _{1.1}	I tend to accept new things around me	3.31	Medium
Z _{1.2}	I have an innovative idea that can be implemented	3.50	Medium
Z _{1.3}	I have unique ideas that haven't been done before	3.34	Medium
Z _{1.4}	I can implement the unique ideas that I have	3.49	Medium
<i>Innovativeness (Z₁)</i>		3.41	Medium

Table 4 shows the average value of innovativeness is 3.41. It means students' innovativeness in the public universities in Surabaya has value medium. Besides, the highest average value of the indicators is 3.50 "I have innovative ideas to be implemented." The lowest average value of the indicator is 3.31 in "I am likely to receive new things around me." These results indicate that respondents have different ideas to be applied in their business. The entire statement is in the category of the medium. It means that innovativeness possibly is improved further.

Table 5. The description of risk-taking

Item	Statement	Mean	Remarks
Z _{2.1}	I dare go to an entirely new place for me all alone	3.65	Medium
Z _{2.2}	I have a willingness to try new things	3.66	Medium
Z _{2.3}	I have the courage to take the decision with minimal information	3.77	High
Z _{2.4}	I felt challenged to do things outside of my comfort zone	3.69	High
Z _{2.5}	I have the desire to conquer my greatest fear	3.71	High
<i>Risk-taking (Z₂)</i>		3.69	High

Based on Table 5 can be noted that the average value of the variable risk-taking is 3.69. It means the risk-taking of students of the public universities in Surabaya has a value of high. The highest average value of the indicator is 3.77 in the statement I dare to decide with minimal information. The lowest average value of the indicator is 3.65 on the statement of I dare go to an entirely new place for me all alone. Respondents take decisions with minimal information and illustrate that the respondent takes their decision quicker. Table 5 also pointed out that the existence of the respondent towards new things is medium. It is similar to the variable description analysis of innovativeness. The respondents need to enhance adaptation to new things.

Table 6. The description of the competitive aggressiveness

Item	Statement	Mean	Remarks
Z _{3.1}	I am trying to find information to know the existence of competitors for my business	3.42	Medium
Z _{3.2}	I am trying to find information about my business competitors	3.31	Medium
Z _{3.3}	I have the desire to grow bigger than competitors	3.37	Medium
Z _{3.4}	I made the difference in the ability with competitors as a motivation to compete	3.41	Medium
Z _{3.5}	I have the ability to compete with business competitors	3.35	Medium
Z _{3.6}	I can overtake the position of the competitors who have higher business position	3.37	Medium
<i>Competitive Aggressiveness (Z₃)</i>		3.37	Medium

Based on Table 6 can be noted that the average value of the variable competitive aggressiveness is 3.37. It means the competitive aggressiveness of students of the public universities in Surabaya has a value the medium. Besides, the highest average value of the indicator is 3.42 in the statement I am trying to find information to know the existence of competitors for my business. The lowest average value is 3.31 on I am trying to find information about my business competitors. Respondents tend to strive to recognize the surrounding environment despite the statement with the highest value remained in the category of "Medium". All Statements about competitive aggressiveness are medium. It indicates that respondents tend to be less concerned with competitors to compete better. Lack of concern for the competitors to compete can come from ego and focus on their own business.

Table 7. The description of the autonomy

Item	Statement	Mean	Remarks
Z _{4.1}	I work without relying on others	3.34	Medium
Z _{4.2}	I am working without affected by other people's assumptions	3.49	Medium
Z _{4.3}	I believe with the my ability to resolve the job	3.41	Medium
Z _{4.4}	I work in a field that I've mastered	3.50	Medium
Z _{4.5}	I can specify the time limit to finish the job	3.45	Medium
Z _{4.6}	I can determine the target of achievement for myself	3.55	Medium
<i>Autonomy (Z₅)</i>		3.46	Medium

Based on Table 7 can be noted that the average value of the variable autonomy is 3.46. It means the autonomy of students of the public universities in Surabaya is medium. Besides, the highest average value of the indicator is 3.55 can determine the achievement target. The lowest average is 3.34 of I work without relying on others. These results show that determine the targets for ourselves is easier to do than the other statements. All statements regarding autonomy are in the category of the medium. It shows that the autonomy of the respondents needs to improve regarding independence in work.

Table 8. The description of proactiveness

Item	Statement	Mean	Remarks
Z _{5.1}	I work with my own initiatives and without being asked	3.64	Medium
Z _{5.2}	I get the job done faster than the given time	3.56	Medium
Z _{5.3}	I prefer to face rather than avoid the problem	3.60	Medium
<i>Proactiveness (Z₅)</i>		3.60	Medium

Based on Table 8 can be noted that the average value of the proactiveness is 3.60. It means that the proactiveness of students of the public universities in Surabaya is medium. Also, the highest average value

of the indicator is 3.64 I am working with the initiative. The lowest average is 3.56 I get the job done faster than the given time. These results indicate that respondents may give rise to the initiative from themselves to do something. All statements about proactiveness are in the category of the medium. It indicates that respondents can enhance the initiative. Tend to work on time and finish it sooner than the given time.

Table 9. The description of entrepreneurial performance

Item	Statement	Mean	Remarks
Y ₁	I am trying to improve my business turnover	3.33	Medium
Y ₂	I am trying to hit the target that I set for my business	3.57	Medium
Y ₃	I have a high spirit in opening my business	3.55	Medium
Y ₄	I am very happy to have a new business	3.46	Medium
Y ₅	I feel excited when finding a new breakthrough for my business	3.50	Medium
Y ₆	I can apply the ideas of my effort into my business	3.59	Medium
<i>Entrepreneurial Performance (Y)</i>		3.50	Medium

Based on Table 9 can be noted that the average value of the variable entrepreneurial performance is 3.50. It means the entrepreneurial performance of students of the public universities in Surabaya has a value of the medium. Besides, the highest average value of the indicator is 3.59 I can apply the ideas of my effort into my efforts. The lowest average is 3.33 I am trying to improve my business turnover. These results indicate that respondents can reasonably implement ideas into their business. All statements regarding entrepreneurial performance are in the category of the medium. It shows that entrepreneurial performance could still be improved, especially in terms of efforts on increasing turnover. More respondents need to pay close attention to the financial aspects.

4.2 Convergent Validity

Campbell and Fisk stated that convergent validity is an agreement between measures of the same construct assessed by different methods (Guo et al., 2008). Convergent validity measurement carries out using the value of the outer-loading. An indicator is said to satisfy the convergent validity if it has the value of outer-loading > 0.5 (Muafi & Roostika, 2014). Here are the values of the outer-loading indicator on each variable dimensions and research.

From Table 10 can be noted that all indicators that make up the research dimensions and variables have a value of outer-loading > 0.5. Based on these results, all indicators have met the convergent validity. They can be used to do further analysis.

4.3 Discriminant Validity

Campbell and Fisk stated that discriminant validity was the distinctiveness of different constructs (Guo et al., 2008). The measurement of discriminant validity carries out using cross-loading value (Henseler et al., 2015). An indicator that satisfies to discriminant validity of the indicator value of cross-loading on dimensions or from the variables is the largest when compared with other variables or dimensions (Muafi & Roostika, 2014). Table 10 shows the value of cross-loading each indicator.

Table 10 shows that all indicators have the largest cross-loading on their dimension or variables compared to others. Based on these results, the indicators used in this study have had good discriminant validity in drawing up each dimension or variable. Besides using the value of outer loading, testing validity can also be done by looking at the AVE value (Henseler et al., 2015). The indicators used are said to be valid if the value of AVE is above 0.5. The AVE value of indicators are shown in Table 12.

Table 12 shows the AVE value produced by all reflective indicators is above 0.5. Based on those results, all reflective indicators meet the validity requirements. Further examination is construct-reliability by looking at the output of the composite reliability or Cronbach's alpha. Constructs are pretty reliable if the value of the composite reliability or Cronbach's alpha is greater than or equal to 0.3. But better if above 0.7 (Muafi & Roostika, 2014). Table 13 shows the output of the Cronbach's alpha. The Cronbach's alpha values of all constructs are good if above 0.7. So all reflective indicators are reliable or meet the reliability test.

Table 10. Outer-loading and cross-loading value

	Autonomy		Competitive Aggressiveness		Entrepreneurial Mindset		Entrepreneurial Performance		Innovativeness		Proactiveness		Risk-taking	
	Outer-loading	Cross-loading	Outer-loading	Cross-loading	Outer-loading	Cross-loading	Outer-loading	Cross-loading	Outer-loading	Cross-loading	Outer-loading	Cross-loading	Outer-loading	Cross-loading
A1	0.795914	0.795914		0.546739		0.546110		0.597485		0.517463		0.473654		0.482839
A2	0.820101	0.820101		0.636932		0.567808		0.674356		0.653024		0.599733		0.474295
A3	0.766828	0.766828		0.603595		0.533795		0.654978		0.623765		0.550383		0.508391
A4	0.791210	0.791210		0.553146		0.516577		0.642986		0.536862		0.560568		0.494318
A5	0.815840	0.815840		0.539068		0.481304		0.600802		0.541449		0.481319		0.464055
A6	0.890515	0.890515		0.572540		0.504996		0.670452		0.568687		0.550442		0.465893
CA1		0.597251	0.826384	0.826384		0.413458		0.588599		0.583278		0.449628		0.413075
CA2		0.568863	0.788390	0.788390		0.515976		0.577079		0.548098		0.447603		0.453065
CA3		0.454781	0.757231	0.757231		0.427850		0.508528		0.557980		0.397768		0.375940
CA4		0.581470	0.770411	0.770411		0.429500		0.642631		0.630459		0.460988		0.419129
CA5		0.573336	0.787101	0.787101		0.484007		0.611462		0.642640		0.434427		0.424887
CA6		0.587625	0.830609	0.830609		0.503883		0.639402		0.593314		0.568785		0.520743
EM1		0.578223		0.523911	0.847068	0.847068		0.601549		0.511237		0.576205		0.726098
EM2		0.469106		0.450495	0.778124	0.778124		0.483172		0.390101		0.592348		0.646298
EM3		0.480377		0.414348	0.787740	0.787740		0.586079		0.452395		0.664646		0.725289
EM4		0.600080		0.537760	0.889122	0.889122		0.662212		0.549196		0.611439		0.803558
EP1		0.690985		0.629075		0.592925	0.767887	0.767887		0.516021		0.581399		0.571018
EP2		0.710318		0.669900		0.667298	0.882425	0.882425		0.657511		0.714472		0.665061
EP3		0.547919		0.592988		0.543400	0.782284	0.782284		0.659590		0.595855		0.529508
EP4		0.575115		0.504559		0.465962	0.753799	0.753799		0.527506		0.613374		0.534530
EP5		0.630194		0.648269		0.610477	0.847037	0.847037		0.662474		0.616929		0.612048
EP6		0.734086		0.666199		0.615633	0.907086	0.907086		0.663536		0.671315		0.634993
I1		0.580683		0.619670		0.491576		0.605705	0.833910	0.833910		0.473129		0.401179
I2		0.612614		0.682626		0.522052		0.676580	0.838759	0.838759		0.520045		0.490018
I3		0.519908		0.562908		0.421137		0.567804	0.828741	0.828741		0.404254		0.387576
I4		0.642745		0.625403		0.494055		0.636961	0.844424	0.844424		0.517415		0.448238
PA1		0.648007		0.535303		0.679524		0.713894		0.503103	0.914802	0.914802		0.664298
PA2		0.506749		0.577421		0.652216		0.668834		0.532460	0.849710	0.849710		0.655503
PA3		0.551079		0.379615		0.568926		0.594728		0.450296	0.818392	0.818392		0.566120
RT1		0.466286		0.414258		0.692612		0.540781		0.372364		0.623311	0.764520	0.764520
RT2		0.551430		0.533691		0.805747		0.607792		0.494341		0.593115	0.847122	0.847122
RT3		0.370777		0.351081		0.637335		0.556424		0.358214		0.598761	0.799130	0.799130
RT4		0.428922		0.377258		0.658522		0.561112		0.361990		0.625084	0.813196	0.813196
RT5		0.584088		0.549996		0.793162		0.669312		0.516321		0.572851	0.871995	0.871995

Table 12 shows the value of Cronbach's alpha of all constructs is good if above 0.7. So all reflective indicators are reliable or meet the reliability test. Besides, the composite-reliability values of all reflective constructs are also good. So all the reflective indicators are reliable or meet the test of reliability.

Table 12. AVE value and reliability test

Variable	AVE	Composite Reliability	Cronbach's Alpha
Entrepreneurial Mindset	0.683518	0.895975	0.844539
Innovativeness	0.699696	0.903095	0.857253
Risk-taking	0.672476	0.911069	0.878042
Competitive Aggressiveness	0.630140	0.910798	0.882372
Autonomy	0.663116	0.921775	0.897767
Proactiveness	0.742878	0.896360	0.826114
Entrepreneurial Performance	0.681464		

4.4 R-Square

Table 14 shows the R-Square value of each variable. Risk-taking and proactiveness have a high magnitude of the research model (77% and 54%). This result explains that the Indonesian students have strong entrepreneurial characteristics on those two. It may be the education of entrepreneurship has a positive contribution in building their entrepreneurship.

Moreover, the R-Square value of Entrepreneurial Performance is very high. It means that the magnitude of entrepreneurial performance is 80.3%. Autonomy, competitive aggressiveness, innovativeness, proactiveness, and risk-taking explain it. The rest amounted of 19.7% are explained by other factors outside the model that is examined.

4.5 Hypothesis Testing and Discussion

Hypothesis testing is a scientific process to examine if a hypothesis is plausible or not. Hypothesis testing is

calculated by searching for the quantity and value of the effect coefficient also t-statistic (Park, 2008). Research hypothesis is acceptable if the value of the t-statistic > 1.96. Here are the coefficients of effect (original sample estimate) and the value of the t-statistic of each hypothesis on the inner model shown in Table 15. The results support positively the previous one done by [Sutanto et al. \(2019\)](#).

Table 14. R-square value

Variable	R-Square
Entrepreneurial Mindset	
Innovativeness	0.335497
Risk-taking	0.774349
Competitive Aggressiveness	0.341781
Autonomy	0.418010
Proactiveness	0.544001
Entrepreneurial Performance	0.803013

The entrepreneurial mindset has a coefficient of effect on the innovativeness of 0.579 with a t-statistic of 7.696 outweighs 1.96. This result indicates that entrepreneurial mindset has significant effects against innovativeness. A higher entrepreneurial mindset will increase the innovativeness of students of public universities. Based on this result, H_1 is accepted. It supports the earlier researches claimed that entrepreneurial mindset affects significantly to innovativeness. Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). He indicated that entrepreneurial mindset affected innovativeness. Moreover, Slater stated that entrepreneurship tailored to the market-oriented culture contribute significantly to the successful innovation (Ndubisi, 2014) as well as the research by Wang and Zang (2005) which suggested entrepreneurship was one of the many areas that are relevant in the human resource and innovation. [Gonthier and Chirita \(2019\)](#) also found that several factors that enable the entrepreneurial spirit fostered by corporate incubators to boost the innovation capability in their parent companies.

The entrepreneurial mindset has a coefficient of effect on risk-taking of 0.879 with a t-statistic of 37.235 outweighs 1.96. This result indicates that entrepreneurial mindset has a significant effect towards risk-taking. A higher entrepreneurial mindset increases the risk-taking of students of public universities. Based on this result, H_2 is accepted. It supports the earlier researches that claimed that entrepreneurial mindset affects risk-taking. Wenhong and Liuying (2010) stated systems thinking owned by entrepreneurs would affect their tendency in risk-taking. Zahra says industrial entrepreneur ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. (2005) stated that an entrepreneur received personal financial risk existing in the ownership of a business but was also directly benefit from the potential success of that business. [Jemal \(2020\)](#) found that entrepreneurial mindset affects positively and significantly the performance of SMEs and parameters includes: seeking opportunity, creativity, innovation, risk taking, pro-activeness, and alertness to take action. All these findings indicate that the entrepreneurial mindset has a significant effect on risk-taking.

The entrepreneurial mindset has a coefficient of effect on competitive aggressiveness of 0.585 with a t-statistic of 7.89 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against competitive aggressiveness. A higher entrepreneurial mindset increases the competitive aggressiveness of students of public universities. Based on this result, H_3 is accepted.

It supports previous research that suggests that entrepreneurial mindset affects competitive aggressiveness. Stevenson's research (1990), cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors, the entrepreneurial mindset improves competitive aggressiveness. Someone with high competitive aggressiveness will be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better performance. Neneh (2012) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. [Paek and Lee \(2017\)](#) also suggested that the dimensions of strategic entrepreneurship, which are environmental sensing, opportunity seizing, strategic flexibility and entrepreneurial orientation play a critical role in competitive advantage of firms.

Table 15. Coefficients of effect and t-statistic

Hypothesis	Effect	Coefficient	t-statistic	Decision
H_1	EM --> I	0.579221	7.696174	Accepted
H_2	EM --> RT	0.879971	37.235113	Accepted
H_3	EM --> CA	0.584621	7.892138	Accepted
H_4	EM --> P	0.737564	14.584267	Accepted
H_5	EM --> A	0.646537	9.845969	Accepted
H_6	I --> EP	0.194541	2.039976	Accepted
H_7	RT --> EP	0.191298	2.68042	Accepted
H_8	CA --> EP	0.185336	2.152761	Accepted
H_9	P --> EP	0.247053	2.389091	Accepted
H_{10}	A --> EP	0.242796	2.112903	Accepted

The entrepreneurial mindset has a coefficient of effect on the autonomy of 0.647 with t-statistic of 9.846 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect on autonomy. A higher entrepreneurial mindset increases the autonomy of students of public universities. Based on this result, H_4 is accepted. This result supports research of McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies are not able to detect and or control such acts.

The entrepreneurial mindset has a coefficient of effect on the proactiveness of 0.738 with a t-statistic of 14.584 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against proactiveness. A higher entrepreneurial mindset increases the proactiveness of students of public universities. Based on this result, H_5 is accepted. This result supports what Mintzberg found that entrepreneurial companies tended to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014).

The innovativeness has a coefficient of effect on the entrepreneurial performance of 0.195 with t-statistic of 2.0399 greater than 1.96. This result shows that there is a significant effect of innovativeness on entrepreneurial performance. A higher innovativeness increases the entrepreneurial performance of students of public universities. Based on this result, H_6 is accepted. This result supports previous scholars. Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It shows that innovativeness has an impact on performance. Khalili et al. (2013), Linton (2019), and Sutanto et al. (2019) said innovativeness had a significant effect on performance. Further, Bor (2018) revealed that entrepreneurial innovativeness has a direct positive relationship with performance of mid-sized firms. Falahat, Tehseen, and van Horne (2018) also revealed that there was a significant positive impact of entrepreneurial innovativeness on three types of business performances namely perceived non-financial, perceived business growth, and perceived performance relative competitors except on financial performance.

The risk-taking has a coefficient of effect on the entrepreneurial performance of 0.191 with t-statistic of 2.68 greater than 1.96. This result shows that risk-taking providing a significant effect against the entrepreneurial performance. A higher risk-taking increases the entrepreneurial performance of students of public universities. Based on this result, H_7 is accepted. It supports the studies of Chen et al. (2007), Callaghan and Venter (2011), Linton (2019), and Sutanto et al. (2019). It suggests that risk-taking has an impact on performance. Guo and Jiang (2020) also found that a focal firm's new product success benefits most from adopting a concurrently high level of sensing risk-taking and seizing risk-taking when market growth is high but a high level of sensing risk-taking with a low level of seizing risk-taking when market growth is low.

The competitive aggressiveness has a coefficient of effect on the entrepreneurial performance of 0.185 with t-statistic of 2.152 greater than 1.96. This result suggests that the competitive aggressiveness has a significant effect on entrepreneurial performance. A higher competitive aggressiveness increases the entrepreneurial performance in of students of public universities. Based on this result, H_8 is accepted. The result supports the studies of Chen et al. (2007), Callaghan and Venter (2011), Khalili et al. (2013), Kosa, Mohamad, and Ajibie (2018), Sutanto et al. (2019), and Abdullahi, Kunya, Bustani, and Usman (2019). The competitive aggressiveness leads in performance.

Autonomy has a coefficient of effect on the entrepreneurial performance of 0.247 with t-statistic of 2.389 greater than 1.96. This result explains that autonomy has a significant effect on entrepreneurial performance. A higher autonomy increases the entrepreneurial of students of public universities. Based on this result, H_9 is accepted. It supports positively what was found by Callaghan and Venter (2011), Chen et al. (2007), Yu et al. (2019), and Sutanto et al. (2019) previously that autonomy had an impact on performance.

The proactiveness has a coefficient of effect on the entrepreneurial performance of 0.243 with a t-statistic of 2.112 outweighs 1.96. This result explains that the proactiveness has a significant effect on entrepreneurial performance. A higher proactiveness increases the entrepreneurial performance of students of public universities. Based on this result, H_{10} is accepted. It convinces the previous findings of Costa and McCrae (1992) (in Smith, 2013), Callaghan and Venter (2011), Chen et al. (2007), Linton (2019), and Sutanto et al. (2019). It shows that proactiveness has an impact on performance.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Based on the results of this research then it can be concluded the conclusions that entrepreneurial mindset of the Indonesian students has a positive and significant effect against their innovativeness, risk-taking, competitive aggressiveness, autonomy, proactiveness. Therefore, changing mindset of the students to entrepreneurship is a vital effort. It implies the entrepreneurship education of Indonesian public universities has succeeded to change their mindset as well as their entrepreneurial orientation and performance. Promoting entrepreneurship education to develop the entrepreneurial competences and mindsets of citizens has become an important mission on the supranational educational policy agenda (Laalo & Heinonen, 2016).

On the other hand, the Indonesian students' innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are found has and significant effect against entrepreneurial performance. It convinces that the education of entrepreneurship should not satisfy only to change the students' mindset but also to cultivate all variables in order to reach high performance.

Some variables such as entrepreneurial mindset, innovativeness, competitive aggressiveness, autonomy, proactiveness, as well as entrepreneurial performance of the Indonesian college students have medium mean. Some actions need to be done much more in the future. Improving the entrepreneurship curriculum is extremely necessary. Inviting and connecting to successful business leaders and entrepreneurs is a must. It will open and inspire students' minds and hearts to create a startup business. Furthermore, as suggested by Loboda, Ostrovskyi, and Katernyak (2018) universities should promote entrepreneurship as a career option and provide entrepreneurship experiences to students. The change in the academic culture is a common challenge, which includes the introduction of entrepreneurial thinking and acting as alternatives to traditional teaching approaches and opening up the universities to the surrounding society and industrial ecosystem. The use of ICT and in particular eLearning in delivering entrepreneurial education might be an additional option for expanding the outreach of the course.

This study is only to analyze the entrepreneurship of the students. However, to make sure whether the students really implement their entrepreneurship potential after finishing their education, it needs a further research. Without that, the findings are only a theory.

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Kepada Ysh. Sdr. Eddy M. Sutanto,

Terlampir disampaikan hasil review atas revisi artikel Saudara dari Editor In Chief, untuk dilakukan revisi ke-2, selambatnya **tanggal 18 Juni 2021**.

Demikian untuk dijadikan perhatian Saudara.

Salam,

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Pada tanggal Rab, 12 Mei 2021 15.04, Prof. Dr. Eddy M. Sutanto, M.Sc.
<esutanto@petra.ac.id> menulis:

Yth. Ibu Tritutik

Bersama ini saya sampaikan revisi artikel sesuai dengan catatan para penelaah dan template JEBAV. Judul dan

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Judul baru ialah Entrepreneurial Mindset, Orientation, and Performance of Public University Students in Surabaya, Indonesia.

Demikian dan semoga sesuai harapan. Terima kasih banyak atas segala bantuannya.

Dr. Eddy M. Sutanto, M.Sc.
Professor
Management Business Program
Petra Christian University
Surabaya - Indonesia

On Tue, May 4, 2021 at 1:33 PM Ventura PPPM Perbanas <ventura@perbanas.ac.id> wrote:

Kepada Ysh. **Sdr. Eddy Madiono Sutanto¹, Evan Lau, Andreas Ezra,**

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maka dengan ini kami kirimkan hasil review dari Editor on Board/Reviewer serta Template Artikel Ventura. (attachment). Revisi artikel Saudara kami tunggu selambatnya tanggal **11 Mei 2021**.

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Entrepreneurial Mindset, Orientation, and Performance of University Students in Indonesia

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ABSTRACT

Entrepreneurship plays an important role in determining the level of economic growth of a country. This study aims to explore the impact of entrepreneurial mindset on innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance. This research uses Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the data. It gathered data of 364 respondents, which were the bachelor students of management program of public universities in Surabaya, Indonesia. The results show that entrepreneurial mindset has a significant impact to innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness. It also enhances positive and significant impact to entrepreneurial performance of the students. It implies that the entrepreneurship education of public universities in Surabaya, Indonesia succeeds to change the students' mindset and orientation. The government needs to increase entrepreneurship education centers and business incubator centers at various universities.

Key words:

Autonomy, competitive aggressiveness, innovativeness, proactiveness, risk-taking

ABSTRAK

Kewirausahaan memegang peranan penting dalam menentukan tingkat pertumbuhan ekonomi suatu negara. Studi ini menggali dampak pola pikir kewirausahaan terhadap inovasi, pengambilan risiko, agresivitas kompetitif, otonomi, dan daya proaksi terhadap kinerja kewirausahaan mahasiswa. Penelitian ini Partial Least Squares Structural Equation Modeling (PLS-SEM) untuk menganalisis data. Penelitian ini mengumpulkan data dari 364 responden, yang merupakan mahasiswa sarjana program manajemen dari universitas negeri di Surabaya, Indonesia. Hasil penelitian menunjukkan bahwa pola pikir kewirausahaan memiliki pengaruh yang signifikan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian, dan daya proaktif. Hal ini juga meningkatkan kinerja kewirausahaan mahasiswa secara positif signifikan. Implikasinya ialah pendidikan kewirausahaan di perguruan tinggi negeri di Kota Surabaya, Indonesia telah berhasil mengubah pola pikir dan orientasi mahasiswa. Pemerintah perlu memperbanyak sentra pendidikan kewirausahaan dan pusat inkubator bisnis di berbagai perguruan tinggi.

1. INTRODUCTION

Entrepreneurship is an interesting field as a career. World Economic Forum concludes that over a third of Indonesian young people want to be entrepreneurs (Wood, 2019). On the other hand, the choice as an entrepreneur as career stood at 26% from 20% in 2009 (GMAC, 2014). It adds what shown by the survey against 37,000 students from 14 countries by the International Survey of Collegiate Entrepreneurship in 2006, states that 15.4% of students choose entrepreneur as a career within the first five years after graduation and for the next five years the number increased to 50.1% (Szerb & Imreh, 2007). In this study, we draw some lessons from Indonesia's experience with the focus of the public university students. It offers an interesting case study because the growth of entrepreneurship in the country in general and university students, in particular, do not tally to the entrepreneurial performance. Entrepreneurship which is encouraged in university-level education by various countries in the world and also in Indonesia has not been followed by an increase in entrepreneurial performance of Indonesia's students.

Gustiawan et al. (2014) indicated that the entrepreneur in Indonesia was still small although the development of entrepreneurship is critical to the country. They stated that 2% was an ideal figure for entrepreneurs in any country from the total population. In the case of Indonesia, 400,000 entrepreneurs were identified of which about 0.08% were low comparatively to America (12%), Singapore (7%), and Malaysia (6%). From policy perspectives, entrepreneurship help to reduce unemployment while the ability of entrepreneurs needs to be developed and enhance particularly among the young people.

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Motivated by the importance of entrepreneurial performance, this article is set to explore the impact of an entrepreneurial mindset, innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance of undergraduate management students of public universities. The concept of entrepreneurial orientations which contains some variables such as innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are adopted from Miller (1983), Lumpkin and Dess (2001), and Rauch et al. (2009) who found that these variables have positive and significant relationships towards entrepreneurial performance. Therefore, the main novelty of this research is to comprehensively examine various aspects of entrepreneurial orientation towards entrepreneurial performance. What do happen with university students of Indonesia who have been studying entrepreneurship? Has the entrepreneurship education in Indonesia universities succeeded to change their mindset and orientation? University students are potential generation in the future of a country. All efforts to create a wonderful generation need to be done seriously and consistently. Entrepreneurship is one of the best solution. This study aims and benefits to improve the entrepreneurship education in Indonesia universities.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Entrepreneurship starts from mindset. Dhliwayo and Van Vuuren (2011) stated that entrepreneurial mindset was a way of thinking about business and the opportunity to benefit from the uncertain circumstances. According to Valerio et al. (2014), entrepreneurial mindset referred to socio-emotional abilities and overall awareness towards entrepreneurship which related with entrepreneurial motivation and the success that would come as an entrepreneur. Indicators used to describe the entrepreneurial mindset in this study are the ability to identify business opportunities and the amount of thinking to entrepreneurship (Solesvik et al., 2013). One possible outcome of entrepreneurship education is a change in students' entrepreneurial mindset (Jung & Lee, 2020). Kouakou, Li, Akolgo, and Tchamekwen (2019) highlighted the importance of an entrepreneurial mindset to students at their youngest age. By doing so, they develop entrepreneurial experiences, skills, and abilities to overcome entrepreneurial challenges. This article offers a clear insight into the topic of an entrepreneurial mindset to ease individuals and organization involved in interactive entrepreneurial activities continuously.

2.1 Innovativeness

Innovativeness is the ability to innovate. There are several definitions of innovativeness. According to the West and Anderson, innovativeness could be defined as the ability to create effective implementation of new processes and products for the organization and was designed to give you an advantage for the organization and stakeholders in it (Baregheh et al., 2009). Galunic and Rodan claimed that innovativeness was the ability to produce continuous innovation (Quintane et al., 2011). Rogers defined innovativeness as how fast a person or organization in adopting innovations compared against another person or organization (Yildiz et al., 2014).

There are three indicators of Innovativeness, which are 1) Openness towards new things. Hurt et al. (1977) described innovativeness as a willingness to try new things (Goldsmith & Foxall, 2003); 2) The level of creativity. Kirton declared that innovative people would search for and combine various information, examines problems they experienced, and produces a thought or idea that is unconventional (Lee, 2008); and 3) The ability to innovate. The power to innovate is a further phase of creativity. It is a comparison between the study in quickly manner with the embodiment of innovation practices, particularly socio-organized practices. The power of innovation is an ability to understand socially, accept, estimates, disseminate, implement, and use innovation (Mikhailova, 2015).

2.2 Risk-Taking

Byrnes (1998) stated that risk-taking is an involvement in a variety of behaviors that were associated with some possibilities against unwanted results (Boyer, 2006). According to Hyrzky and Tunnanen, the definition of risk-taking was a process of decision making and an act without enough knowledge about the obtained results (Noer et al., 2013). According to Wenhong and Liuying (2010), risk-taking was a tendency to take action against something that's rated as risky.

There are several indicators to know risk-taking. These indicators include 1) The courage of facing new things. Sung and Hanna stated that young entrepreneurs were more willing to take risks. They have the urge to invest in new goods/services and enter into new markets (Wang & Poutziouris, 2010); and 2) The

courage of facing a difficult situation. Brockhaus declared that the tendency of risk-taking is a possibility to receive profit related to success in certain situations. It is required by a person before putting himself on the consequences associated with failure (Wenhong & Liuying, 2010).

2.3 Competitive Aggressiveness

Competitive aggressiveness is associated with a way to confront the threats and challenges of the external environment (Gamble et al., 2013). Lumpkin and Dess (2001) stated that the competitive aggressiveness was the intensity of the desire to beat your opponent. Noer et al. (2013) stated that competitive aggressiveness was a responsive attitude towards any threat as a form of resistance and effort to win the competition.

According to Chen (1996), there are three indicators of competitive behavior (Stambaugh et al., 2011):

1) Awareness of competitors. Awareness includes analysis of the opponents' strength, stalking the opponents' competitive actions, and the dissemination of information about the opponent. It is about knowing the condition of opponents; 2) Motivation to compete. There are two characteristics of motivation in the company that owns high competitive aggressiveness. The first is beating competitors who are crucial for aggressive companies. Other companies might choose different things as references. They want to know their performance, internal purpose, and satisfaction with the reached target. The aggressive companies seek information of their competitor. They also compare the performance of their own with the others. The second one is a position of opponents which put oneself in difficult situation as appropriate and necessary steps to improve its performance; and 3) Capability to compete. The intended capability is the ability to deliver attacks to the opponent and deflect the opponent's attack. Part of this ability is an existed resource as funds resulting from past good performance. The company is also aggressively identifying available resources and prioritize the resource to attack while the less aggressive company saw the same resource base. Aggressive companies are better to use the available resources rather than to wait for achieving an optimal point.

2.4 Autonomy

According to Metaal, a definition of autonomy was freedom of choice without depending on other parties (Van Gelderen & Jansen, 2006). In another study, Brooke also revealed almost a similar definition that autonomy was the degree of freedom of a person without the need for approval from others (Barnabas and Mekoth, 2010). Feinberg stated that autonomy had at least four meanings: the capacity to govern ourselves, the conditions to set up ourselves, the ideal state to regulate ourselves, and the authority to rule ourselves (Mitcham, 2005).

There are several indicators of autonomy, which are 1) Independent. The ability to do things without being effected by other people (Van Gelderen & Jansen, 2006); 2) Self-learning. Ryan and Deci (2000) said that someone independent would involve himself to learn on an ongoing basis about himself (Weinstein et al., 2012); and 3) Determination. It is the ability to set and to decide whether the regulations, targets, and processes that occur in his business (Van Gelderen & Jansen, 2006).

2.5 Proactiveness

Crant defined proactiveness as taking the initiative to improve the circumstances of (Unsworth & Parker, 2003). According to Wiklund and Shepherd proactiveness was looking far ahead and have the determination to identify and respond to opportunities (Wong, 2012). Teece stated that in the entrepreneurship literatures, proactiveness had definitions as the ability to anticipate and feel a vague signs and act to the needs in the future ahead of existing competitors to gain a competitive advantage (Sundqvist et al., 2012). Crant (2000) stated that proactiveness could be seen from some behaviors. The behaviors could be used as gauges or indicators for proactiveness: The ability to pick the opportunity quickly; Courage start a change; The desirability of creating favorable conditions.

2.6 Entrepreneurial Performance

Van Vuuren said that entrepreneurial performance was the achievement of several entrepreneurial objectives (Sebikari, 2014). According to Dollinger, the entrepreneurial performance was something done by an entrepreneur with high initiative to obtain the goal of entrepreneurship (Tseng, 2013). Callaghan and Venter (2011) mentioned that entrepreneurial performance was something that emphasizes on achieving something and provide continous satisfaction.

There are several indicators of entrepreneurial performance, which are 1) Need for achievement.

McClelland stated that the need for achievement that was often described as a passion to deliver good performance and to gain a feeling of achievement. It is one of the specific characters of entrepreneurship. Collins et al. stated that the need for achievement had a positive correlation with corporate success (Khan et al., 2015). Successful entrepreneurs have high scores in need for achievement (Oosterbeek et al., 2010); 2) The enthusiasm for entrepreneurship. Empirical findings using non-economic indicators to measure the performance namely enthusiasm in work, which represents positive aspect that belonging to someone (Leitao & Franco, 2008), and 3) The realization of the thinking to entrepreneurship. Dhliwayo and Van Vuuren (2011) stated that entrepreneurship would ultimately culminate in the creation or realization of entrepreneurial and strategic management plan that would be resulting in the best performance.

2.7 Entrepreneurial Mindset and Innovativeness

Earlier research claimed that entrepreneurial mindset affects significantly innovativeness. Previous research by Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). Herbig et al. indicate that entrepreneurial mindset affects innovativeness. Other research by Slater states that entrepreneurship tailored to the market-oriented culture will contribute significantly to successful innovation (Ndubisi, 2014; Sutanto et al., 2019). Research by Wang and Zang (2005) state that entrepreneurship is one of the major areas relevant in human resource and innovation. Gonthier and Chirita (2019) found that several factors that enable the entrepreneurial spirit fostered by corporate incubators to boost the innovation capability in their parent companies. Based on the statements, it can be formulated as the following hypothesis:

H_1 : Entrepreneurial mindset significantly affects the innovativeness of students of public universities in Surabaya, Indonesia.

2.8 Entrepreneurial Mindset and Risk-Taking

Earlier researches claim that entrepreneurial mindset affect significantly to risk-taking. Wenhong and Liuying stated systems thinking owned by the entrepreneur would affect the tendency of risk-taking. Related to entrepreneur behavior concerning the family business, Zahra states that ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. state that an entrepreneur receives personal financial risk existing but directly benefits from the potential success. It indicates that the entrepreneurial mindset has a significant effect on risk-taking (Sutanto et al., 2019). Further, Jemal (2020) found that entrepreneurial mindset affects positively and significantly the performance of SMEs and parameters includes: seeking opportunity, creativity, innovation, risk taking, pro-activeness, and alertness to take action. Based on the statement, it can be formulated as the following hypothesis:

H_2 : Entrepreneurial mindset significantly affects the risk-taking of students of the public universities in Surabaya, Indonesia.

2.9 Entrepreneurial Mindset and Competitive Aggressiveness

Previous researches suggest that entrepreneurial mindset affects significantly competitive aggressiveness. Stevenson's research cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors that effected by the entrepreneurial mindset, competitive aggressiveness could be improved. Someone with high competitive aggressiveness would be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better competition. Neneh (2012) and Sutanto et al. (2019) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. Moreover, Paek and Lee (2017) suggested that the dimensions of strategic entrepreneurship, which are environmental sensing, opportunity seizing, strategic flexibility and entrepreneurial orientation play a critical role in competitive advantage of firms. Based on the statement, it can be formulated as the following hypothesis:

H_3 : Entrepreneurial mindset significantly affects competitive aggressiveness of students of public universities in Surabaya, Indonesia.

2.10 Entrepreneurial Mindset and Autonomy

Research by McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control

in some multinational companies were not able to detect and/or control such acts. Moreover, [Sutanto et al. \(2019\)](#) found that the entrepreneurial mindset had a significant effect on the autonomy of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

H₄: Entrepreneurial mindset significantly affects autonomy of students of the public universities in Surabaya, Indonesia.

2.11 Entrepreneurial Mindset and Proactiveness

Mintzberg said entrepreneurial companies tend to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014). Moreover, [Sutanto et al. \(2019\)](#) found entrepreneurial mindset had a significant effect on the proactiveness of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

H₅: Entrepreneurial mindset significantly affects the proactiveness of students of the public universities in Surabaya, Indonesia.

2.12 Innovativeness and Entrepreneurial Performance

In their study, Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with the entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It shows that the innovativeness has an impact on performance. [Prihandono and Utami \(2018\)](#) also consider to explore the entrepreneurial in higher education and innovative potential. Moreover, Khalili et al. (2013) and [Sutanto et al. \(2019\)](#) stated that innovativeness had a significant impact on performance. Further, [Bor \(2018\)](#) revealed that entrepreneurial innovativeness has a direct positive relationship with performance of mid-sized firms. [Falahat, Tehseen, and van Horne \(2018\)](#) also revealed that there was a significant positive impact of entrepreneurial innovativeness on three types of business performances namely perceived non-financial, perceived business growth, and perceived performance relative competitors except on financial performance. Further, [Linton \(2019\)](#) highlighted that innovativeness can be meaningfully divided between the attributes of process and outcome. Based on the statement, it can be formulated as the following hypothesis:

H₆: Innovativeness significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.13 Risk-taking and Entrepreneurial Performance

Callaghan and Venter (2011) and [Sutanto et al. \(2019\)](#) mentioned that risk-taking was one of the dimensions associated with the entrepreneurial performance. On the other hand, Chen et al. (2007) stated entrepreneurial orientation had a positive relationship to performance. In the entrepreneurial orientation, there were dimensions of risk-taking. It suggests that risk-taking has an impact on performance. [Guo and Jiang \(2020\)](#) also found that a focal firm's new product success benefits most from adopting a concurrently high level of sensing risk-taking and seizing risk-taking when market growth is high but a high level of sensing risk-taking with a low level of seizing risk-taking when market growth is low. Moreover, [Linton \(2019\)](#) highlighted that risk-taking can be meaningfully divided between the attributes of process and outcome. Based on the statement, it can be formulated as the following hypothesis:

H₇: Risk-taking significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.14 Competitive Aggressiveness and Entrepreneurial Performance

Callaghan and Venter (2011) and [Sutanto et al. \(2019\)](#) mentioned that competitive aggressiveness was a dimension that was associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of the competitive aggressiveness. It shows that competitive aggressiveness has an impact on performance. Moreover, Khalili et al. (2013) mentioned that competitive aggressiveness equaled as an effort to lead in performance and beat your opponent. [Abdullahi, Kunya, Bustani, and Usman \(2019\)](#) also concluded that competitive aggressive impacts positively on the financial performance of Nigerian CSMES. On the other hand, [Fadda \(2018\)](#) showed that innovativeness, proactiveness and autonomy were significantly associated with tourism firm performance, whereas risk-taking and competitiveness were not.

While, Kosa, Mohammad, and Ajibie (2018) found the level of influence is increasing as firms are being established in larger cities because the firms in cities have more customers and competitors causing them to generate unique strategies that lead them to outstanding performance. Based on the statement, it can be formulated as the following hypothesis:

H₈: Competitive aggressiveness significantly affects the entrepreneurial performance of students of public universities in Surabaya, Indonesia.

2.15 Autonomy and Entrepreneurial Performance

In their study, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that autonomy was one of the dimensions that associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of autonomy. It shows that autonomy has an impact on performance. While, Yu, Lumpkin, Parboteeah, and Stambaugh (2019) found that in dynamic environments, autonomy is associated with improved performance in the United States, while in Taiwan, firms in dynamic environments fared worse with increasing autonomy. Based on the statement, it can be formulated as the following hypothesis:

H₉: Autonomy significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.16 Proactiveness and Entrepreneurial Performance

Costa and McCrae stated that openness to experience was the proactive search and an appreciation for the experience itself as well as tolerance over the exploration of new things (Smith, 2013). On the other hand, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that proactiveness was one dimension that was associated with the entrepreneurial performance. In the study, it was mentioned that openness to experience is one of the factors influencing entrepreneurial performance. It can be concluded that proactiveness has an impact on entrepreneurial performance. Chen et al. (2007) also stated it had a positive relationship between entrepreneurial orientation taking action against performance, wherein the entrepreneurial orientation there was a dimension of proactiveness. Linton (2019) highlighted that proactiveness can be meaningfully divided between the attributes of process and outcome. It shows that proactiveness has an impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H₁₀: Proactiveness significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.17 Research Framework

All the developed hypotheses are shown in Figure 1.

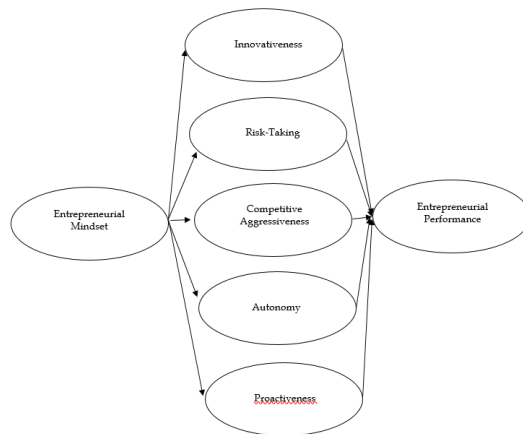


Figure 1. Research Framework

3. RESEARCH METHOD

The population was the bachelor students of the management program of the public universities in Surabaya, Indonesia. There were four establish public universities in Surabaya, which had been offering an entrepreneurship education for their students. The total amount was 4,036 shown in Table 1. It used a purposive sampling.

The criteria set out against the respondents to get the results by the research objectives. They were bachelor students of the management program of the public universities in Surabaya, Indonesia, who were/are ever engaged in entrepreneurship. The 364 samples were taken from the population and determined using Slovin's formula. The questionnaires were disseminated directly to the students of the universities. In order to control bias, the questionnaires was tried out in advance on some respondents. Screening of respondents was conducted orally by asking the respondents one by one and strengthened with the existing questions in the questionnaire.

The study utilized the PLS-SEM to analyze the data. The Partial Least Square function is divided into two groups, namely the inner model and the outer model. The outer model is more towards testing the validity and reliability. While the inner model is more towards regression, which is to assess the effect of one variable on other variables. Model fit on Partial Least Square is not like SEM where there is a global match, such as RMSEA, AGFI, PGFI, PNFI, CMIN / DF, etc. In PLS there are only two criteria for assessing the fit of the model, namely the fit of the outer model which is called the outer model and the inner fit which is called the inner model (Ghozali, 2014).

Table 1. Amounts of bachelor students of management program of public universities in Surabaya

University	Number of Students
Universitas Airlangga	2,026
Universitas Negeri Surabaya	997
Institut Teknologi 10 November Surabaya	109
Universitas Pembangunan Negeri Veteran Jawa Timur	904
Total Number of Students	4,036

Source: <http://forlap.dikti.go.id/>

4. DATA ANALYSIS AND DISCUSSION

4.1 Variable Descriptive Analysis

All responses of the respondents to each variable were designed by Likert scale from 1 to 5. It was set categories of variables by this formula as shown in Table 2.

$$\text{Range} = \frac{\text{Maximum Value} - \text{Minimum Value}}{\text{Amounts of Category}} \quad [1]$$

$$\text{Range} = \frac{5 - 1}{3}$$

$$\text{Range} = 1.33$$

Table 2. Interval of mean scores

Range	Remarks
1.00–2.33	Low
2.34–3.67	Medium
3.67–5.00	High

By using the category, then the evaluation of the answers for each of the variables can be described as follows.

Table 3. The description of entrepreneurial mindset

Item	Statement	Mean	Remark
$X_{1.1}$	I want to create my own workplace	3.64	Medium
$X_{1.2}$	I have an aspiration to be an entrepreneur	3.32	Medium
$X_{1.3}$	I tend to seek business opportunities	3.84	High
$X_{1.4}$	I can identify a business opportunity based on the needs of consumers in the market	3.57	Medium
<i>Entrepreneurial Mindset (X_1)</i>		3.59	Medium

Table 3 notes that the average value of the entrepreneurial mindset is 3.59. It means that the entrepreneurial mindset of students of the public universities in Surabaya has value medium. Table 3 also notes that the highest average value of the indicators is 3.84 in the statement "I tend to seek business opportunities." The lowest average value of the indicator is 3.32 in the statement "I have an aspiration to be an entrepreneur." These results indicate that respondents tend to seek business opportunities despite the aspiration to be an entrepreneur is not so great. It attributes to the respondent's efforts to earn an income or meet his needs. The difference between the statements "I tend to seek business opportunities" with the other states also far enough to the point of being in the different categories (high, medium, low). It indicates that most respondents tend to think more about how to get a business opportunity in a wide variety of way whether to become entrepreneurs or not. It implies that the education succeeds to change the students' mind-set of entrepreneurship (Jung & Lee, 2020; Wardana et al., 2020).

Table 4. The description of innovativeness

Item	Statement	Mean	Remarks
$Z_{1.1}$	I tend to accept new things around me	3.31	Medium
$Z_{1.2}$	I have an innovative idea that can be implemented	3.50	Medium
$Z_{1.3}$	I have unique ideas that haven't been done before	3.34	Medium
$Z_{1.4}$	I can implement the unique ideas that I have	3.49	Medium
<i>Innovativeness (Z_1)</i>		3.41	Medium

Table 4 shows the average value of innovativeness is 3.41. It means students' innovativeness in the public universities in Surabaya has value medium. Besides, the highest average value of the indicators is 3.50 "I have innovative ideas to be implemented." The lowest average value of the indicator is 3.31 in "I am likely to receive new things around me." These results indicate that respondents have different ideas to be applied

in their business. The entire statement is in the category of the medium. It means that innovativeness possibly is improved further.

Table 5. The description of risk-taking

Item	Statement	Mean	Remarks
Z _{2.1}	I dare go to an entirely new place for me all alone	3.65	Medium
Z _{2.2}	I have a willingness to try new things	3.66	Medium
Z _{2.3}	I have the courage to take the decision with minimal information	3.77	High
Z _{2.4}	I felt challenged to do things outside of my comfort zone	3.69	High
Z _{2.5}	I have the desire to conquer my greatest fear	3.71	High
Risk-taking (Z ₂)		3.69	High

Based on Table 5 can be noted that the average value of the variable risk-taking is 3.69. It means the risk-taking of students of the public universities in Surabaya has a value of high. The highest average value of the indicator is 3.77 in the statement I dare to decide with minimal information. The lowest average value of the indicator is 3.65 on the statement of I dare go to an entirely new place for me all alone. Respondents take decisions with minimal information and illustrate that the respondent takes their decision quicker. Table 5 also pointed out that the existence of the respondent towards new things is medium. It is similar to the variable description analysis of innovativeness. The respondents need to enhance adaptation to new things.

Table 6. The description of the competitive aggressiveness

Item	Statement	Mean	Remarks
Z _{3.1}	I am trying to find information to know the existence of competitors for my business	3.42	Medium
Z _{3.2}	I am trying to find information about my business competitors	3.31	Medium
Z _{3.3}	I have the desire to grow bigger than competitors	3.37	Medium
Z _{3.4}	I made the difference in the ability with competitors as a motivation to compete	3.41	Medium
Z _{3.5}	I have the ability to compete with business competitors	3.35	Medium
Z _{3.6}	I can overtake the position of the competitors who have higher business position	3.37	Medium
Competitive Aggressiveness (Z ₃)		3.37	Medium

Based on Table 6 can be noted that the average value of the variable competitive aggressiveness is 3.37. It means the competitive aggressiveness of students of the public universities in Surabaya has a value the medium. Besides, the highest average value of the indicator is 3.42 in the statement I am trying to find information to know the existence of competitors for my business. The lowest average value is 3.31 on I am trying to find information about my business competitors. Respondents tend to strive to recognize the surrounding environment despite the statement with the highest value remained in the category of "Medium". All Statements about competitive aggressiveness are medium. It indicates that respondents tend to be less concerned with competitors to compete better. Lack of concern for the competitors to compete can come from ego and focus on their own business.

Table 7. The description of the autonomy

Item	Statement	Mean	Remarks
Z _{4.1}	I work without relying on others	3.34	Medium
Z _{4.2}	I am working without affected by other people's assumptions	3.49	Medium
Z _{4.3}	I believe with the my ability to resolve the job	3.41	Medium
Z _{4.4}	I work in a field that I've mastered	3.50	Medium

$Z_{4.5}$	I can specify the time limit to finish the job	3.45	Medium
$Z_{4.6}$	I can determine the target of achievement for myself	3.55	Medium
<i>Autonomy (Z_5)</i>		3.46	Medium

Based on Table 7 can be noted that the average value of the variable autonomy is 3.46. It means the autonomy of students of the public universities in Surabaya is medium. Besides, the highest average value of the indicator is 3.55 can determine the achievement target. The lowest average is 3.34 of I work without relying on others. These results show that determine the targets for ourselves is easier to do than the other statements. All statements regarding autonomy are in the category of the medium. It shows that the autonomy of the respondents needs to improve regarding independence in work.

Table 8. The description of proactiveness

Item	Statement	Mean	Remarks
$Z_{5.1}$	I work with my own initiatives and without being asked	3.64	Medium
$Z_{5.2}$	I get the job done faster than the given time	3.56	Medium
$Z_{5.3}$	I prefer to face rather than avoid the problem	3.60	Medium
<i>Proactiveness (Z_5)</i>		3.60	Medium

Based on Table 8 can be noted that the average value of the proactiveness is 3.60. It means that the proactiveness of students of the public universities in Surabaya is medium. Also, the highest average value of the indicator is 3.64 I am working with the initiative. The lowest average is 3.56 I get the job done faster than the given time. These results indicate that respondents may give rise to the initiative from themselves to do something. All statements about proactiveness are in the category of the medium. It indicates that respondents can enhance the initiative. Tend to work on time and finish it sooner than the given time.

Table 9. The description of entrepreneurial performance

Item	Statement	Mean	Remarks
Y_1	I am trying to improve my business turnover	3.33	Medium
Y_2	I am trying to hit the target that I set for my business	3.57	Medium
Y_3	I have a high spirit in opening my business	3.55	Medium
Y_4	I am very happy to have a new business	3.46	Medium
Y_5	I feel excited when finding a new breakthrough for my business	3.50	Medium
Y_6	I can apply the ideas of my effort into my business	3.59	Medium
<i>Entrepreneurial Performance (Y)</i>		3.50	Medium

Based on Table 9 can be noted that the average value of the variable entrepreneurial performance is 3.50. It means the entrepreneurial performance of students of the public universities in Surabaya has a value of the medium. Besides, the highest average value of the indicator is 3.59 I can apply the ideas of my effort into my efforts. The lowest average is 3.33 I am trying to improve my business turnover. These results indicate that respondents can reasonably implement ideas into their business. All statements regarding entrepreneurial performance are in the category of the medium. It shows that entrepreneurial performance could still be improved, especially in terms of efforts on increasing turnover. More respondents need to pay close attention to the financial aspects.

4.2 Convergent Validity

Campbell and Fisk stated that convergent validity is an agreement between measures of the same construct assessed by different methods (Guo et al., 2008). Convergent validity measurement carries out using the value of the outer-loading. An indicator is said to satisfy the convergent validity if it has the value of outer-loading > 0.5 (Muafi & Roostika, 2014). Here are the values of the outer-loading indicator on each variable dimensions and research.

From Table 10 can be noted that all indicators that make up the research dimensions and variables

have a value of outer-loading > 0.5. Based on these results, all indicators have met the convergent validity. They can be used to do further analysis.

4.3 Discriminant Validity

Campbell and Fisk stated that discriminant validity was the distinctiveness of different constructs (Guo et al., 2008). The measurement of discriminant validity carries out using cross-loading value (Henseler et al., 2015). An indicator that satisfies to discriminant validity of the indicator value of cross-loading on dimensions or from the variables is the largest when compared with other variables or dimensions (Muafi & Roostika, 2014). Table 10 shows the value of cross-loading each indicator.

Table 10 shows that all indicators have the largest cross-loading on their dimension or variables compared to others. Based on these results, the indicators used in this study have had good discriminant validity in drawing up each dimension or variable. Besides using the value of outer loading, testing validity can also be done by looking at the AVE value (Henseler et al., 2015). The indicators used are said to be valid if the value of AVE is above 0.5. The AVE value of indicators are shown in Table 12.

Table 12 shows the AVE value produced by all reflective indicators is above 0.5. Based on those results, all reflective indicators meet the validity requirements. Further examination is construct-reliability by looking at the output of the composite reliability or Cronbach's alpha. Constructs are pretty reliable if the value of the composite reliability or Cronbach's alpha is greater than or equal to 0.3. But better if above 0.7 (Muafi & Roostika, 2014). Table 13 shows the output of the Cronbach's alpha. The Cronbach's alpha values of all constructs are good if above 0.7. So all reflective indicators are reliable or meet the reliability test.

Table 10. Outer-loading and cross-loading value

	Autonomy		Competitive Aggressiveness		Entrepreneurial Mindset		Entrepreneurial Performance		Innovativeness		Proactiveness		Risk-taking	
	Outer-loading	Cross-loading	Outer-loading	Cross-loading	Outer-loading	Cross-loading	Outer-loading	Cross-loading	Outer-loading	Cross-loading	Outer-loading	Cross-loading	Outer-loading	Cross-loading
A1	0.795914	0.795914		0.546739		0.546110		0.597485		0.517463		0.473654		0.482839
A2	0.820101	0.820101		0.636932		0.567808		0.674356		0.653024		0.599733		0.474295
A3	0.766828	0.766828		0.603595		0.533795		0.654078		0.623765		0.550383		0.508391
A4	0.791210	0.791210		0.553146		0.516577		0.642966		0.536862		0.560568		0.494318
A5	0.815840	0.815840		0.539068		0.481304		0.600802		0.541449		0.481319		0.464055
A6	0.890515	0.890515		0.572540		0.504996		0.670452		0.568687		0.550442		0.465893
CA1		0.597251	0.826384	0.826384		0.413458		0.588599		0.583278		0.449628		0.413075
CA2		0.568863	0.788390	0.788390		0.513976		0.577079		0.548098		0.447603		0.453065
CA3		0.454781	0.757231	0.757231		0.427850		0.508528		0.557980		0.397768		0.375940
CA4		0.581470	0.770411	0.770411		0.429500		0.642631		0.630459		0.460988		0.419129
CA5		0.573336	0.787101	0.787101		0.484007		0.611462		0.642640		0.434427		0.424887
CA6		0.587625	0.830609	0.830609		0.503883		0.639402		0.593314		0.568785		0.520743
EM1		0.578223		0.523911	0.847068	0.847068		0.601549		0.511237		0.576205		0.726098
EM2		0.469106		0.450495	0.778124	0.778124		0.483172		0.390101		0.592348		0.646298
EM3		0.480377		0.414348	0.787740	0.787740		0.586079		0.452395		0.664646		0.725289
EM4		0.600080		0.537760	0.889122	0.889122		0.662212		0.549196		0.611439		0.803558
EP1		0.690985		0.629075		0.592925	0.767887	0.767887		0.516021		0.581399		0.571018
EP2		0.710318		0.669900		0.667298	0.882425	0.882425		0.657911		0.714472		0.665061
EP3		0.547919		0.592988		0.543400	0.782284	0.782284		0.659590		0.595855		0.529508
EP4		0.579115		0.504559		0.465962	0.753799	0.753799		0.527506		0.613374		0.534530
EP5		0.630194		0.648269		0.610477	0.847037	0.847037		0.662474		0.616929		0.612048
EP6		0.734086		0.666199		0.615633	0.907086	0.907086		0.665356		0.671315		0.634993
I1		0.580663		0.619670		0.491576		0.605705	0.833910	0.833910		0.473129		0.401179
I2		0.612614		0.682626		0.522052		0.676580	0.836759	0.836759		0.520045		0.490018
I3		0.519908		0.562908		0.421137		0.567804	0.828741	0.828741		0.404254		0.387576
I4		0.642745		0.625403		0.494055		0.634961	0.844424	0.844424		0.517415		0.448238
PA1		0.648007		0.535303		0.679524		0.713894		0.503103	0.914802	0.914802		0.664298
PA2		0.506749		0.577421		0.652216		0.668834		0.532460	0.849710	0.849710		0.655903
PA3		0.531079		0.379615		0.568926		0.594728		0.450296	0.818392	0.818392		0.566120
RT1		0.466286		0.414258		0.692612		0.540781		0.372364		0.623311	0.764520	0.764520
RT2		0.531430		0.533691		0.805747		0.607792		0.494341		0.593115	0.847122	0.847122
RT3		0.370777		0.351081		0.637335		0.556424		0.358214		0.598761	0.799130	0.799130
RT4		0.428922		0.377258		0.658522		0.561112		0.361990		0.625084	0.813196	0.813196
RT5		0.584088		0.549996		0.793162		0.669312		0.516321		0.572851	0.871995	0.871995

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Table 12 shows the value of Cronbach's alpha of all constructs is good if above 0.7. So all reflective indicators are reliable or meet the reliability test. Besides, the composite-reliability values of all reflective constructs are also good. So all the reflective indicators are reliable or meet the test of reliability.

Table 12. AVE value and reliability test

Variable	AVE	Composite Reliability	Cronbach's Alpha
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Entrepreneurial Mindset	0.683518	0.895975	0.844539
Innovativeness	0.699696	0.903095	0.857253
Risk-taking	0.672476	0.911069	0.878042
Competitive Aggressiveness	0.630140	0.910798	0.882372
Autonomy	0.663116	0.921775	0.897767
Proactiveness	0.742878	0.896360	0.826114
Entrepreneurial Performance	0.681464		

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4.4 R-Square

Table 14 shows the R-Square value of each variable. Risk-taking and proactiveness have a high magnitude of the research model (77% and 54%). This result explains that the Indonesian students have strong entrepreneurial characteristics on those two. It may be the education of entrepreneurship has a positive contribution in building their entrepreneurship.

Moreover, the R-Square value of Entrepreneurial Performance is very high. It means that the magnitude of entrepreneurial performance is 80.3%. Autonomy, competitive aggressiveness, innovativeness, proactiveness, and risk-taking explain it. The rest amounted of 19.7% are explained by other factors outside the model that is examined.

4.5 Hypothesis Testing and Discussion

Hypothesis testing is a scientific process to examine if a hypothesis is plausible or not. Hypothesis testing is calculated by searching for the quantity and value of the effect coefficient also t-statistic (Park, 2008). Research hypothesis is acceptable if the value of the t-statistic > 1.96. Here are the coefficients of effect (original sample estimate) and the value of the t-statistic of each hypothesis on the inner model shown in Table 15. The results support positively the previous one done by [Sutanto et al. \(2019\)](#).

Table 14. R-square value

Variable	R-Square
Entrepreneurial Mindset	
Innovativeness	0.335497
Risk-taking	0.774349
Competitive Aggressiveness	0.341781
Autonomy	0.418010
Proactiveness	0.544001
Entrepreneurial Performance	0.803013

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The entrepreneurial mindset has a coefficient of effect on the innovativeness of 0.579 with a t-statistic of 7.696 outweighs 1.96. This result indicates that entrepreneurial mindset has significant effects against innovativeness. A higher entrepreneurial mindset will increase the innovativeness of students of public universities. Based on this result, H_1 is accepted. It supports the earlier researches claimed that entrepreneurial mindset affects significantly to innovativeness. Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). He indicated that entrepreneurial mindset affected innovativeness. Moreover, Slater stated that entrepreneurship tailored to the market-oriented culture contribute significantly to the successful innovation (Ndubisi, 2014) as well as the research by Wang and Zang (2005) which suggested entrepreneurship was one of the many areas that are relevant in the human resource and innovation. [Gonthier and Chirita \(2019\)](#) also found that several factors that enable the entrepreneurial spirit fostered by corporate incubators to boost the innovation capability in their parent companies.

The entrepreneurial mindset has a coefficient of effect on risk-taking of 0.879 with a t-statistic of 37.235 outweighs 1.96. This result indicates that entrepreneurial mindset has a significant effect towards risk-taking. A higher entrepreneurial mindset increases the risk-taking of students of public universities. Based on this result, H_2 is accepted. It supports the earlier researches that claimed that entrepreneurial mindset affects risk-taking. Wenhong and Liuying (2010) stated systems thinking owned by entrepreneurs would affect their tendency in risk-taking. Zahra says industrial entrepreneur ownership is associated with risk-

taking (Wang & Poutziouris, 2010). In his research, Segal et al. (2005) stated that an entrepreneur received personal financial risk existing in the ownership of a business but was also directly benefit from the potential success of that business. Jemal (2020) found that entrepreneurial mindset affects positively and significantly the performance of SMEs and parameters includes: seeking opportunity, creativity, innovation, risk taking, pro-activeness, and alertness to take action. All these findings indicate that the entrepreneurial mindset has a significant effect on risk-taking.

The entrepreneurial mindset has a coefficient of effect on competitive aggressiveness of 0.585 with a t-statistic of 7.89 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against competitive aggressiveness. A higher entrepreneurial mindset increases the competitive aggressiveness of students of public universities. Based on this result, H_3 is accepted.

It supports previous research that suggests that entrepreneurial mindset affects competitive aggressiveness. Stevenson's research (1990), cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors, the entrepreneurial mindset improves competitive aggressiveness. Someone with high competitive aggressiveness will be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better performance. Neneh (2012) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. Paek and Lee (2017) also suggested that the dimensions of strategic entrepreneurship, which are environmental sensing, opportunity seizing, strategic flexibility and entrepreneurial orientation play a critical role in competitive advantage of firms.

Table 15. Coefficients of effect and t-statistic

Hypothesis	Effect	Coefficient	t-statistic	Decision
H_1	EM --> I	0.579221	7.696174	Accepted
H_2	EM --> RT	0.879971	37.235113	Accepted
H_3	EM --> CA	0.584621	7.892138	Accepted
H_4	EM --> P	0.737564	14.584267	Accepted
H_5	EM --> A	0.646537	9.845969	Accepted
H_6	I --> EP	0.194541	2.039976	Accepted
H_7	RT --> EP	0.191298	2.68042	Accepted
H_8	CA --> EP	0.185336	2.152761	Accepted
H_9	P --> EP	0.247053	2.389091	Accepted
H_{10}	A --> EP	0.242796	2.112903	Accepted

The entrepreneurial mindset has a coefficient of effect on the autonomy of 0.647 with t-statistic of 9.846 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect on autonomy. A higher entrepreneurial mindset increases the autonomy of students of public universities. Based on this result, H_4 is accepted. This result supports research of McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies are not able to detect and or control such acts.

The entrepreneurial mindset has a coefficient of effect on the proactiveness of 0.738 with a t-statistic of 14.584 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against proactiveness. A higher entrepreneurial mindset increases the proactiveness of students of public universities. Based on this result, H_5 is accepted. This result supports what Mintzberg found that entrepreneurial companies tended to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014).

The innovativeness has a coefficient of effect on the entrepreneurial performance of 0.195 with t-statistic of 2.0399 greater than 1.96. This result shows that there is a significant effect of innovativeness on entrepreneurial performance. A higher innovativeness increases the entrepreneurial performance of students of public universities. Based on this result, H_6 is accepted. This result supports previous scholars. Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It

shows that innovativeness has an impact on performance. Khalili et al. (2013), Linton (2019), and Sutanto et al. (2019) said innovativeness had a significant effect on performance. Further, Bor (2018) revealed that entrepreneurial innovativeness has a direct positive relationship with performance of mid-sized firms. Falahat, Tehseen, and van Horne (2018) also revealed that there was a significant positive impact of entrepreneurial innovativeness on three types of business performances namely perceived non-financial, perceived business growth, and perceived performance relative competitors except on financial performance.

The risk-taking has a coefficient of effect on the entrepreneurial performance of 0.191 with t-statistic of 2.68 greater than 1.96. This result shows that risk-taking providing a significant effect against the entrepreneurial performance. A higher risk-taking increases the entrepreneurial performance of students of public universities. Based on this result, H_7 is accepted. It supports the studies of Chen et al. (2007), Callaghan and Venter (2011), Linton (2019), and Sutanto et al. (2019). It suggests that risk-taking has an impact on performance. Guo and Jiang (2020) also found that a focal firm's new product success benefits most from adopting a concurrently high level of sensing risk-taking and seizing risk-taking when market growth is high but a high level of sensing risk-taking with a low level of seizing risk-taking when market growth is low.

The competitive aggressiveness has a coefficient of effect on the entrepreneurial performance of 0.185 with t-statistic of 2.152 greater than 1.96. This result suggests that the competitive aggressiveness has a significant effect on entrepreneurial performance. A higher competitive aggressiveness increases the entrepreneurial performance in of students of public universities. Based on this result, H_8 is accepted. The result supports the studies of Chen et al. (2007), Callaghan and Venter (2011), Khalili et al. (2013), Kosa, Mohammad, and Ajibie (2018), Sutanto et al. (2019), and Abdullahi, Kunya, Bustani, and Usman (2019). The competitive aggressiveness leads in performance.

Autonomy has a coefficient of effect on the entrepreneurial performance of 0.247 with t-statistic of 2.389 greater than 1.96. This result explains that autonomy has a significant effect on entrepreneurial performance. A higher autonomy increases the entrepreneurial of students of public universities. Based on this result, H_9 is accepted. It supports positively what was found by Callaghan and Venter (2011), Chen et al. (2007), Yu et al. (2019), and Sutanto et al. (2019) previously that autonomy had an impact on performance.

The proactiveness has a coefficient of effect on the entrepreneurial performance of 0.243 with a t-statistic of 2.112 outweighs 1.96. This result explains that the proactiveness has a significant effect on entrepreneurial performance. A higher proactiveness increases the entrepreneurial performance of students of public universities. Based on this result, H_{10} is accepted. It convinces the previous findings of Costa and McCrae (1992) (in Smith, 2013), Callaghan and Venter (2011), Chen et al. (2007), Linton (2019), and Sutanto et al. (2019). It shows that proactiveness has an impact on performance.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Based on the results of this research then it can be concluded the conclusions that entrepreneurial mindset of the Indonesian students has a positive and significant effect against their innovativeness, risk-taking, competitive aggressiveness, autonomy, proactiveness. Therefore, changing mindset of the students to entrepreneurship is a vital effort. It implies the entrepreneurship education of Indonesian public universities has succeeded to change their mindset as well as their entrepreneurial orientation and performance. Promoting entrepreneurship education to develop the entrepreneurial competences and mindsets of citizens has become an important mission on the supranational educational policy agenda (Laalo & Heinonen, 2016).

On the other hand, the Indonesian students' innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are found has and significant effect against entrepreneurial performance. It convinces that the education of entrepreneurship should not satisfy only to change the students' mindset but also to cultivate all variables in order to reach high performance.

Some variables such as entrepreneurial mindset, innovativeness, competitive aggressiveness, autonomy, proactiveness, as well as entrepreneurial performance of the Indonesian college students have medium mean. Some actions need to be done much more in the future. Improving the entrepreneurship curriculum is extremely necessary. Inviting and connecting to successful business leaders and entrepreneurs is a must. It will open and inspire students' minds and hearts to create a startup business. Furthermore, as suggested by Loboda, Ostrovskiy, and Katernyak (2018) universities should promote entrepreneurship as a career option and provide entrepreneurship experiences to students. The change in the academic culture is a common challenge, which includes the introduction of entrepreneurial thinking and acting as alternatives to

traditional teaching approaches and opening up the universities to the surrounding society and industrial ecosystem. The use of ICT and in particular eLearning in delivering entrepreneurial education might be an additional option for expanding the outreach of the course.

This study is only to analyze the entrepreneurship of the students. However, to make sure whether the students really implement their entrepreneurship potential after finishing their education, it needs a further research. Without that, the findings are only a theory.

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Yth. Redaksi

Terlampir revisinya. Terima kasih.

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Entrepreneurial Mindset, Orientation, and Performance of University Students in Indonesia

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ABSTRACT

Entrepreneurship plays an important role in determining the level of economic growth of a country. This study aims to explore the impact of entrepreneurial mindset on innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance. This research uses Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the data. It gathered data of 364 respondents, which were the bachelor students of management program of public universities in Surabaya, Indonesia. The results show that entrepreneurial mindset has a significant impact to innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness. It also enhances positive and significant impact to entrepreneurial performance of the students. It implies that the entrepreneurship education of public universities in Surabaya, Indonesia succeeds to change the students' mindset and orientation. The government needs to increase entrepreneurship education centers and business incubator centers at various universities.

Key words:

Autonomy, competitive aggressiveness, innovativeness, proactiveness, risk-taking

ABSTRAK

Kewirausahaan memegang peranan penting dalam menentukan tingkat pertumbuhan ekonomi suatu negara. Studi ini menggali dampak pola pikir kewirausahaan terhadap inovasi, pengambilan risiko, agresivitas kompetitif, otonomi, dan daya proaksi terhadap kinerja kewirausahaan mahasiswa. Penelitian ini Partial Least Squares Structural Equation Modeling (PLS-SEM) untuk menganalisis data. Penelitian ini mengumpulkan data dari 364 responden, yang merupakan mahasiswa sarjana program manajemen dari universitas negeri di Surabaya, Indonesia. Hasil penelitian menunjukkan bahwa pola pikir kewirausahaan memiliki pengaruh yang signifikan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian, dan daya proaktif. Hal ini juga meningkatkan kinerja kewirausahaan mahasiswa secara positif signifikan. Implikasinya ialah pendidikan kewirausahaan di perguruan tinggi negeri di Kota Surabaya, Indonesia telah berhasil mengubah pola pikir dan orientasi mahasiswa. Pemerintah perlu memperbanyak sentra pendidikan kewirausahaan dan pusat inkubator bisnis di berbagai perguruan tinggi.

1. INTRODUCTION

Entrepreneurship is an interesting field as a career. World Economic Forum concludes that over a third of Indonesian young people want to be entrepreneurs (Wood, 2019). On the other hand, the choice as an entrepreneur as career stood at 26% from 20% in 2009 (GMAC, 2014). It adds what shown by the survey against 37,000 students from 14 countries by the International Survey of Collegiate Entrepreneurship in 2006, states that 15.4% of students choose entrepreneur as a career within the first five years after graduation and for the next five years the number increased to 50.1% (Szerb & Imreh, 2007). In this study, we draw some lessons from Indonesia's experience with the focus of the public university students. It offers an interesting case study because the growth of entrepreneurship in the country in general and university students, in particular, do not tally to the entrepreneurial performance. Entrepreneurship which is encouraged in university-level education by various countries in the world and also in Indonesia has not been followed by an increase in entrepreneurial performance of Indonesia's students.

Gustiawan et al. (2014) indicated that the entrepreneur in Indonesia was still small although the development of entrepreneurship is critical to the country. They stated that 2% was an ideal figure for entrepreneurs in any country from the total population. In the case of Indonesia, 400,000 entrepreneurs were identified of which about 0.08% were low comparatively to America (12%), Singapore (7%), and Malaysia (6%). From policy perspectives, entrepreneurship help to reduce unemployment while the ability of entrepreneurs needs to be developed and enhance particularly among the young people.

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Motivated by the importance of entrepreneurial performance, this article is set to explore the impact of an entrepreneurial mindset, innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance of undergraduate management students of public universities. The concept of entrepreneurial orientations which contains some variables such as innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are adopted from Miller (1983), Lumpkin and Dess (2001), and Rauch et al. (2009) who found that these variables have positive and significant relationships towards entrepreneurial performance. Therefore, the main novelty of this research is to comprehensively examine various aspects of entrepreneurial orientation towards entrepreneurial performance. What do happen with university students of Indonesia who have been studying entrepreneurship? Has the entrepreneurship education in Indonesia universities succeeded to change their mindset and orientation? University students are potential generation in the future of a country. All efforts to create a wonderful generation need to be done seriously and consistently. Entrepreneurship is one of the best solution. This study aims and benefits to improve the entrepreneurship education in Indonesia universities.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Entrepreneurship starts from mindset. Dhliwayo and Van Vuuren (2011) stated that entrepreneurial mindset was a way of thinking about business and the opportunity to benefit from the uncertain circumstances. According to Valerio et al. (2014), entrepreneurial mindset referred to socio-emotional abilities and overall awareness towards entrepreneurship which related with entrepreneurial motivation and the success that would come as an entrepreneur. Indicators used to describe the entrepreneurial mindset in this study are the ability to identify business opportunities and the amount of thinking to entrepreneurship (Solesvik et al., 2013). One possible outcome of entrepreneurship education is a change in students' entrepreneurial mindset (Jung & Lee, 2020). Kouakou, Li, Akolgo, and Tchamekwen (2019) highlighted the importance of an entrepreneurial mindset to students at their youngest age. By doing so, they develop entrepreneurial experiences, skills, and abilities to overcome entrepreneurial challenges. This article offers a clear insight into the topic of an entrepreneurial mindset to ease individuals and organization involved in interactive entrepreneurial activities continuously.

2.1 Innovativeness

Innovativeness is the ability to innovate. There are several definitions of innovativeness. According to the West and Anderson, innovativeness could be defined as the ability to create effective implementation of new processes and products for the organization and was designed to give you an advantage for the organization and stakeholders in it (Baregheh et al., 2009). Galunic and Rodan claimed that innovativeness was the ability to produce continuous innovation (Quintane et al., 2011). Rogers defined innovativeness as how fast a person or organization in adopting innovations compared against another person or organization (Yildiz et al., 2014).

There are three indicators of Innovativeness, which are 1) Openness towards new things. Hurt et al. (1977) described innovativeness as a willingness to try new things (Goldsmith & Foxall, 2003); 2) The level of creativity. Kirton declared that innovative people would search for and combine various information, examines problems they experienced, and produces a thought or idea that is unconventional (Lee, 2008); and 3) The ability to innovate. The power to innovate is a further phase of creativity. It is a comparison between the study in quickly manner with the embodiment of innovation practices, particularly socio-organized practices. The power of innovation is an ability to understand socially, accept, estimates, disseminate, implement, and use innovation (Mikhailova, 2015).

2.2 Risk-Taking

Byrnes (1998) stated that risk-taking is an involvement in a variety of behaviors that were associated with some possibilities against unwanted results (Boyer, 2006). According to Hyrzky and Tunnanen, the definition of risk-taking was a process of decision making and an act without enough knowledge about the obtained results (Noer et al., 2013). According to Wenhong and Liuying (2010), risk-taking was a tendency to take action against something that's rated as risky.

There are several indicators to know risk-taking. These indicators include 1) The courage of facing new things. Sung and Hanna stated that young entrepreneurs were more willing to take risks. They have the urge to invest in new goods/services and enter into new markets (Wang & Poutziouris, 2010); and 2) The

courage of facing a difficult situation. Brockhaus declared that the tendency of risk-taking is a possibility to receive profit related to success in certain situations. It is required by a person before putting himself on the consequences associated with failure (Wenhong & Liuying, 2010).

2.3 Competitive Aggressiveness

Competitive aggressiveness is associated with a way to confront the threats and challenges of the external environment (Gamble et al., 2013). Lumpkin and Dess (2001) stated that the competitive aggressiveness was the intensity of the desire to beat your opponent. Noer et al. (2013) stated that competitive aggressiveness was a responsive attitude towards any threat as a form of resistance and effort to win the competition.

According to Chen (1996), there are three indicators of competitive behavior (Stambaugh et al., 2011):

1) Awareness of competitors. Awareness includes analysis of the opponents' strength, stalking the opponents' competitive actions, and the dissemination of information about the opponent. It is about knowing the condition of opponents; 2) Motivation to compete. There are two characteristics of motivation in the company that owns high competitive aggressiveness. The first is beating competitors who are crucial for aggressive companies. Other companies might choose different things as references. They want to know their performance, internal purpose, and satisfaction with the reached target. The aggressive companies seek information of their competitor. They also compare the performance of their own with the others. The second one is a position of opponents which put oneself in difficult situation as appropriate and necessary steps to improve its performance; and 3) Capability to compete. The intended capability is the ability to deliver attacks to the opponent and deflect the opponent's attack. Part of this ability is an existed resource as funds resulting from past good performance. The company is also aggressively identifying available resources and prioritize the resource to attack while the less aggressive company saw the same resource base. Aggressive companies are better to use the available resources rather than to wait for achieving an optimal point.

2.4 Autonomy

According to Metaal, a definition of autonomy was freedom of choice without depending on other parties (Van Gelderen & Jansen, 2006). In another study, Brooke also revealed almost a similar definition that autonomy was the degree of freedom of a person without the need for approval from others (Barnabas and Mekoth, 2010). Feinberg stated that autonomy had at least four meanings: the capacity to govern ourselves, the conditions to set up ourselves, the ideal state to regulate ourselves, and the authority to rule ourselves (Mitcham, 2005).

There are several indicators of autonomy, which are 1) Independent. The ability to do things without being effected by other people (Van Gelderen & Jansen, 2006); 2) Self-learning. Ryan and Deci (2000) said that someone independent would involve himself to learn on an ongoing basis about himself (Weinstein et al., 2012); and 3) Determination. It is the ability to set and to decide whether the regulations, targets, and processes that occur in his business (Van Gelderen & Jansen, 2006).

2.5 Proactiveness

Crant defined proactiveness as taking the initiative to improve the circumstances of (Unsworth & Parker, 2003). According to Wiklund and Shepherd proactiveness was looking far ahead and have the determination to identify and respond to opportunities (Wong, 2012). Teece stated that in the entrepreneurship literatures, proactiveness had definitions as the ability to anticipate and feel a vague signs and act to the needs in the future ahead of existing competitors to gain a competitive advantage (Sundqvist et al., 2012). Crant (2000) stated that proactiveness could be seen from some behaviors. The behaviors could be used as gauges or indicators for proactiveness: The ability to pick the opportunity quickly; Courage start a change; The desirability of creating favorable conditions.

2.6 Entrepreneurial Performance

Van Vuuren said that entrepreneurial performance was the achievement of several entrepreneurial objectives (Sebikari, 2014). According to Dollinger, the entrepreneurial performance was something done by an entrepreneur with high initiative to obtain the goal of entrepreneurship (Tseng, 2013). Callaghan and Venter (2011) mentioned that entrepreneurial performance was something that emphasizes on achieving something and provide continous satisfaction.

There are several indicators of entrepreneurial performance, which are 1) Need for achievement.

McClelland stated that the need for achievement that was often described as a passion to deliver good performance and to gain a feeling of achievement. It is one of the specific characters of entrepreneurship. Collins et al. stated that the need for achievement had a positive correlation with corporate success (Khan et al., 2015). Successful entrepreneurs have high scores in need for achievement (Oosterbeek et al., 2010); 2) The enthusiasm for entrepreneurship. Empirical findings using non-economic indicators to measure the performance namely enthusiasm in work, which represents positive aspect that belonging to someone (Leitao & Franco, 2008), and 3) The realization of the thinking to entrepreneurship. Dhliwayo and Van Vuuren (2011) stated that entrepreneurship would ultimately culminate in the creation or realization of entrepreneurial and strategic management plan that would be resulting in the best performance.

2.7 Entrepreneurial Mindset and Innovativeness

Earlier research claimed that entrepreneurial mindset affects significantly innovativeness. Previous research by Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). Herbig et al. indicate that entrepreneurial mindset affects innovativeness. Other research by Slater states that entrepreneurship tailored to the market-oriented culture will contribute significantly to successful innovation (Ndubisi, 2014; Sutanto et al., 2019). Research by Wang and Zang (2005) state that entrepreneurship is one of the major areas relevant in human resource and innovation. Gonthier and Chirita (2019) found that several factors that enable the entrepreneurial spirit fostered by corporate incubators to boost the innovation capability in their parent companies. Based on the statements, it can be formulated as the following hypothesis:

H_1 : Entrepreneurial mindset significantly affects the innovativeness of students of public universities in Surabaya, Indonesia.

2.8 Entrepreneurial Mindset and Risk-Taking

Earlier researches claim that entrepreneurial mindset affect significantly to risk-taking. Wenhong and Liuying stated systems thinking owned by the entrepreneur would affect the tendency of risk-taking. Related to entrepreneur behavior concerning the family business, Zahra states that ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. state that an entrepreneur receives personal financial risk existing but directly benefits from the potential success. It indicates that the entrepreneurial mindset has a significant effect on risk-taking (Sutanto et al., 2019). Further, Jemal (2020) found that entrepreneurial mindset affects positively and significantly the performance of SMEs and parameters includes: seeking opportunity, creativity, innovation, risk taking, pro-activeness, and alertness to take action. Based on the statement, it can be formulated as the following hypothesis:

H_2 : Entrepreneurial mindset significantly affects the risk-taking of students of the public universities in Surabaya, Indonesia.

2.9 Entrepreneurial Mindset and Competitive Aggressiveness

Previous researches suggest that entrepreneurial mindset affects significantly competitive aggressiveness. Stevenson's research cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors that effected by the entrepreneurial mindset, competitive aggressiveness could be improved. Someone with high competitive aggressiveness would be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better competition. Neneh (2012) and Sutanto et al. (2019) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. Moreover, Paek and Lee (2017) suggested that the dimensions of strategic entrepreneurship, which are environmental sensing, opportunity seizing, strategic flexibility and entrepreneurial orientation play a critical role in competitive advantage of firms. Based on the statement, it can be formulated as the following hypothesis:

H_3 : Entrepreneurial mindset significantly affects competitive aggressiveness of students of public universities in Surabaya, Indonesia.

2.10 Entrepreneurial Mindset and Autonomy

Research by McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control

in some multinational companies were not able to detect and/or control such acts. Moreover, [Sutanto et al. \(2019\)](#) found that the entrepreneurial mindset had a significant effect on the autonomy of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

H₄: Entrepreneurial mindset significantly affects autonomy of students of the public universities in Surabaya, Indonesia.

2.11 Entrepreneurial Mindset and Proactiveness

Mintzberg said entrepreneurial companies tend to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014). Moreover, [Sutanto et al. \(2019\)](#) found entrepreneurial mindset had a significant effect on the proactiveness of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

H₅: Entrepreneurial mindset significantly affects the proactiveness of students of the public universities in Surabaya, Indonesia.

2.12 Innovativeness and Entrepreneurial Performance

In their study, Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with the entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It shows that the innovativeness has an impact on performance. [Prihandono and Utami \(2018\)](#) also consider to explore the entrepreneurial in higher education and innovative potential. Moreover, Khalili et al. (2013) and [Sutanto et al. \(2019\)](#) stated that innovativeness had a significant impact on performance. Further, [Bor \(2018\)](#) revealed that entrepreneurial innovativeness has a direct positive relationship with performance of mid-sized firms. [Falahat, Tehseen, and van Horne \(2018\)](#) also revealed that there was a significant positive impact of entrepreneurial innovativeness on three types of business performances namely perceived non-financial, perceived business growth, and perceived performance relative competitors except on financial performance. Further, [Linton \(2019\)](#) highlighted that innovativeness can be meaningfully divided between the attributes of process and outcome. Based on the statement, it can be formulated as the following hypothesis:

H₆: Innovativeness significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.13 Risk-taking and Entrepreneurial Performance

Callaghan and Venter (2011) and [Sutanto et al. \(2019\)](#) mentioned that risk-taking was one of the dimensions associated with the entrepreneurial performance. On the other hand, Chen et al. (2007) stated entrepreneurial orientation had a positive relationship to performance. In the entrepreneurial orientation, there were dimensions of risk-taking. It suggests that risk-taking has an impact on performance. [Guo and Jiang \(2020\)](#) also found that a focal firm's new product success benefits most from adopting a concurrently high level of sensing risk-taking and seizing risk-taking when market growth is high but a high level of sensing risk-taking with a low level of seizing risk-taking when market growth is low. Moreover, [Linton \(2019\)](#) highlighted that risk-taking can be meaningfully divided between the attributes of process and outcome. Based on the statement, it can be formulated as the following hypothesis:

H₇: Risk-taking significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.14 Competitive Aggressiveness and Entrepreneurial Performance

Callaghan and Venter (2011) and [Sutanto et al. \(2019\)](#) mentioned that competitive aggressiveness was a dimension that was associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of the competitive aggressiveness. It shows that competitive aggressiveness has an impact on performance. Moreover, Khalili et al. (2013) mentioned that competitive aggressiveness equaled as an effort to lead in performance and beat your opponent. [Abdullahi, Kunya, Bustani, and Usman \(2019\)](#) also concluded that competitive aggressive impacts positively on the financial performance of Nigerian CSMES. On the other hand, [Fadda \(2018\)](#) showed that innovativeness, proactiveness and autonomy were significantly associated with tourism firm performance, whereas risk-taking and competitiveness were not.

While, Kosa, Mohammad, and Ajibie (2018) found the level of influence is increasing as firms are being established in larger cities because the firms in cities have more customers and competitors causing them to generate unique strategies that lead them to outstanding performance. Based on the statement, it can be formulated as the following hypothesis:

H₈: Competitive aggressiveness significantly affects the entrepreneurial performance of students of public universities in Surabaya, Indonesia.

2.15 Autonomy and Entrepreneurial Performance

In their study, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that autonomy was one of the dimensions that associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of autonomy. It shows that autonomy has an impact on performance. While, Yu, Lumpkin, Parboteeah, and Stambaugh (2019) found that in dynamic environments, autonomy is associated with improved performance in the United States, while in Taiwan, firms in dynamic environments fared worse with increasing autonomy. Based on the statement, it can be formulated as the following hypothesis:

H₉: Autonomy significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.16 Proactiveness and Entrepreneurial Performance

Costa and McCrae stated that openness to experience was the proactive search and an appreciation for the experience itself as well as tolerance over the exploration of new things (Smith, 2013). On the other hand, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that proactiveness was one dimension that was associated with the entrepreneurial performance. In the study, it was mentioned that openness to experience is one of the factors influencing entrepreneurial performance. It can be concluded that proactiveness has an impact on entrepreneurial performance. Chen et al. (2007) also stated it had a positive relationship between entrepreneurial orientation taking action against performance, wherein the entrepreneurial orientation there was a dimension of proactiveness. Linton (2019) highlighted that proactiveness can be meaningfully divided between the attributes of process and outcome. It shows that proactiveness has an impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H₁₀: Proactiveness significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.17 Research Framework

All the developed hypotheses are shown in Figure 1.

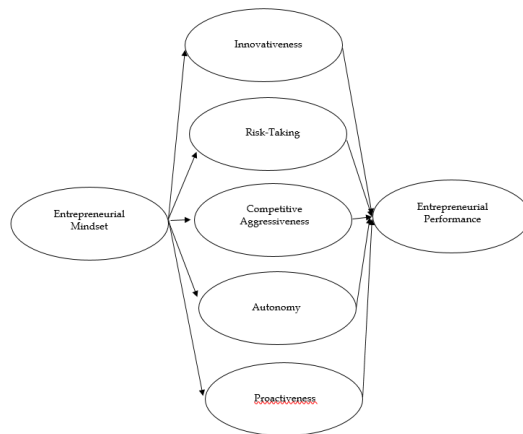


Figure 1. Research Framework

3. RESEARCH METHOD

The population was the bachelor students of the management program of the public universities in Surabaya, Indonesia. There were four establish public universities in Surabaya, which had been offering an entrepreneurship education for their students. The total amount was 4,036 shown in Table 1. It used a purposive sampling.

The criteria set out against the respondents to get the results by the research objectives. They were bachelor students of the management program of the public universities in Surabaya, Indonesia, who were/are ever engaged in entrepreneurship. The 364 samples were taken from the population and determined using Slovin's formula. The questionnaires were disseminated directly to the students of the universities. In order to control bias, the questionnaires was tried out in advance on some respondents. Screening of respondents was conducted orally by asking the respondents one by one and strengthened with the existing questions in the questionnaire.

The study utilized the PLS-SEM to analyze the data. The Partial Least Square function is divided into two groups, namely the inner model and the outer model. The outer model is more towards testing the validity and reliability. While the inner model is more towards regression, which is to assess the effect of one variable on other variables. Model fit on Partial Least Square is not like SEM where there is a global match, such as RMSEA, AGFI, PGFI, PNFI, CMIN / DF, etc. In PLS there are only two criteria for assessing the fit of the model, namely the fit of the outer model which is called the outer model and the inner fit which is called the inner model (Ghozali, 2014).

Table 1. Amounts of bachelor students of management program of public universities in Surabaya

University	Number of Students
Universitas Airlangga	2,026
Universitas Negeri Surabaya	997
Institut Teknologi 10 November Surabaya	109
Universitas Pembangunan Negeri Veteran Jawa Timur	904
Total Number of Students	4,036

Source: <http://forlap.dikti.go.id/>

4. DATA ANALYSIS AND DISCUSSION

4.1 Variable Descriptive Analysis

All responses of the respondents to each variable were designed by Likert scale from 1 to 5. It was set categories of variables by this formula as shown in Table 2.

$$\text{Range} = \frac{\text{Maximum Value} - \text{Minimum Value}}{\text{Amounts of Category}} \quad [1]$$

$$\text{Range} = \frac{5 - 1}{3}$$

$$\text{Range} = 1.33$$

Table 2. Interval of mean scores

Range	Remarks
1,00-2,33	Low
2,34-3,67	Medium
3,67-5,00	High

By using the category, then the evaluation of the answers for each of the variables can be described as follows.

Table 3. The description of entrepreneurial mindset

Item	Statement	Mean	Remark
$X_{1.1}$	I want to create my own workplace	3,64	Medium
$X_{1.2}$	I have an aspiration to be an entrepreneur	3,32	Medium
$X_{1.3}$	I tend to seek business opportunities	3,84	High
$X_{1.4}$	I can identify a business opportunity based on the needs of consumers in the market	3,57	Medium
<i>Entrepreneurial Mindset (X_1)</i>		3,59	Medium

Table 3 notes that the average value of the entrepreneurial mindset is 3.59. It means that the entrepreneurial mindset of students of the public universities in Surabaya has value medium. Table 3 also notes that the highest average value of the indicators is 3.84 in the statement "I tend to seek business opportunities." The lowest average value of the indicator is 3.32 in the statement "I have an aspiration to be an entrepreneur." These results indicate that respondents tend to seek business opportunities despite the aspiration to be an entrepreneur is not so great. It attributes to the respondent's efforts to earn an income or meet his needs. The difference between the statements "I tend to seek business opportunities" with the other states also far enough to the point of being in the different categories (high, medium, low). It indicates that most respondents tend to think more about how to get a business opportunity in a wide variety of way whether to become entrepreneurs or not. It implies that the education succeeds to change the students' mind-set of entrepreneurship (Jung & Lee, 2020; Wardana et al., 2020).

Table 4. The description of innovativeness

Item	Statement	Mean	Remarks
$Z_{1.1}$	I tend to accept new things around me	3,31	Medium
$Z_{1.2}$	I have an innovative idea that can be implemented	3,50	Medium
$Z_{1.3}$	I have unique ideas that haven't been done before	3,34	Medium
$Z_{1.4}$	I can implement the unique ideas that I have	3,49	Medium
<i>Innovativeness (Z_1)</i>		3,41	Medium

Table 4 shows the average value of innovativeness is 3.41. It means students' innovativeness in the public universities in Surabaya has value medium. Besides, the highest average value of the indicators is 3.50 "I have innovative ideas to be implemented." The lowest average value of the indicator is 3.31 in "I am likely to receive new things around me." These results indicate that respondents have different ideas to be applied

in their business. The entire statement is in the category of the medium. It means that innovativeness possibly is improved further.

Table 5. The description of risk-taking

Item	Statement	Mean	Remarks
Z _{2,1}	I dare go to an entirely new place for me all alone	3,65	Medium
Z _{2,2}	I have a willingness to try new things	3,66	Medium
Z _{2,3}	I have the courage to take the decision with minimal information	3,77	High
Z _{2,4}	I felt challenged to do things outside of my comfort zone	3,69	High
Z _{2,5}	I have the desire to conquer my greatest fear	3,71	High
Risk-taking (Z ₂)		3,69	High

Based on Table 5 can be noted that the average value of the variable risk-taking is 3.69. It means the risk-taking of students of the public universities in Surabaya has a value of high. The highest average value of the indicator is 3.77 in the statement I dare to decide with minimal information. The lowest average value of the indicator is 3.65 on the statement of I dare go to an entirely new place for me all alone. Respondents take decisions with minimal information and illustrate that the respondent takes their decision quicker. Table 5 also pointed out that the existence of the respondent towards new things is medium. It is similar to the variable description analysis of innovativeness. The respondents need to enhance adaptation to new things.

Table 6. The description of the competitive aggressiveness

Item	Statement	Mean	Remarks
Z _{3,1}	I am trying to find information to know the existence of competitors for my business	3,42	Medium
Z _{3,2}	I am trying to find information about my business competitors	3,31	Medium
Z _{3,3}	I have the desire to grow bigger than competitors	3,37	Medium
Z _{3,4}	I made the difference in the ability with competitors as a motivation to compete	3,41	Medium
Z _{3,5}	I have the ability to compete with business competitors	3,35	Medium
Z _{3,6}	I can overtake the position of the competitors who have higher business position	3,37	Medium
Competitive Aggressiveness (Z ₃)		3,37	Medium

Based on Table 6 can be noted that the average value of the variable competitive aggressiveness is 3.37. It means the competitive aggressiveness of students of the public universities in Surabaya has a value the medium. Besides, the highest average value of the indicator is 3.42 in the statement I am trying to find information to know the existence of competitors for my business. The lowest average value is 3.31 on I am trying to find information about my business competitors. Respondents tend to strive to recognize the surrounding environment despite the statement with the highest value remained in the category of "Medium". All Statements about competitive aggressiveness are medium. It indicates that respondents tend to be less concerned with competitors to compete better. Lack of concern for the competitors to compete can come from ego and focus on their own business.

Table 7. The description of the autonomy

Item	Statement	Mean	Remarks
Z _{4,1}	I work without relying on others	3,34	Medium
Z _{4,2}	I am working without affected by other people's assumptions	3,49	Medium
Z _{4,3}	I believe with the my ability to resolve the job	3,41	Medium
Z _{4,4}	I work in a field that I've mastered	3,50	Medium

$Z_{4.5}$	I can specify the time limit to finish the job	3,45	Medium
$Z_{4.6}$	I can determine the target of achievement for myself	3,55	Medium
<i>Autonomy (Z_5)</i>		3,46	Medium

Based on Table 7 can be noted that the average value of the variable autonomy is 3.46. It means the autonomy of students of the public universities in Surabaya is medium. Besides, the highest average value of the indicator is 3.55 can determine the achievement target. The lowest average is 3.34 of I work without relying on others. These results show that determine the targets for ourselves is easier to do than the other statements. All statements regarding autonomy are in the category of the medium. It shows that the autonomy of the respondents needs to improve regarding independence in work.

Table 8. The description of proactiveness

Item	Statement	Mean	Remarks
$Z_{5.1}$	I work with my own initiatives and without being asked	3,64	Medium
$Z_{5.2}$	I get the job done faster than the given time	3,56	Medium
$Z_{5.3}$	I prefer to face rather than avoid the problem	3,60	Medium
<i>Proactiveness (Z_5)</i>		3,60	Medium

Based on Table 8 can be noted that the average value of the proactiveness is 3.60. It means that the proactiveness of students of the public universities in Surabaya is medium. Also, the highest average value of the indicator is 3.64 I am working with the initiative. The lowest average is 3.56 I get the job done faster than the given time. These results indicate that respondents may give rise to the initiative from themselves to do something. All statements about proactiveness are in the category of the medium. It indicates that respondents can enhance the initiative. Tend to work on time and finish it sooner than the given time.

Table 9. The description of entrepreneurial performance

Item	Statement	Mean	Remarks
Y_1	I am trying to improve my business turnover	3,33	Medium
Y_2	I am trying to hit the target that I set for my business	3,57	Medium
Y_3	I have a high spirit in opening my business	3,55	Medium
Y_4	I am very happy to have a new business	3,46	Medium
Y_5	I feel excited when finding a new breakthrough for my business	3,50	Medium
Y_6	I can apply the ideas of my effort into my business	3,59	Medium
<i>Entrepreneurial Performance (Y)</i>		3,50	Medium

Based on Table 9 can be noted that the average value of the variable entrepreneurial performance is 3.50. It means the entrepreneurial performance of students of the public universities in Surabaya has a value of the medium. Besides, the highest average value of the indicator is 3.59 I can apply the ideas of my effort into my efforts. The lowest average is 3.33 I am trying to improve my business turnover. These results indicate that respondents can reasonably implement ideas into their business. All statements regarding entrepreneurial performance are in the category of the medium. It shows that entrepreneurial performance could still be improved, especially in terms of efforts on increasing turnover. More respondents need to pay close attention to the financial aspects.

4.2 Convergent Validity

Campbell and Fisk stated that convergent validity is an agreement between measures of the same construct assessed by different methods (Guo et al., 2008). Convergent validity measurement carries out using the value of the outer-loading. An indicator is said to satisfy the convergent validity if it has the value of outer-loading > 0.5 (Muafi & Roostika, 2014). Here are the values of the outer-loading indicator on each variable dimensions and research.

From Table 10 can be noted that all indicators that make up the research dimensions and variables

have a value of outer-loading > 0.5. Based on these results, all indicators have met the convergent validity. They can be used to do further analysis.

4.3 Discriminant Validity

Campbell and Fisk stated that discriminant validity was the distinctiveness of different constructs (Guo et al., 2008). The measurement of discriminant validity carries out using cross-loading value (Henseler et al., 2015). An indicator that satisfies to discriminant validity of the indicator value of cross-loading on dimensions or from the variables is the largest when compared with other variables or dimensions (Muafi & Roostika, 2014). Table 10 shows the value of cross-loading each indicator.

Table 10 shows that all indicators have the largest cross-loading on their dimension or variables compared to others. Based on these results, the indicators used in this study have had good discriminant validity in drawing up each dimension or variable. Besides using the value of outer loading, testing validity can also be done by looking at the AVE value (Henseler et al., 2015). The indicators used are said to be valid if the value of AVE is above 0.5. The AVE value of indicators are shown in Table 12.

Table 12 shows the AVE value produced by all reflective indicators is above 0.5. Based on those results, all reflective indicators meet the validity requirements. Further examination is construct-reliability by looking at the output of the composite reliability or Cronbach's alpha. Constructs are pretty reliable if the value of the composite reliability or Cronbach's alpha is greater than or equal to 0.3. But better if above 0.7 (Muafi & Roostika, 2014). Table 13 shows the output of the Cronbach's alpha. The Cronbach's alpha values of all constructs are good if above 0.7. So all reflective indicators are reliable or meet the reliability test.

Table 10. Outer-loading and cross-loading value

	Autonomy		Competitive Aggressiveness		Entrepreneurial Mindset		Entrepreneurial Performance		Innovativeness		Proactiveness		Risk Taking	
	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading
A1	0,7959	0,7959		0,5467		0,5461		0,5975		0,5175		0,4737		0,4828
A2	0,8201	0,8201		0,6369		0,5678		0,6744		0,6531		0,5997		0,4743
A3	0,7668	0,7668		0,6036		0,5338		0,6549		0,6238		0,5504		0,5084
A4	0,7912	0,7912		0,5531		0,5166		0,6429		0,5369		0,5606		0,4943
A5	0,8158	0,8158		0,5391		0,4813		0,6008		0,5414		0,4813		0,4641
A6	0,8905	0,8905		0,5725		0,5049		0,6705		0,5687		0,5504		0,4659
CA1		0,5972	0,8264	0,8264		0,4135		0,5886		0,5833		0,4496		0,4131
CA2		0,5689	0,7884	0,7884		0,5159		0,5771		0,5481		0,4476		0,4531
CA3		0,4548	0,7572	0,7572		0,4279		0,5085		0,5579		0,3978		0,3759
CA4		0,5815	0,7704	0,7704		0,4295		0,6426		0,6305		0,4609		0,4191
CA5		0,5733	0,7871	0,7871		0,4841		0,6115		0,6426		0,4344		0,4249
CA6		0,5876	0,8306	0,8306		0,5039		0,6394		0,5933		0,5688		0,5207
EM1		0,5782		0,5239	0,8471	0,8471		0,6015		0,5112		0,5762		0,7261
EM2		0,4691		0,4505	0,7781	0,7781		0,4832		0,3901		0,5923		0,6463
EM3		0,4804		0,4143	0,7877	0,7877		0,5861		0,4524		0,6646		0,7253
EM4		0,6001		0,5378	0,8891	0,8891		0,6622		0,5492		0,6114		0,8036
EP1		0,6909		0,6291		0,5929	0,7679	0,7679		0,5161		0,5814		0,5711
EP2		0,7103		0,6699		0,6673	0,8824	0,8824		0,6575		0,7145		0,6651
EP3		0,5479		0,5929		0,5434	0,7823	0,7823		0,6596		0,5959		0,5295
EP4		0,5751		0,5046		0,4659	0,7538	0,7538		0,5275		0,6133		0,5345
EP5		0,6302		0,6483		0,6105	0,8471	0,8471		0,6625		0,6169		0,6121
EP6		0,7341		0,6662		0,6156	0,9071	0,9071		0,6635		0,6713		0,6349
I1		0,5807		0,6197		0,4916		0,6057	0,8339	0,8339		0,4731		0,4012
I2		0,6126		0,6826		0,5221		0,6766	0,8388	0,8388		0,5201		0,4901
I3		0,5199		0,5629		0,4211		0,5678	0,8287	0,8287		0,4042		0,3876
I4		0,6427		0,6254		0,4941		0,6369	0,8444	0,8444		0,5174		0,4482
PA1		0,6481		0,5353		0,6795		0,7139		0,5031	0,9148	0,9148		0,6643
PA2		0,5067		0,5774		0,6522		0,6688		0,5325	0,8497	0,8497		0,6555
PA3		0,5511		0,3796		0,5689		0,5947		0,4503	0,8184	0,8184		0,5661
RT1		0,4663		0,4143		0,6926		0,5408		0,3724		0,6233	0,7645	0,7645
RT2		0,5514		0,5337		0,8057		0,6078		0,4943		0,5931	0,8471	0,8471
RT3		0,3708		0,3511		0,6373		0,5564		0,3582		0,5987	0,7991	0,7991
RT4		0,4289		0,3773		0,6585		0,5611		0,3619		0,6251	0,8132	0,8132
RT5		0,5841		0,5499		0,7932		0,6693		0,5163		0,5729	0,8721	0,8719

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Table 12 shows the value of Cronbach's alpha of all constructs is good if above 0.7. So all reflective indicators are reliable or meet the reliability test. Besides, the composite-reliability values of all reflective constructs are also good. So all the reflective indicators are reliable or meet the test of reliability.

Table 12. AVE value and reliability test

Variable	AVE	Composite	Cronbach's
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		Reliability	Alpha
Entrepreneurial Mindset	0,6835	0,8960	0,8445
Innovativeness	0,6997	0,9031	0,8573
Risk-taking	0,6725	0,9111	0,8780
Competitive Aggressiveness	0,6301	0,9108	0,8824
Autonomy	0,6631	0,9218	0,8978
Proactiveness	0,7429	0,8964	0,8261
Entrepreneurial Performance	0,6815		

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4.4 R-Square

Table 14 shows the R-Square value of each variable. Risk-taking and proactiveness have a high magnitude of the research model (77% and 54%). This result explains that the Indonesian students have strong entrepreneurial characteristics on those two. It may be the education of entrepreneurship has a positive contribution in building their entrepreneurship.

Moreover, the R-Square value of Entrepreneurial Performance is very high. It means that the magnitude of entrepreneurial performance is 80.3%. Autonomy, competitive aggressiveness, innovativeness, proactiveness, and risk-taking explain it. The rest amounted of 19.7% are explained by other factors outside the model that is examined.

4.5 Hypothesis Testing and Discussion

Hypothesis testing is a scientific process to examine if a hypothesis is plausible or not. Hypothesis testing is calculated by searching for the quantity and value of the effect coefficient also t-statistic (Park, 2008). Research hypothesis is acceptable if the value of the t-statistic > 1.96. Here are the coefficients of effect (original sample estimate) and the value of the t-statistic of each hypothesis on the inner model shown in Table 15. The results support positively the previous one done by [Sutanto et al. \(2019\)](#).

Table 14. R-square value	
Variable	R-Square
Entrepreneurial Mindset	
Innovativeness	0,3355
Risk-taking	0,7743
Competitive Aggressiveness	0,3418
Autonomy	0,4180
Proactiveness	0,5440
Entrepreneurial Performance	0,8030

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The entrepreneurial mindset has a coefficient of effect on the innovativeness of 0.579 with a t-statistic of 7.696 outweighs 1.96. This result indicates that entrepreneurial mindset has significant effects against innovativeness. A higher entrepreneurial mindset will increase the innovativeness of students of public universities. Based on this result, H_1 is accepted. It supports the earlier researches claimed that entrepreneurial mindset affects significantly to innovativeness. Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). He indicated that entrepreneurial mindset affected innovativeness. Moreover, Slater stated that entrepreneurship tailored to the market-oriented culture contribute significantly to the successful innovation (Ndubisi, 2014) as well as the research by Wang and Zang (2005) which suggested entrepreneurship was one of the many areas that are relevant in the human resource and innovation. [Gonthier and Chirita \(2019\)](#) also found that several factors that enable the entrepreneurial spirit fostered by corporate incubators to boost the innovation capability in their parent companies.

The entrepreneurial mindset has a coefficient of effect on risk-taking of 0.879 with a t-statistic of 37.235 outweighs 1.96. This result indicates that entrepreneurial mindset has a significant effect towards risk-taking. A higher entrepreneurial mindset increases the risk-taking of students of public universities. Based on this result, H_2 is accepted. It supports the earlier researches that claimed that entrepreneurial mindset affects risk-taking. Wenhong and Liuying (2010) stated systems thinking owned by entrepreneurs would

affect their tendency in risk-taking. Zahra says industrial entrepreneur ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. (2005) stated that an entrepreneur received personal financial risk existing in the ownership of a business but was also directly benefit from the potential success of that business. Jemal (2020) found that entrepreneurial mindset affects positively and significantly the performance of SMEs and parameters includes: seeking opportunity, creativity, innovation, risk taking, pro-activeness, and alertness to take action. All these findings indicate that the entrepreneurial mindset has a significant effect on risk-taking.

The entrepreneurial mindset has a coefficient of effect on competitive aggressiveness of 0.585 with a t-statistic of 7.89 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against competitive aggressiveness. A higher entrepreneurial mindset increases the competitive aggressiveness of students of public universities. Based on this result, H_3 is accepted.

It supports previous research that suggests that entrepreneurial mindset affects competitive aggressiveness. Stevenson's research (1990), cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors, the entrepreneurial mindset improves competitive aggressiveness. Someone with high competitive aggressiveness will be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better performance. Neneh (2012) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. Paek and Lee (2017) also suggested that the dimensions of strategic entrepreneurship, which are environmental sensing, opportunity seizing, strategic flexibility and entrepreneurial orientation play a critical role in competitive advantage of firms.

Table 15. Coefficients of effect and t-statistic

Hypothesis	Effect	Coefficient	t-statistic	Decision
H_1	EM --> I	0,5792	7,6962	Accepted
H_2	EM --> RT	0,8800	37,2351	Accepted
H_3	EM --> CA	0,5846	7,8921	Accepted
H_4	EM --> P	0,7376	14,5843	Accepted
H_5	EM --> A	0,6465	9,8460	Accepted
H_6	I --> EP	0,1945	2,0400	Accepted
H_7	RT --> EP	0,1913	2,6804	Accepted
H_8	CA --> EP	0,1853	2,1528	Accepted
H_9	P --> EP	0,2471	2,3890	Accepted
H_{10}	A --> EP	0,2428	2,1129	Accepted

The entrepreneurial mindset has a coefficient of effect on the autonomy of 0.647 with t-statistic of 9.846 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect on autonomy. A higher entrepreneurial mindset increases the autonomy of students of public universities. Based on this result, H_4 is accepted. This result supports research of McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies are not able to detect and or control such acts.

The entrepreneurial mindset has a coefficient of effect on the proactiveness of 0.738 with a t-statistic of 14.584 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against proactiveness. A higher entrepreneurial mindset increases the proactiveness of students of public universities. Based on this result, H_5 is accepted. This result supports what Mintzberg found that entrepreneurial companies tended to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014).

The innovativeness has a coefficient of effect on the entrepreneurial performance of 0.195 with t-statistic of 2.0399 greater than 1.96. This result shows that there is a significant effect of innovativeness on entrepreneurial performance. A higher innovativeness increases the entrepreneurial performance of students of public universities. Based on this result, H_6 is accepted. This result supports previous scholars. Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with entrepreneurial

performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It shows that innovativeness has an impact on performance. Khalili et al. (2013), Linton (2019), and Sutanto et al. (2019) said innovativeness had a significant effect on performance. Further, Bor (2018) revealed that entrepreneurial innovativeness has a direct positive relationship with performance of mid-sized firms. Falahat, Tehseen, and van Horne (2018) also revealed that there was a significant positive impact of entrepreneurial innovativeness on three types of business performances namely perceived non-financial, perceived business growth, and perceived performance relative competitors except on financial performance.

The risk-taking has a coefficient of effect on the entrepreneurial performance of 0.191 with t-statistic of 2.68 greater than 1.96. This result shows that risk-taking providing a significant effect against the entrepreneurial performance. A higher risk-taking increases the entrepreneurial performance of students of public universities. Based on this result, H_7 is accepted. It supports the studies of Chen et al. (2007), Callaghan and Venter (2011), Linton (2019), and Sutanto et al. (2019). It suggests that risk-taking has an impact on performance. Guo and Jiang (2020) also found that a focal firm's new product success benefits most from adopting a concurrently high level of sensing risk-taking and seizing risk-taking when market growth is high but a high level of sensing risk-taking with a low level of seizing risk-taking when market growth is low.

The competitive aggressiveness has a coefficient of effect on the entrepreneurial performance of 0.185 with t-statistic of 2.152 greater than 1.96. This result suggests that the competitive aggressiveness has a significant effect on entrepreneurial performance. A higher competitive aggressiveness increases the entrepreneurial performance in of students of public universities. Based on this result, H_8 is accepted. The result supports the studies of Chen et al. (2007), Callaghan and Venter (2011), Khalili et al. (2013), Kosa, Moham-mad, and Ajibie (2018), Sutanto et al. (2019), and Abdullahi, Kunya, Bustani, and Usman (2019). The competitive aggressiveness leads in performance.

Autonomy has a coefficient of effect on the entrepreneurial performance of 0.247 with t-statistic of 2.389 greater than 1.96. This result explains that autonomy has a significant effect on entrepreneurial performance. A higher autonomy increases the entrepreneurial of students of public universities. Based on this result, H_9 is accepted. It supports positively what was found by Callaghan and Venter (2011), Chen et al. (2007), Yu et al. (2019), and Sutanto et al. (2019) previously that autonomy had an impact on performance.

The proactiveness has a coefficient of effect on the entrepreneurial performance of 0.243 with a t-statistic of 2.112 outweighs 1.96. This result explains that the proactiveness has a significant effect on entrepreneurial performance. A higher proactiveness increases the entrepreneurial performance of students of public universities. Based on this result, H_{10} is accepted. It convinces the previous findings of Costa and McCrae (1992) (in Smith, 2013), Callaghan and Venter (2011), Chen et al. (2007), Linton (2019), and Sutanto et al. (2019). It shows that proactiveness has an impact on performance.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Based on the results of this research then it can be concluded the conclusions that entrepreneurial mindset of the Indonesian students has a positive and significant effect against their innovativeness, risk-taking, competitive aggressiveness, autonomy, proactiveness. Therefore, changing mindset of the students to entrepreneurship is a vital effort. It implies the entrepreneurship education of Indonesian public universities has succeeded to change their mindset as well as their entrepreneurial orientation and performance. Promoting entrepreneurship education to develop the entrepreneurial competences and mindsets of citizens has become an important mission on the supranational educational policy agenda (Laalo & Heinonen, 2016).

On the other hand, the Indonesian students' innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are found has and significant effect against entrepreneurial performance. It convinces that the education of entrepreneurship should not satisfy only to change the students' mindset but also to cultivate all variables in order to reach high performance.

Some variables such as entrepreneurial mindset, innovativeness, competitive aggressiveness, autonomy, proactiveness, as well as entrepreneurial performance of the Indonesian college students have medium mean. Some actions need to be done much more in the future. Improving the entrepreneurship curriculum is extremely necessary. Inviting and connecting to successful business leaders and entrepreneurs is a must. It will open and inspire students' minds and hearts to create a startup business. Furthermore, as sug-

gested by Loboda, Ostrovskyi, and Katernyak (2018) universities should promote entrepreneurship as a career option and provide entrepreneurship experiences to students. The change in the academic culture is a common challenge, which includes the introduction of entrepreneurial thinking and acting as alternatives to traditional teaching approaches and opening up the universities to the surrounding society and industrial ecosystem. The use of ICT and in particular eLearning in delivering entrepreneurial education might be an additional option for expanding the outreach of the course.

This study is only to analyze the entrepreneurship of the students. However, to make sure whether the students really implement their entrepreneurship potential after finishing their education, it needs a further research. Without that, the findings are only a theory.

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Entrepreneurial Mindset, Orientation, and Performance of University Students in Indonesia

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ABSTRACT

Entrepreneurship plays an important role in determining the level of economic growth of a country. This study aims to explore the impact of entrepreneurial mindset on innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance. This research uses Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the data. It gathered data of 364 respondents, which were the bachelor students of management program of public universities in Surabaya, Indonesia. The results show that entrepreneurial mindset has a significant impact to innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness. It also enhances positive and significant impact to entrepreneurial performance of the students. It implies that the entrepreneurship education of public universities in Surabaya, Indonesia succeeds to change the students' mindset and orientation. The government needs to increase entrepreneurship education centers and business incubator centers at various universities.

Key words:

Autonomy, competitive aggressiveness, innovativeness, proactiveness, risk-taking

ABSTRAK

Kewirausahaan memegang peranan penting dalam menentukan tingkat pertumbuhan ekonomi suatu negara. Studi ini menggali dampak pola pikir kewirausahaan terhadap inovasi, pengambilan risiko, agresivitas kompetitif, otonomi, dan daya proaksi terhadap kinerja kewirausahaan mahasiswa. Penelitian ini Partial Least Squares Structural Equation Modeling (PLS-SEM) untuk menganalisis data. Penelitian ini mengumpulkan data dari 364 responden, yang merupakan mahasiswa sarjana program manajemen dari universitas negeri di Surabaya, Indonesia. Hasil penelitian menunjukkan bahwa pola pikir kewirausahaan memiliki pengaruh yang signifikan terhadap daya inovasi, pengambilan risiko, agresivitas kompetitif, kemandirian, dan daya proaktif. Hal ini juga meningkatkan kinerja kewirausahaan mahasiswa secara positif signifikan. Implikasinya ialah pendidikan kewirausahaan di perguruan tinggi negeri di Kota Surabaya, Indonesia telah berhasil mengubah pola pikir dan orientasi mahasiswa. Pemerintah perlu memperbanyak sentra pendidikan kewirausahaan dan pusat inkubator bisnis di berbagai perguruan tinggi.

1. INTRODUCTION

Entrepreneurship is an interesting field as a career. World Economic Forum concludes that over a third of Indonesian young people want to be entrepreneurs (Wood, 2019). On the other hand, the choice as an entrepreneur as career stood at 26% from 20% in 2009 (GMAC, 2014). It adds what shown by the survey against 37,000 students from 14 countries by the International Survey of Collegiate Entrepreneurship in 2006, states that 15.4% of students choose entrepreneur as a career within the first five years after graduation and for the next five years the number increased to 50.1% (Szerb & Imreh, 2007). In this study, we draw some lessons from Indonesia's experience with the focus of the public university students. It offers an interesting case study because the growth of entrepreneurship in the country in general and university students, in particular, do not tally to the entrepreneurial performance. Entrepreneurship which is encouraged in university-level education by various countries in the world and also in Indonesia has not been followed by an increase in entrepreneurial performance of Indonesia's students.

Gustiawan et al. (2014) indicated that the entrepreneur in Indonesia was still small although the development of entrepreneurship is critical to the country. They stated that 2% was an ideal figure for entrepreneurs in any country from the total population. In the case of Indonesia, 400,000 entrepreneurs were identified of which about 0.08% were low comparatively to America (12%), Singapore (7%), and Malaysia (6%). From policy perspectives, entrepreneurship help to reduce unemployment while the ability of entrepreneurs needs to be developed and enhance particularly among the young people.

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Motivated by the importance of entrepreneurial performance, this article is set to explore the impact of an entrepreneurial mindset, innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance of undergraduate management students of public universities. The concept of entrepreneurial orientations which contains some variables such as innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are adopted from Miller (1983), Lumpkin and Dess (2001), and Rauch et al. (2009) who found that these variables have positive and significant relationships towards entrepreneurial performance. Therefore, the main novelty of this research is to comprehensively examine various aspects of entrepreneurial orientation towards entrepreneurial performance. What do happen with university students of Indonesia who have been studying entrepreneurship? Has the entrepreneurship education in Indonesia universities succeeded to change their mindset and orientation? University students are potential generation in the future of a country. All efforts to create a wonderful generation need to be done seriously and consistently. Entrepreneurship is one of the best solution. This study aims and benefits to improve the entrepreneurship education in Indonesia universities.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Entrepreneurship starts from mindset. Dhliwayo and Van Vuuren (2011) stated that entrepreneurial mindset was a way of thinking about business and the opportunity to benefit from the uncertain circumstances. According to Valerio et al. (2014), entrepreneurial mindset referred to socio-emotional abilities and overall awareness towards entrepreneurship which related with entrepreneurial motivation and the success that would come as an entrepreneur. Indicators used to describe the entrepreneurial mindset in this study are the ability to identify business opportunities and the amount of thinking to entrepreneurship (Solesvik et al., 2013). One possible outcome of entrepreneurship education is a change in students' entrepreneurial mindset (Jung & Lee, 2020). Kouakou, Li, Akolgo, and Tchamekwen (2019) highlighted the importance of an entrepreneurial mindset to students at their youngest age. By doing so, they develop entrepreneurial experiences, skills, and abilities to overcome entrepreneurial challenges. This article offers a clear insight into the topic of an entrepreneurial mindset to ease individuals and organization involved in interactive entrepreneurial activities continuously.

2.1 Innovativeness

Innovativeness is the ability to innovate. There are several definitions of innovativeness. According to the West and Anderson, innovativeness could be defined as the ability to create effective implementation of new processes and products for the organization and was designed to give you an advantage for the organization and stakeholders in it (Baregheh et al., 2009). Galunic and Rodan claimed that innovativeness was the ability to produce continuous innovation (Quintane et al., 2011). Rogers defined innovativeness as how fast a person or organization in adopting innovations compared against another person or organization (Yildiz et al., 2014).

There are three indicators of Innovativeness, which are 1) Openness towards new things. Hurt et al. (1977) described innovativeness as a willingness to try new things (Goldsmith & Foxall, 2003); 2) The level of creativity. Kirton declared that innovative people would search for and combine various information, examines problems they experienced, and produces a thought or idea that is unconventional (Lee, 2008); and 3) The ability to innovate. The power to innovate is a further phase of creativity. It is a comparison between the study in quickly manner with the embodiment of innovation practices, particularly socio-organized practices. The power of innovation is an ability to understand socially, accept, estimates, disseminate, implement, and use innovation (Mikhailova, 2015).

2.2 Risk-Taking

Byrnes (1998) stated that risk-taking is an involvement in a variety of behaviors that were associated with some possibilities against unwanted results (Boyer, 2006). According to Hyrzky and Tunnanen, the definition of risk-taking was a process of decision making and an act without enough knowledge about the obtained results (Noer et al., 2013). According to Wenhong and Liuying (2010), risk-taking was a tendency to take action against something that's rated as risky.

There are several indicators to know risk-taking. These indicators include 1) The courage of facing new things. Sung and Hanna stated that young entrepreneurs were more willing to take risks. They have the urge to invest in new goods/services and enter into new markets (Wang & Poutziouris, 2010); and 2) The

courage of facing a difficult situation. Brockhaus declared that the tendency of risk-taking is a possibility to receive profit related to success in certain situations. It is required by a person before putting himself on the consequences associated with failure (Wenhong & Liuying, 2010).

2.3 Competitive Aggressiveness

Competitive aggressiveness is associated with a way to confront the threats and challenges of the external environment (Gamble et al., 2013). Lumpkin and Dess (2001) stated that the competitive aggressiveness was the intensity of the desire to beat your opponent. Noer et al. (2013) stated that competitive aggressiveness was a responsive attitude towards any threat as a form of resistance and effort to win the competition.

According to Chen (1996), there are three indicators of competitive behavior (Stambaugh et al., 2011):

1) Awareness of competitors. Awareness includes analysis of the opponents' strength, stalking the opponents' competitive actions, and the dissemination of information about the opponent. It is about knowing the condition of opponents; 2) Motivation to compete. There are two characteristics of motivation in the company that owns high competitive aggressiveness. The first is beating competitors who are crucial for aggressive companies. Other companies might choose different things as references. They want to know their performance, internal purpose, and satisfaction with the reached target. The aggressive companies seek information of their competitor. They also compare the performance of their own with the others. The second one is a position of opponents which put oneself in difficult situation as appropriate and necessary steps to improve its performance; and 3) Capability to compete. The intended capability is the ability to deliver attacks to the opponent and deflect the opponent's attack. Part of this ability is an existed resource as funds resulting from past good performance. The company is also aggressively identifying available resources and prioritize the resource to attack while the less aggressive company saw the same resource base. Aggressive companies are better to use the available resources rather than to wait for achieving an optimal point.

2.4 Autonomy

According to Metaal, a definition of autonomy was freedom of choice without depending on other parties (Van Gelderen & Jansen, 2006). In another study, Brooke also revealed almost a similar definition that autonomy was the degree of freedom of a person without the need for approval from others (Barnabas and Mekoth, 2010). Feinberg stated that autonomy had at least four meanings: the capacity to govern ourselves, the conditions to set up ourselves, the ideal state to regulate ourselves, and the authority to rule ourselves (Mitcham, 2005).

There are several indicators of autonomy, which are 1) Independent. The ability to do things without being effected by other people (Van Gelderen & Jansen, 2006); 2) Self-learning. Ryan and Deci (2000) said that someone independent would involve himself to learn on an ongoing basis about himself (Weinstein et al., 2012); and 3) Determination. It is the ability to set and to decide whether the regulations, targets, and processes that occur in his business (Van Gelderen & Jansen, 2006).

2.5 Proactiveness

Crant defined proactiveness as taking the initiative to improve the circumstances of (Unsworth & Parker, 2003). According to Wiklund and Shepherd proactiveness was looking far ahead and have the determination to identify and respond to opportunities (Wong, 2012). Teece stated that in the entrepreneurship literatures, proactiveness had definitions as the ability to anticipate and feel a vague signs and act to the needs in the future ahead of existing competitors to gain a competitive advantage (Sundqvist et al., 2012). Crant (2000) stated that proactiveness could be seen from some behaviors. The behaviors could be used as gauges or indicators for proactiveness: The ability to pick the opportunity quickly; Courage start a change; The desirability of creating favorable conditions.

2.6 Entrepreneurial Performance

Van Vuuren said that entrepreneurial performance was the achievement of several entrepreneurial objectives (Sebikari, 2014). According to Dollinger, the entrepreneurial performance was something done by an entrepreneur with high initiative to obtain the goal of entrepreneurship (Tseng, 2013). Callaghan and Venter (2011) mentioned that entrepreneurial performance was something that emphasizes on achieving something and provide continous satisfaction.

There are several indicators of entrepreneurial performance, which are 1) Need for achievement.

McClelland stated that the need for achievement that was often described as a passion to deliver good performance and to gain a feeling of achievement. It is one of the specific characters of entrepreneurship. Collins et al. stated that the need for achievement had a positive correlation with corporate success (Khan et al., 2015). Successful entrepreneurs have high scores in need for achievement (Oosterbeek et al., 2010); 2) The enthusiasm for entrepreneurship. Empirical findings using non-economic indicators to measure the performance namely enthusiasm in work, which represents positive aspect that belonging to someone (Leitao & Franco, 2008), and 3) The realization of the thinking to entrepreneurship. Dhliwayo and Van Vuuren (2011) stated that entrepreneurship would ultimately culminate in the creation or realization of entrepreneurial and strategic management plan that would be resulting in the best performance.

2.7 Entrepreneurial Mindset and Innovativeness

Earlier research claimed that entrepreneurial mindset affects significantly innovativeness. Previous research by Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). Herbig et al. indicate that entrepreneurial mindset affects innovativeness. Other research by Slater states that entrepreneurship tailored to the market-oriented culture will contribute significantly to successful innovation (Ndubisi, 2014; Sutanto et al., 2019). Research by Wang and Zang (2005) state that entrepreneurship is one of the major areas relevant in human resource and innovation. Gonthier and Chirita (2019) found that several factors that enable the entrepreneurial spirit fostered by corporate incubators to boost the innovation capability in their parent companies. Based on the statements, it can be formulated as the following hypothesis:

H_1 : Entrepreneurial mindset significantly affects the innovativeness of students of public universities in Surabaya, Indonesia.

2.8 Entrepreneurial Mindset and Risk-Taking

Earlier researches claim that entrepreneurial mindset affect significantly to risk-taking. Wenhong and Liuying stated systems thinking owned by the entrepreneur would affect the tendency of risk-taking. Related to entrepreneur behavior concerning the family business, Zahra states that ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. state that an entrepreneur receives personal financial risk existing but directly benefits from the potential success. It indicates that the entrepreneurial mindset has a significant effect on risk-taking (Sutanto et al., 2019). Further, Jemal (2020) found that entrepreneurial mindset affects positively and significantly the performance of SMEs and parameters includes: seeking opportunity, creativity, innovation, risk taking, pro-activeness, and alertness to take action. Based on the statement, it can be formulated as the following hypothesis:

H_2 : Entrepreneurial mindset significantly affects the risk-taking of students of the public universities in Surabaya, Indonesia.

2.9 Entrepreneurial Mindset and Competitive Aggressiveness

Previous researches suggest that entrepreneurial mindset affects significantly competitive aggressiveness. Stevenson's research cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors that effected by the entrepreneurial mindset, competitive aggressiveness could be improved. Someone with high competitive aggressiveness would be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better competition. Neneh (2012) and Sutanto et al. (2019) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. Moreover, Paek and Lee (2017) suggested that the dimensions of strategic entrepreneurship, which are environmental sensing, opportunity seizing, strategic flexibility and entrepreneurial orientation play a critical role in competitive advantage of firms. Based on the statement, it can be formulated as the following hypothesis:

H_3 : Entrepreneurial mindset significantly affects competitive aggressiveness of students of public universities in Surabaya, Indonesia.

2.10 Entrepreneurial Mindset and Autonomy

Research by McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control

in some multinational companies were not able to detect and/or control such acts. Moreover, [Sutanto et al. \(2019\)](#) found that the entrepreneurial mindset had a significant effect on the autonomy of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

H₄: Entrepreneurial mindset significantly affects autonomy of students of the public universities in Surabaya, Indonesia.

2.11 Entrepreneurial Mindset and Proactiveness

Mintzberg said entrepreneurial companies tend to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014). Moreover, [Sutanto et al. \(2019\)](#) found entrepreneurial mindset had a significant effect on the proactiveness of college students in Malang City, Indonesia. Based on the statement, it can be formulated as the following hypothesis:

H₅: Entrepreneurial mindset significantly affects the proactiveness of students of the public universities in Surabaya, Indonesia.

2.12 Innovativeness and Entrepreneurial Performance

In their study, Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with the entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It shows that the innovativeness has an impact on performance. [Prihandono and Utami \(2018\)](#) also consider to explore the entrepreneurial in higher education and innovative potential. Moreover, Khalili et al. (2013) and [Sutanto et al. \(2019\)](#) stated that innovativeness had a significant impact on performance. Further, [Bor \(2018\)](#) revealed that entrepreneurial innovativeness has a direct positive relationship with performance of mid-sized firms. [Falahat, Tehseen, and van Horne \(2018\)](#) also revealed that there was a significant positive impact of entrepreneurial innovativeness on three types of business performances namely perceived non-financial, perceived business growth, and perceived performance relative competitors except on financial performance. Further, [Linton \(2019\)](#) highlighted that innovativeness can be meaningfully divided between the attributes of process and outcome. Based on the statement, it can be formulated as the following hypothesis:

H₆: Innovativeness significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.13 Risk-taking and Entrepreneurial Performance

Callaghan and Venter (2011) and [Sutanto et al. \(2019\)](#) mentioned that risk-taking was one of the dimensions associated with the entrepreneurial performance. On the other hand, Chen et al. (2007) stated entrepreneurial orientation had a positive relationship to performance. In the entrepreneurial orientation, there were dimensions of risk-taking. It suggests that risk-taking has an impact on performance. [Guo and Jiang \(2020\)](#) also found that a focal firm's new product success benefits most from adopting a concurrently high level of sensing risk-taking and seizing risk-taking when market growth is high but a high level of sensing risk-taking with a low level of seizing risk-taking when market growth is low. Moreover, [Linton \(2019\)](#) highlighted that risk-taking can be meaningfully divided between the attributes of process and outcome. Based on the statement, it can be formulated as the following hypothesis:

H₇: Risk-taking significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.14 Competitive Aggressiveness and Entrepreneurial Performance

Callaghan and Venter (2011) and [Sutanto et al. \(2019\)](#) mentioned that competitive aggressiveness was a dimension that was associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of the competitive aggressiveness. It shows that competitive aggressiveness has an impact on performance. Moreover, Khalili et al. (2013) mentioned that competitive aggressiveness equaled as an effort to lead in performance and beat your opponent. [Abdullahi, Kunya, Bustani, and Usman \(2019\)](#) also concluded that competitive aggressive impacts positively on the financial performance of Nigerian CSMES. On the other hand, [Fadda \(2018\)](#) showed that innovativeness, proactiveness and autonomy were significantly associated with tourism firm performance, whereas risk-taking and competitiveness were not.

While, Kosa, Mohammad, and Ajibie (2018) found the level of influence is increasing as firms are being established in larger cities because the firms in cities have more customers and competitors causing them to generate unique strategies that lead them to outstanding performance. Based on the statement, it can be formulated as the following hypothesis:

H₈: Competitive aggressiveness significantly affects the entrepreneurial performance of students of public universities in Surabaya, Indonesia.

2.15 Autonomy and Entrepreneurial Performance

In their study, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that autonomy was one of the dimensions that associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of autonomy. It shows that autonomy has an impact on performance. While, Yu, Lumpkin, Parboteeah, and Stambaugh (2019) found that in dynamic environments, autonomy is associated with improved performance in the United States, while in Taiwan, firms in dynamic environments fared worse with increasing autonomy. Based on the statement, it can be formulated as the following hypothesis:

H₉: Autonomy significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.16 Proactiveness and Entrepreneurial Performance

Costa and McCrae stated that openness to experience was the proactive search and an appreciation for the experience itself as well as tolerance over the exploration of new things (Smith, 2013). On the other hand, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that proactiveness was one dimension that was associated with the entrepreneurial performance. In the study, it was mentioned that openness to experience is one of the factors influencing entrepreneurial performance. It can be concluded that proactiveness has an impact on entrepreneurial performance. Chen et al. (2007) also stated it had a positive relationship between entrepreneurial orientation taking action against performance, wherein the entrepreneurial orientation there was a dimension of proactiveness. Linton (2019) highlighted that proactiveness can be meaningfully divided between the attributes of process and outcome. It shows that proactiveness has an impact on performance. Based on the statement, it can be formulated as the following hypothesis:

H₁₀: Proactiveness significantly affects the entrepreneurial performance of students of the public universities in Surabaya, Indonesia.

2.17 Research Framework

All the developed hypotheses are shown in Figure 1.

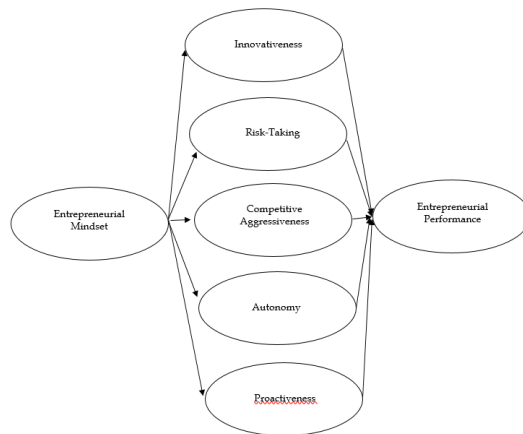


Figure 1. Research Framework

3. RESEARCH METHOD

The population was the bachelor students of the management program of the public universities in Surabaya, Indonesia. There were four establish public universities in Surabaya, which had been offering an entrepreneurship education for their students. The total amount was 4,036 shown in Table 1. It used a purposive sampling.

The criteria set out against the respondents to get the results by the research objectives. They were bachelor students of the management program of the public universities in Surabaya, Indonesia, who were/are ever engaged in entrepreneurship. The 364 samples were taken from the population and determined using Slovin's formula. The questionnaires were disseminated directly to the students of the universities. In order to control bias, the questionnaires was tried out in advance on some respondents. Screening of respondents was conducted orally by asking the respondents one by one and strengthened with the existing questions in the questionnaire.

The study utilized the PLS-SEM to analyze the data. The Partial Least Square function is divided into two groups, namely the inner model and the outer model. The outer model is more towards testing the validity and reliability. While the inner model is more towards regression, which is to assess the effect of one variable on other variables. Model fit on Partial Least Square is not like SEM where there is a global match, such as RMSEA, AGFI, PGFI, PNFI, CMIN / DF, etc. In PLS there are only two criteria for assessing the fit of the model, namely the fit of the outer model which is called the outer model and the inner fit which is called the inner model (Ghozali, 2014).

Table 1. Amounts of bachelor students of management program of public universities in Surabaya

University	Number of Students
Universitas Airlangga	2,026
Universitas Negeri Surabaya	997
Institut Teknologi 10 November Surabaya	109
Universitas Pembangunan Negeri Veteran Jawa Timur	904
Total Number of Students	4,036

Source: <http://forlap.dikti.go.id/>

4. DATA ANALYSIS AND DISCUSSION

4.1 Variable Descriptive Analysis

All responses of the respondents to each variable were designed by Likert scale from 1 to 5. It was set categories of variables by this formula as shown in Table 2.

$$\text{Range} = \frac{\text{Maximum Value} - \text{Minimum Value}}{\text{Amounts of Category}} \quad [1]$$

$$\text{Range} = \frac{5 - 1}{3}$$

$$\text{Range} = 1.33$$

Table 2. Interval of mean scores

Range	Remarks
1,00-2,33	Low
2,34-3,67	Medium
3,67-5,00	High

By using the category, then the evaluation of the answers for each of the variables can be described as follows.

Table 3. The description of entrepreneurial mindset

Item	Statement	Mean	Remark
$X_{1.1}$	I want to create my own workplace	3,64	Medium
$X_{1.2}$	I have an aspiration to be an entrepreneur	3,32	Medium
$X_{1.3}$	I tend to seek business opportunities	3,84	High
$X_{1.4}$	I can identify a business opportunity based on the needs of consumers in the market	3,57	Medium
<i>Entrepreneurial Mindset (X_1)</i>		3,59	Medium

Table 3 notes that the average value of the entrepreneurial mindset is 3.59. It means that the entrepreneurial mindset of students of the public universities in Surabaya has value medium. Table 3 also notes that the highest average value of the indicators is 3.84 in the statement "I tend to seek business opportunities." The lowest average value of the indicator is 3.32 in the statement "I have an aspiration to be an entrepreneur." These results indicate that respondents tend to seek business opportunities despite the aspiration to be an entrepreneur is not so great. It attributes to the respondent's efforts to earn an income or meet his needs. The difference between the statements "I tend to seek business opportunities" with the other states also far enough to the point of being in the different categories (high, medium, low). It indicates that most respondents tend to think more about how to get a business opportunity in a wide variety of way whether to become entrepreneurs or not. It implies that the education succeeds to change the students' mind-set of entrepreneurship (Jung & Lee, 2020; Wardana et al., 2020).

Table 4. The description of innovativeness

Item	Statement	Mean	Remarks
$Z_{1.1}$	I tend to accept new things around me	3,31	Medium
$Z_{1.2}$	I have an innovative idea that can be implemented	3,50	Medium
$Z_{1.3}$	I have unique ideas that haven't been done before	3,34	Medium
$Z_{1.4}$	I can implement the unique ideas that I have	3,49	Medium
<i>Innovativeness (Z_1)</i>		3,41	Medium

Table 4 shows the average value of innovativeness is 3.41. It means students' innovativeness in the public universities in Surabaya has value medium. Besides, the highest average value of the indicators is 3.50 "I have innovative ideas to be implemented." The lowest average value of the indicator is 3.31 in "I am likely to receive new things around me." These results indicate that respondents have different ideas to be applied

in their business. The entire statement is in the category of the medium. It means that innovativeness possibly is improved further.

Table 5. The description of risk-taking

Item	Statement	Mean	Remarks
Z _{2,1}	I dare go to an entirely new place for me all alone	3,65	Medium
Z _{2,2}	I have a willingness to try new things	3,66	Medium
Z _{2,3}	I have the courage to take the decision with minimal information	3,77	High
Z _{2,4}	I felt challenged to do things outside of my comfort zone	3,69	High
Z _{2,5}	I have the desire to conquer my greatest fear	3,71	High
Risk-taking (Z ₂)		3,69	High

Based on Table 5 can be noted that the average value of the variable risk-taking is 3.69. It means the risk-taking of students of the public universities in Surabaya has a value of high. The highest average value of the indicator is 3.77 in the statement I dare to decide with minimal information. The lowest average value of the indicator is 3.65 on the statement of I dare go to an entirely new place for me all alone. Respondents take decisions with minimal information and illustrate that the respondent takes their decision quicker. Table 5 also pointed out that the existence of the respondent towards new things is medium. It is similar to the variable description analysis of innovativeness. The respondents need to enhance adaptation to new things.

Table 6. The description of the competitive aggressiveness

Item	Statement	Mean	Remarks
Z _{3,1}	I am trying to find information to know the existence of competitors for my business	3,42	Medium
Z _{3,2}	I am trying to find information about my business competitors	3,31	Medium
Z _{3,3}	I have the desire to grow bigger than competitors	3,37	Medium
Z _{3,4}	I made the difference in the ability with competitors as a motivation to compete	3,41	Medium
Z _{3,5}	I have the ability to compete with business competitors	3,35	Medium
Z _{3,6}	I can overtake the position of the competitors who have higher business position	3,37	Medium
Competitive Aggressiveness (Z ₃)		3,37	Medium

Based on Table 6 can be noted that the average value of the variable competitive aggressiveness is 3.37. It means the competitive aggressiveness of students of the public universities in Surabaya has a value the medium. Besides, the highest average value of the indicator is 3.42 in the statement I am trying to find information to know the existence of competitors for my business. The lowest average value is 3.31 on I am trying to find information about my business competitors. Respondents tend to strive to recognize the surrounding environment despite the statement with the highest value remained in the category of "Medium". All Statements about competitive aggressiveness are medium. It indicates that respondents tend to be less concerned with competitors to compete better. Lack of concern for the competitors to compete can come from ego and focus on their own business.

Table 7. The description of the autonomy

Item	Statement	Mean	Remarks
Z _{4,1}	I work without relying on others	3,34	Medium
Z _{4,2}	I am working without affected by other people's assumptions	3,49	Medium
Z _{4,3}	I believe with the my ability to resolve the job	3,41	Medium
Z _{4,4}	I work in a field that I've mastered	3,50	Medium

<i>Z_{4.5}</i>	I can specify the time limit to finish the job	3,45	Medium
<i>Z_{4.6}</i>	I can determine the target of achievement for myself	3,55	Medium
<i>Autonomy (Z₅)</i>		3,46	Medium

Based on Table 7 can be noted that the average value of the variable autonomy is 3.46. It means the autonomy of students of the public universities in Surabaya is medium. Besides, the highest average value of the indicator is 3.55 can determine the achievement target. The lowest average is 3.34 of I work without relying on others. These results show that determine the targets for ourselves is easier to do than the other statements. All statements regarding autonomy are in the category of the medium. It shows that the autonomy of the respondents needs to improve regarding independence in work.

Table 8. The description of proactiveness

Item	Statement	Mean	Remarks
<i>Z_{5.1}</i>	I work with my own initiatives and without being asked	3,64	Medium
<i>Z_{5.2}</i>	I get the job done faster than the given time	3,56	Medium
<i>Z_{5.3}</i>	I prefer to face rather than avoid the problem	3,60	Medium
<i>Proactiveness (Z₅)</i>		3,60	Medium

Based on Table 8 can be noted that the average value of the proactiveness is 3.60. It means that the proactiveness of students of the public universities in Surabaya is medium. Also, the highest average value of the indicator is 3.64 I am working with the initiative. The lowest average is 3.56 I get the job done faster than the given time. These results indicate that respondents may give rise to the initiative from themselves to do something. All statements about proactiveness are in the category of the medium. It indicates that respondents can enhance the initiative. Tend to work on time and finish it sooner than the given time.

Table 9. The description of entrepreneurial performance

Item	Statement	Mean	Remarks
<i>Y₁</i>	I am trying to improve my business turnover	3,33	Medium
<i>Y₂</i>	I am trying to hit the target that I set for my business	3,57	Medium
<i>Y₃</i>	I have a high spirit in opening my business	3,55	Medium
<i>Y₄</i>	I am very happy to have a new business	3,46	Medium
<i>Y₅</i>	I feel excited when finding a new breakthrough for my business	3,50	Medium
<i>Y₆</i>	I can apply the ideas of my effort into my business	3,59	Medium
<i>Entrepreneurial Performance (Y)</i>		3,50	Medium

Based on Table 9 can be noted that the average value of the variable entrepreneurial performance is 3.50. It means the entrepreneurial performance of students of the public universities in Surabaya has a value of the medium. Besides, the highest average value of the indicator is 3.59 I can apply the ideas of my effort into my efforts. The lowest average is 3.33 I am trying to improve my business turnover. These results indicate that respondents can reasonably implement ideas into their business. All statements regarding entrepreneurial performance are in the category of the medium. It shows that entrepreneurial performance could still be improved, especially in terms of efforts on increasing turnover. More respondents need to pay close attention to the financial aspects.

4.2 Convergent Validity

Campbell and Fisk stated that convergent validity is an agreement between measures of the same construct assessed by different methods (Guo et al., 2008). Convergent validity measurement carries out using the value of the outer-loading. An indicator is said to satisfy the convergent validity if it has the value of outer-loading > 0.5 (Muafi & Roostika, 2014). Here are the values of the outer-loading indicator on each variable dimensions and research.

From Table 10 can be noted that all indicators that make up the research dimensions and variables

have a value of outer-loading > 0.5. Based on these results, all indicators have met the convergent validity. They can be used to do further analysis.

4.3 Discriminant Validity

Campbell and Fisk stated that discriminant validity was the distinctiveness of different constructs (Guo et al., 2008). The measurement of discriminant validity carries out using cross-loading value (Henseler et al., 2015). An indicator that satisfies to discriminant validity of the indicator value of cross-loading on dimensions or from the variables is the largest when compared with other variables or dimensions (Muafi & Roostika, 2014). Table 10 shows the value of cross-loading each indicator.

Table 10 shows that all indicators have the largest cross-loading on their dimension or variables compared to others. Based on these results, the indicators used in this study have had good discriminant validity in drawing up each dimension or variable. Besides using the value of outer loading, testing validity can also be done by looking at the AVE value (Henseler et al., 2015). The indicators used are said to be valid if the value of AVE is above 0.5. The AVE value of indicators are shown in Table 12.

Table 12 shows the AVE value produced by all reflective indicators is above 0.5. Based on those results, all reflective indicators meet the validity requirements. Further examination is construct-reliability by looking at the output of the composite reliability or Cronbach's alpha. Constructs are pretty reliable if the value of the composite reliability or Cronbach's alpha is greater than or equal to 0.3. But better if above 0.7 (Muafi & Roostika, 2014). Table 13 shows the output of the Cronbach's alpha. The Cronbach's alpha values of all constructs are good if above 0.7. So all reflective indicators are reliable or meet the reliability test.

Table 10. Outer-loading and cross-loading value

	Autonomy		Competitive Aggressiveness		Entrepreneurial Mindset		Entrepreneurial Performance		Innovativeness		Proactiveness		Risk Taking	
	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading
A1	0,7959	0,7959		0,5467		0,5461		0,5975		0,5175		0,4737		0,4828
A2	0,8201	0,8201		0,6369		0,5678		0,6744		0,6531		0,5997		0,4743
A3	0,7668	0,7668		0,6036		0,5338		0,6549		0,6238		0,5504		0,5084
A4	0,7912	0,7912		0,5531		0,5166		0,6429		0,5369		0,5606		0,4943
A5	0,8158	0,8158		0,5391		0,4813		0,6008		0,5414		0,4813		0,4641
A6	0,8905	0,8905		0,5725		0,5049		0,6705		0,5687		0,5504		0,4659
CA1		0,5972	0,8264	0,8264		0,4135		0,5886		0,5833		0,4496		0,4131
CA2		0,5689	0,7884	0,7884		0,5159		0,5771		0,5481		0,4476		0,4531
CA3		0,4548	0,7572	0,7572		0,4279		0,5085		0,5579		0,3978		0,3759
CA4		0,5815	0,7704	0,7704		0,4295		0,6426		0,6305		0,4609		0,4191
CA5		0,5733	0,7871	0,7871		0,4841		0,6115		0,6426		0,4344		0,4249
CA6		0,5876	0,8306	0,8306		0,5039		0,6394		0,5933		0,5688		0,5207
EM1		0,5782		0,5239	0,8471	0,8471		0,6015		0,5112		0,5762		0,7261
EM2		0,4691		0,4505	0,7781	0,7781		0,4832		0,3901		0,5923		0,6463
EM3		0,4804		0,4143	0,7877	0,7877		0,5861		0,4524		0,6646		0,7253
EM4		0,6001		0,5378	0,8891	0,8891		0,6622		0,5492		0,6114		0,8036
EP1		0,6909		0,6291		0,5929	0,7679	0,7679		0,5161		0,5814		0,5711
EP2		0,7103		0,6699		0,6673	0,8824	0,8824		0,6575		0,7145		0,6651
EP3		0,5479		0,5929		0,5434	0,7823	0,7823		0,6596		0,5959		0,5295
EP4		0,5751		0,5046		0,4659	0,7538	0,7538		0,5275		0,6133		0,5345
EP5		0,6302		0,6483		0,6105	0,8471	0,8471		0,6625		0,6169		0,6121
EP6		0,7341		0,6662		0,6156	0,9071	0,9071		0,6635		0,6713		0,6349
I1		0,5807		0,6197		0,4916		0,6057	0,8339	0,8339		0,4731		0,4012
I2		0,6126		0,6826		0,5221		0,6766	0,8388	0,8388		0,5201		0,4901
I3		0,5199		0,5629		0,4211		0,5678	0,8287	0,8287		0,4042		0,3876
I4		0,6427		0,6254		0,4941		0,6369	0,8444	0,8444		0,5174		0,4482
PA1		0,6481		0,5353		0,6795		0,7139		0,5031	0,9148	0,9148		0,6643
PA2		0,5067		0,5774		0,6522		0,6688		0,5325	0,8497	0,8497		0,6555
PA3		0,5511		0,3796		0,5689		0,5947		0,4503	0,8184	0,8184		0,5661
RT1		0,4663		0,4143		0,6926		0,5408		0,3724		0,6233	0,7645	0,7645
RT2		0,5514		0,5337		0,8057		0,6078		0,4943		0,5931	0,8471	0,8471
RT3		0,3708		0,3511		0,6373		0,5564		0,3582		0,5987	0,7991	0,7991
RT4		0,4289		0,3773		0,6585		0,5611		0,3619		0,6251	0,8132	0,8132
RT5		0,5841		0,5499		0,7932		0,6693		0,5163		0,5729	0,8721	0,8719

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Table 12 shows the value of Cronbach's alpha of all constructs is good if above 0.7. So all reflective indicators are reliable or meet the reliability test. Besides, the composite-reliability values of all reflective constructs are also good. So all the reflective indicators are reliable or meet the test of reliability.

Table 12. AVE value and reliability test

Variable	AVE	Composite	Cronbach's
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		Reliability	Alpha
Entrepreneurial Mindset	0,6835	0,8960	0,8445
Innovativeness	0,6997	0,9031	0,8573
Risk-taking	0,6725	0,9111	0,8780
Competitive Aggressiveness	0,6301	0,9108	0,8824
Autonomy	0,6631	0,9218	0,8978
Proactiveness	0,7429	0,8964	0,8261
Entrepreneurial Performance	0,6815		

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4.4 R-Square

Table 14 shows the R-Square value of each variable. Risk-taking and proactiveness have a high magnitude of the research model (77% and 54%). This result explains that the Indonesian students have strong entrepreneurial characteristics on those two. It may be the education of entrepreneurship has a positive contribution in building their entrepreneurship.

Moreover, the R-Square value of Entrepreneurial Performance is very high. It means that the magnitude of entrepreneurial performance is 80.3%. Autonomy, competitive aggressiveness, innovativeness, proactiveness, and risk-taking explain it. The rest amounted of 19.7% are explained by other factors outside the model that is examined.

4.5 Hypothesis Testing and Discussion

Hypothesis testing is a scientific process to examine if a hypothesis is plausible or not. Hypothesis testing is calculated by searching for the quantity and value of the effect coefficient also t-statistic (Park, 2008). Research hypothesis is acceptable if the value of the t-statistic > 1.96. Here are the coefficients of effect (original sample estimate) and the value of the t-statistic of each hypothesis on the inner model shown in Table 15. The results support positively the previous one done by [Sutanto et al. \(2019\)](#).

Table 14. R-square value	
Variable	R-Square
Entrepreneurial Mindset	
Innovativeness	0,3355
Risk-taking	0,7743
Competitive Aggressiveness	0,3418
Autonomy	0,4180
Proactiveness	0,5440
Entrepreneurial Performance	0,8030

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The entrepreneurial mindset has a coefficient of effect on the innovativeness of 0.579 with a t-statistic of 7.696 outweighs 1.96. This result indicates that entrepreneurial mindset has significant effects against innovativeness. A higher entrepreneurial mindset will increase the innovativeness of students of public universities. Based on this result, H_1 is accepted. It supports the earlier researches claimed that entrepreneurial mindset affects significantly to innovativeness. Herbig et al. stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur (Zhao, 2005). He indicated that entrepreneurial mindset affected innovativeness. Moreover, Slater stated that entrepreneurship tailored to the market-oriented culture contribute significantly to the successful innovation (Ndubisi, 2014) as well as the research by Wang and Zang (2005) which suggested entrepreneurship was one of the many areas that are relevant in the human resource and innovation. [Gonthier and Chirita \(2019\)](#) also found that several factors that enable the entrepreneurial spirit fostered by corporate incubators to boost the innovation capability in their parent companies.

The entrepreneurial mindset has a coefficient of effect on risk-taking of 0.879 with a t-statistic of 37.235 outweighs 1.96. This result indicates that entrepreneurial mindset has a significant effect towards risk-taking. A higher entrepreneurial mindset increases the risk-taking of students of public universities. Based on this result, H_2 is accepted. It supports the earlier researches that claimed that entrepreneurial mindset affects risk-taking. Wenhong and Liuying (2010) stated systems thinking owned by entrepreneurs would

affect their tendency in risk-taking. Zahra says industrial entrepreneur ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. (2005) stated that an entrepreneur received personal financial risk existing in the ownership of a business but was also directly benefit from the potential success of that business. Jemal (2020) found that entrepreneurial mindset affects positively and significantly the performance of SMEs and parameters includes: seeking opportunity, creativity, innovation, risk taking, pro-activeness, and alertness to take action. All these findings indicate that the entrepreneurial mindset has a significant effect on risk-taking.

The entrepreneurial mindset has a coefficient of effect on competitive aggressiveness of 0.585 with a t-statistic of 7.89 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against competitive aggressiveness. A higher entrepreneurial mindset increases the competitive aggressiveness of students of public universities. Based on this result, H_3 is accepted.

It supports previous research that suggests that entrepreneurial mindset affects competitive aggressiveness. Stevenson's research (1990), cited by Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors, the entrepreneurial mindset improves competitive aggressiveness. Someone with high competitive aggressiveness will be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better performance. Neneh (2012) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. Paek and Lee (2017) also suggested that the dimensions of strategic entrepreneurship, which are environmental sensing, opportunity seizing, strategic flexibility and entrepreneurial orientation play a critical role in competitive advantage of firms.

Table 15. Coefficients of effect and t-statistic

Hypothesis	Effect	Coefficient	t-statistic	Decision
H_1	EM --> I	0,5792	7,6962	Accepted
H_2	EM --> RT	0,8800	37,2351	Accepted
H_3	EM --> CA	0,5846	7,8921	Accepted
H_4	EM --> P	0,7376	14,5843	Accepted
H_5	EM --> A	0,6465	9,8460	Accepted
H_6	I --> EP	0,1945	2,0400	Accepted
H_7	RT --> EP	0,1913	2,6804	Accepted
H_8	CA --> EP	0,1853	2,1528	Accepted
H_9	P --> EP	0,2471	2,3890	Accepted
H_{10}	A --> EP	0,2428	2,1129	Accepted

The entrepreneurial mindset has a coefficient of effect on the autonomy of 0.647 with t-statistic of 9.846 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect on autonomy. A higher entrepreneurial mindset increases the autonomy of students of public universities. Based on this result, H_4 is accepted. This result supports research of McDonald et al. (2008) stated that there was evidence about the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies are not able to detect and or control such acts.

The entrepreneurial mindset has a coefficient of effect on the proactiveness of 0.738 with a t-statistic of 14.584 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect against proactiveness. A higher entrepreneurial mindset increases the proactiveness of students of public universities. Based on this result, H_5 is accepted. This result supports what Mintzberg found that entrepreneurial companies tended to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014).

The innovativeness has a coefficient of effect on the entrepreneurial performance of 0.195 with t-statistic of 2.0399 greater than 1.96. This result shows that there is a significant effect of innovativeness on entrepreneurial performance. A higher innovativeness increases the entrepreneurial performance of students of public universities. Based on this result, H_6 is accepted. This result supports previous scholars. Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with entrepreneurial

performance. Chen et al. (2007) stated that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there were dimensions of innovativeness. It shows that innovativeness has an impact on performance. Khalili et al. (2013), Linton (2019), and Sutanto et al. (2019) said innovativeness had a significant effect on performance. Further, Bor (2018) revealed that entrepreneurial innovativeness has a direct positive relationship with performance of mid-sized firms. Falahat, Tehseen, and van Horne (2018) also revealed that there was a significant positive impact of entrepreneurial innovativeness on three types of business performances namely perceived non-financial, perceived business growth, and perceived performance relative competitors except on financial performance.

The risk-taking has a coefficient of effect on the entrepreneurial performance of 0.191 with t-statistic of 2.68 greater than 1.96. This result shows that risk-taking providing a significant effect against the entrepreneurial performance. A higher risk-taking increases the entrepreneurial performance of students of public universities. Based on this result, H_7 is accepted. It supports the studies of Chen et al. (2007), Callaghan and Venter (2011), Linton (2019), and Sutanto et al. (2019). It suggests that risk-taking has an impact on performance. Guo and Jiang (2020) also found that a focal firm's new product success benefits most from adopting a concurrently high level of sensing risk-taking and seizing risk-taking when market growth is high but a high level of sensing risk-taking with a low level of seizing risk-taking when market growth is low.

The competitive aggressiveness has a coefficient of effect on the entrepreneurial performance of 0.185 with t-statistic of 2.152 greater than 1.96. This result suggests that the competitive aggressiveness has a significant effect on entrepreneurial performance. A higher competitive aggressiveness increases the entrepreneurial performance in of students of public universities. Based on this result, H_8 is accepted. The result supports the studies of Chen et al. (2007), Callaghan and Venter (2011), Khalili et al. (2013), Kosa, Moham-mad, and Ajibie (2018), Sutanto et al. (2019), and Abdullahi, Kunya, Bustani, and Usman (2019). The competitive aggressiveness leads in performance.

Autonomy has a coefficient of effect on the entrepreneurial performance of 0.247 with t-statistic of 2.389 greater than 1.96. This result explains that autonomy has a significant effect on entrepreneurial performance. A higher autonomy increases the entrepreneurial of students of public universities. Based on this result, H_9 is accepted. It supports positively what was found by Callaghan and Venter (2011), Chen et al. (2007), Yu et al. (2019), and Sutanto et al. (2019) previously that autonomy had an impact on performance.

The proactiveness has a coefficient of effect on the entrepreneurial performance of 0.243 with a t-statistic of 2.112 outweighs 1.96. This result explains that the proactiveness has a significant effect on entrepreneurial performance. A higher proactiveness increases the entrepreneurial performance of students of public universities. Based on this result, H_{10} is accepted. It convinces the previous findings of Costa and McCrae (1992) (in Smith, 2013), Callaghan and Venter (2011), Chen et al. (2007), Linton (2019), and Sutanto et al. (2019). It shows that proactiveness has an impact on performance.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

Based on the results of this research then it can be concluded the conclusions that entrepreneurial mindset of the Indonesian students has a positive and significant effect against their innovativeness, risk-taking, competitive aggressiveness, autonomy, proactiveness. Therefore, changing mindset of the students to entrepreneurship is a vital effort. It implies the entrepreneurship education of Indonesian public universities has succeeded to change their mindset as well as their entrepreneurial orientation and performance. Promoting entrepreneurship education to develop the entrepreneurial competences and mindsets of citizens has become an important mission on the supranational educational policy agenda (Laalo & Heinonen, 2016).

On the other hand, the Indonesian students' innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are found has and significant effect against entrepreneurial performance. It convinces that the education of entrepreneurship should not satisfy only to change the students' mindset but also to cultivate all variables in order to reach high performance.

Some variables such as entrepreneurial mindset, innovativeness, competitive aggressiveness, autonomy, proactiveness, as well as entrepreneurial performance of the Indonesian college students have medium mean. Some actions need to be done much more in the future. Improving the entrepreneurship curriculum is extremely necessary. Inviting and connecting to successful business leaders and entrepreneurs is a must. It will open and inspire students' minds and hearts to create a startup business. Furthermore, as sug-

gested by Loboda, Ostrovskyi, and Katernyak (2018) universities should promote entrepreneurship as a career option and provide entrepreneurship experiences to students. The change in the academic culture is a common challenge, which includes the introduction of entrepreneurial thinking and acting as alternatives to traditional teaching approaches and opening up the universities to the surrounding society and industrial ecosystem. The use of ICT and in particular eLearning in delivering entrepreneurial education might be an additional option for expanding the outreach of the course.

This study is only to analyze the entrepreneurship of the students. However, to make sure whether the students really implement their entrepreneurship potential after finishing their education, it needs a further research. Without that, the findings are only a theory.

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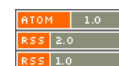
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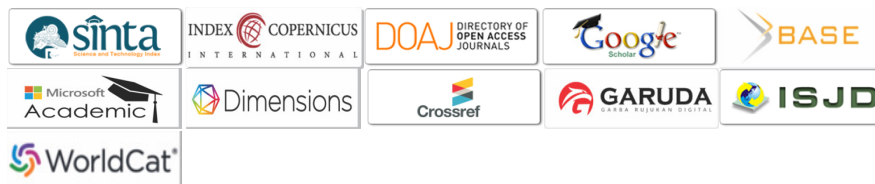
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Entrepreneurial Mindset, Orientation, and Performance of University Students in Indonesia

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ABSTRACT

Entrepreneurship plays a vital role in determining the level of economic growth of a country. This study aims to explore the effect of entrepreneurial mindset on innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance. Besides that, it also analyses the impact of these five factors on entrepreneurial performance. This research uses Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze the data. The data were collected from 364 respondents, consisting of undergraduate students of management program from public universities in Surabaya, Indonesia. The results show that entrepreneurial mindset has a significant effect on innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness. All of these factors, in turn, affect or enhance a positive and significant impact on the students' entrepreneurial performance. It implies that the entrepreneurship education of public universities in Surabaya, Indonesia has succeeded in changing the students' mindset and orientation. The government needs to increase entrepreneurship education centers and business incubator centers at the universities.

ABSTRAK

Kewirausahaan memegang peranan penting dalam menentukan tingkat pertumbuhan ekonomi suatu negara. Penelitian ini bertujuan untuk mengetahui pengaruh pola pikir wirausaha terhadap inovasi, pengambilan risiko, agresifitas bersaing, otonomi, dan proaktif terhadap kinerja wirausahaan. Selain itu juga menganalisis pengaruh kelima faktor tersebut terhadap kinerja kewirausahaan. Penelitian ini menggunakan Partial Least Squares Structural Equation Modeling (PLS-SEM) untuk menganalisis data. Data dikumpulkan dari 364 responden, yang terdiri dari mahasiswa program sarjana dari program manajemen pada perguruan tinggi negeri di Surabaya, Indonesia. Hasil penelitian menunjukkan bahwa pola pikir entrepreneurial berpengaruh signifikan terhadap inovasi, pengambilan risiko, daya saing, otonomi, dan proaktif. Dan, semua faktor ini, pada gilirannya, mempengaruhi atau meningkatkan efek positif dan signifikan pada kinerja kewirausahaan siswa. Hal ini menyiratkan bahwa pendidikan kewirausahaan perguruan tinggi negeri di Surabaya, Indonesia telah berhasil mengubah pola pikir dan orientasi mahasiswa. Pemerintah perlu menambah pusat pendidikan kewirausahaan dan pusat inkubator bisnis di perguruan tinggi. Pemerintah perlu memperbanyak sentra pendidikan kewirausahaan dan pusat inkubator bisnis di berbagai perguruan tinggi.

1. INTRODUCTION

Entrepreneurship, as a career, is interesting. World Economic Forum concludes that over a third of Indonesian young people want to be entrepreneurs (Wood, 2019). On the contrary, the choice for an entrepreneur as a career posits the level at 26% from 20% in 2009 (GMAC, 2014). It can be a reflection as shown by the survey against 37,000 students from 14

countries by the International Survey of Collegiate Entrepreneurship in 2006. It is stated that 15.4% of students choose entrepreneur as a career within the first five years after graduation, and for the next five years, the number increased to 50.1% (Szerb & Imreh, 2007). This study refers to some lessons from Indonesia's experience with the focus of the public university students. It offers an interesting case

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study because the growth of entrepreneurship in the country in general and university students, in particular, has not yet reached the entrepreneurial performance. Yet, this entrepreneurship is encouraged in university-level education by various countries globally, and, in Indonesia, it has not been followed by an increase in entrepreneurial performance of Indonesia's students.

Gustiawan et al. (2014) indicated that the number of entrepreneurs in Indonesia was still small, and its development is critical to the country. They stated that 2% was an ideal figure for entrepreneurs in any country from the total population. In the case of Indonesia, 400,000 entrepreneurs were identified, or less than 2% of the total population. It is very low compared to that in America (12%), Singapore (7%), and Malaysia (6%). From the policy perspectives, entrepreneurship can help to reduce unemployment. However, the entrepreneurs' competency needs to be developed for enhancing the young people's entrepreneurship particularly.

This study was motivated by the importance of entrepreneurial performance. Therefore, the researchers try exploring the effect of an entrepreneurial mindset, innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness on entrepreneurial performance of undergraduate management students of public universities. The concept of entrepreneurial orientation embraces some variables such as innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are adopted from Miller (1983), Lumpkin and Dess (2001), and Rauch et al. (2009). They found that these variables have a positive and significant relationship towards entrepreneurial performance. Therefore, the primary purpose of this research is to comprehensively examine the various aspects of entrepreneurial orientation towards entrepreneurial performance. Besides that, it also attempts to see the university students of Indonesia who have been studying entrepreneurship. It also explores whether entrepreneurship education in Indonesian universities has succeeded in changing their mindset and orientation. University students are the potential generation in the future of a country. It requires some efforts to create a better generation need seriously and consistently, and entrepreneurship is one of the best solutions. This study aims and benefits to improve entrepreneurship education in Indonesian universities.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Entrepreneurship begins from the mindset. Dhliwayo and Van Vuuren (2011) stated that the entrepreneurial mindset is a way of thinking about business and the opportunity to benefit from the uncertain circumstances. Furthermore, according to Valerio et al. (2014), entrepreneurial mindset referred to socio-emotional abilities and overall awareness towards entrepreneurship, related to entrepreneurial motivation and the success that would come as an entrepreneur. This study uses indicators to describe the entrepreneurial mindset, such as the ability to identify business opportunities and the degree of thinking of entrepreneurship (Solevik et al., 2013). One possible outcome of entrepreneurship education is a change in students' entrepreneurial mindset (Jung & Lee, 2020). Kouakou et al. (2019) highlighted the importance of an entrepreneurial mindset of students at their youngest age. By doing so, they develop entrepreneurial experiences, skills, and abilities to overcome entrepreneurial challenges. This research provides a clear insight into the topic of an entrepreneurial mindset to ease individuals and organizations involved in interactive entrepreneurial activities continuously.

Innovativeness

There are several definitions of innovativeness. According to Baregheh et al. (2009), innovativeness is defined as the ability to create effective implementation of new processes and products for the organization, and it is designed to provide an advantage for the organization and stakeholders. In this case, Quintane et al. (2011) claim that innovativeness is the ability to produce continuous innovation. Yildiz, Baştürk, and Boz (2014) also define innovativeness as how fast a person or organization in adopting innovations compared against another person or organization.

There are three indicators of Innovativeness: openness towards new things, level of creativity, and ability to innovate. Goldsmith and Foxall (2003) describes innovativeness as a willingness to try new things. Lee (2008) declares that innovative people would search for and combine various information, examines problems they experienced, and produces a thought or idea that is unconventional. The power to innovate is a further phase of creativity. It is a comparison between the studies in quickly manner with the embodiment of innovation practices, particularly socio-organized practices. The power of innovation is an ability to understand socially,

accept estimates, disseminate, implement, and use innovation (Mikhailova, 2015).

Risk-Taking

Boyer (2006) stated that risk-taking involves a variety of behaviors, associated with some possibilities against unwanted results. According to Wenhong and Liuying (2010), risk-taking is a tendency to take action against something that is rated as risky. It is a process of decision-making and an act without enough knowledge about the obtained results (Noer et al., 2013).

There are several indicators to understand the concept of risk-taking. These indicators include (1) The courage of facing new things. Sung and Hanna stated that young entrepreneurs were more willing to take risks. They urge to invest in new goods/services and enter into new markets (Wang & Poutziouris, 2010); and (2) the courage to face a difficult situation. Wenhong and Liuying (2010) declared that the tendency of risk-taking is a possibility to receive profit related to success in certain conditions. Anyone requires risk-taking before putting himself on the consequences associated with failure.

Competitive Aggressiveness

Competitive aggressiveness is associated with a way to confront the threats and challenges of the external environment (Gamble et al., 2013). Lumpkin and Dess (2001) stated that the competitive aggressiveness is the intensity of the desire to beat your opponent. Noer et al. (2013) also stated that competitive aggressiveness is a responsive attitude towards any threat as a form of resistance and effort to win the competition.

According to Stambaugh, Yu, and Dubinsky (2011), there are three indicators of competitive behavior: awareness of competitors, motivation to compete, and capability to compete. Awareness includes analysis of the opponents' strength, stalking the opponents' competitive actions, and the dissemination of information about the opponent. It is about knowing the condition of opponents. There are two characteristics of motivation in the company with high competitive aggressiveness. The first is beating competitors who are crucial for aggressive companies. Other companies might choose different things as references. They want to know their performance, internal purpose, and satisfaction with the target to achieve. The aggressive companies seek information about their competitor. They also compare the performance of their own with the others. The second one is a position of opponents

that put oneself in difficult situation as appropriate and necessary steps to improve its performance. The capability to compete is the ability to attack the opponents and deflect the opponents' attack. Part of this ability is an existed resource as funds resulting from the past good performance. The company is also aggressively identifying available resources and prioritizes the resource to attack while the less aggressive company finds the same resource base. Aggressive companies are better to use the available resources rather than to wait for achieving an optimal target.

Autonomy

According to Van Gelderen and Jansen (2006), autonomy was freedom of choice without depending on other parties. Barnabas and Mekoth (2010) also revealed almost a similar meaning that autonomy was the degree of freedom of a person without the need for approval from others. Mitcham (2005) stated that autonomy had at least four meanings: the capacity to govern ourselves, the conditions to set ourselves up, the ideal state to regulate ourselves, and the authority to rule ourselves.

There are several indicators of autonomy. First is independent. It is the ability to do things without being affected by other people (Van Gelderen & Jansen, 2006). Second is self-learning. Someone who is independent would involve himself to learn on an ongoing basis about himself (Weinstein et al., 2012). Last is determination. It is the ability to set and decide whether the regulations, targets, and processes occur in his business (Van Gelderen & Jansen, 2006).

Proactiveness

Van Gelderen and Jansen (2006) defines proactiveness as taking the initiative to improve the circumstances. Proactiveness is looking far ahead and had the determination to identify and respond to opportunities (Wong, 2012). It is ability to anticipate and feel a vague sign and act to the needs in the future ahead of existing competitors to gain a competitive advantage (Sundqvist et al., 2012). Crant (2000) stated that proactiveness could be seen in some behaviors. The behaviors could be used as gauges or indicators for proactiveness: The ability to get the opportunity quickly; courage starts a change; and desirability of creating favorable conditions.

Entrepreneurial Performance

Sebikari (2014) stated that entrepreneurial performance was the achievement of several

entrepreneurial objectives. Entrepreneurial performance was done by an entrepreneur with high initiative to obtain the goal of entrepreneurship (Tseng, 2013). Callaghan and Venter (2011) argued that entrepreneurial performance emphasizes achieving something and provide continuous satisfaction.

There are several indicators of entrepreneurial performance: need for achievement, enthusiasm for entrepreneurship, and realization of the thinking to entrepreneurship. Wu and Dagher (2007) stated that the need for achievement that was often described as a passion for delivering good performance and for gaining a feeling of accomplishment. It is one of the specific characters of entrepreneurship. The need for achievement had a positive correlation with corporate success (Khan, Breitenacker, & Schwarz., 2015). Successful entrepreneurs have high scores in need for achievement (Oosterbeek, Van Praag, & Ijsselstein., 2010). Enthusiasm for entrepreneurship is a non-economic indicator used to measure the performance. It represents positive aspect belonging to someone (Leitao & Franco, 2008). Dhliwayo and Van Vuuren (2011) stated that entrepreneurship would ultimately culminate in the creation or realization of entrepreneurial and strategic management plan that would be resulting in the best performance.

Entrepreneurial Mindset and Innovativeness

Earlier research claimed that entrepreneurial mindset significantly affects innovativeness. Zhao (2005) stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur. Herbig, Golden, and Dunphy (1994) indicated that entrepreneurial mindset affects innovativeness. Ndubisi (2014) and Sutanto, Sigols, and Putih (2019) stated that entrepreneurship tailored to the market-oriented culture will contribute significantly to successful innovation. Wang and Zang (2005) proved that entrepreneurship is one of the significant areas relevant in human resource and innovation. Gonthier and Chirita (2019) found that several factors that enable the entrepreneurial spirit to be fostered by corporate incubators to boost the innovation capability in their parent companies. Based on the statements, the hypothesis can be stated as the followings:

H₁: Entrepreneurial mindset significantly affects the innovativeness of students of public universities.

Entrepreneurial Mindset and Risk-Taking

The previous studies claim that entrepreneurial mindset affect significantly to risk-taking. Wenhong and Liuying (2010) stated that systems thinking owned by the entrepreneur would affect the tendency of risk-taking. In regards to entrepreneur behavior concerning the family business, ownership is associated with risk-taking (Wang & Poutziouris, 2010). In his research, Segal et al. state that an entrepreneur receives personal financial risk existing but directly benefits from the potential success. It indicates that the entrepreneurial mindset has a significant effect on risk-taking (Sutanto et al., 2019). Further, Jemal (2020) found that entrepreneurial mindset positively and significantly affects SMEs' performance and parameters include seeking opportunity, creativity, innovation, risk-taking, proactiveness, and alertness to take action. Based on the arguments above, this study then states the hypothesis as the following:

H₂: Entrepreneurial mindset significantly affects the risk-taking of students of public universities.

Entrepreneurial Mindset and Competitive Aggressiveness

Previous researchers suggest that entrepreneurial mindset significantly affects competitive aggressiveness. Piperopoulos (2012) shows that entrepreneurship is somehow becoming synonymous with competitive aggressiveness. Through the internal factors affected by the entrepreneurial mindset, competitive aggressiveness could be improved. Someone with high competitive aggressiveness would be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better competition. Neneh (2012) and Sutanto et al. (2019) state that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. Moreover, Paek and Lee (2017) suggest that the dimensions of strategic entrepreneurship, which are environmental sensing, opportunity seizing, strategic flexibility, and entrepreneurial orientation, play a critical role in the competitive advantage of firms. Based on the statement, this study proposes the hypothesis as the following:

H₃: Entrepreneurial mindset significantly affects competitive aggressiveness of students of public universities.

Entrepreneurial Mindset and Autonomy

McDonald, Warhurst, and Allen (2008) provides evidence regarding the manager of subsidiaries who involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies were not able to detect and/or control such acts. Moreover, Sutanto et al. (2019) found that the entrepreneurial mindset has a significant effect on the autonomy of college students in Malang City, Indonesia. Based on the statement, the hypothesis can be stated as the following:

H₄: Entrepreneurial mindset significantly affects the autonomy of students of public universities.

Entrepreneurial Mindset and Proactiveness

Entrepreneurial companies tend to be more engaged in risk than other companies and more proactive in looking for new opportunities (Zhang et al., 2014). Moreover, Sutanto et al. (2019) found entrepreneurial mindset has a significant effect on the proactiveness of college students in Malang City, Indonesia. Based on the arguments above, the hypothesis can be stated as the following:

H₅: Entrepreneurial mindset significantly affects the proactiveness of students of public universities.

Innovativeness and Entrepreneurial Performance

Callaghan and Venter (2011) argued that innovativeness was one of the dimensions associated with the entrepreneurial performance. Chen et al. (2007) stated that the innovativeness has an impact on performance. Prihandono and Utami (2018) also consider exploring the entrepreneurial in higher education and innovative potential. Moreover, Khalili, Nejadhussein, and Fazel. (2013) and Sutanto et al. (2019) stated that innovativeness had a significant impact on performance. Further, Bor (2018) revealed that entrepreneurial innovativeness has a direct positive relationship with the performance of mid-sized firms. Falahat, Tehseen, and van Horne (2018) also showed a significant positive impact of entrepreneurial innovativeness on three types of business performances namely perceived non-financial, perceived business growth, and perceived performance relative competitors except on financial performance. Further, Linton (2019) highlighted that innovativeness could be meaningfully divided between process attributes and outcome. Based on the statement, the following hypothesis can be formulated:

H₆: Innovativeness significantly affects the entrepreneurial performance of students of public universities.

Risk-taking and Entrepreneurial Performance

Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that risk-taking was one of the dimensions associated with the entrepreneurial performance. On the contrary, Chen et al. (2007) stated entrepreneurial orientation has a positive relationship with performance. In the entrepreneurial orientation, there were dimensions of risk-taking. It suggests that risk-taking has an impact on performance. Guo and Jiang (2020) also found that a focal firm's new product success benefits most from adopting a concurrently high level of sensing risk-taking and seizing risk-taking when market growth is high but a high level of sensing risk-taking with a low level of seizing risk-taking when market growth is low. Moreover, Linton (2019) highlighted that risk-taking could be meaningfully divided between the attributes of process and outcome. Based on the statement; the hypothesis can be formulated as the following:

H₇: Risk-taking significantly affects the entrepreneurial performance of students of public universities.

Competitive Aggressiveness and Entrepreneurial Performance

Callaghan and Venter (2011) and Sutanto et al. (2019) stated that competitive aggressiveness was a dimension that was associated with entrepreneurial performance. Chen et al. (2007) said that there was a positive relationship between entrepreneurial orientation and performance, wherein the entrepreneurial orientation there was a dimension of the competitive aggressiveness. It shows that competitive aggressiveness has an impact on performance. Moreover, Khalili et al. (2013) mentioned that competitive aggressiveness is equaled as an effort to lead in performance and beat your opponent. Abdullahi et al. (2019) also concluded that competitive aggressive positively affects the financial performance of Nigerian SMEs.

On the other hand, Fadda (2018) showed that innovativeness, proactiveness, and autonomy were significantly associated with tourism firm performance, whereas risk-taking and competitiveness were not. However, Kosa, Mohammad, and Ajibie (2018) found the level of influence is increasing as firms are being established in larger cities because the firms in cities have more

customers and competitors, causing them to generate unique strategies that lead them to outstanding performance. Based on the statement, the hypothesis can be stated as the following:

H₈: Competitive aggressiveness significantly affects the entrepreneurial performance of students of public universities.

Autonomy and Entrepreneurial Performance

Callaghan and Venter (2011) and Sutanto et al. (2019) provide evidence that autonomy is one of the dimensions associated with entrepreneurial performance. Chen et al. (2007) stated that autonomy has an impact on performance. While, Yu et al. (2019) found that autonomy is associated with improved performance in the United States in dynamic environments, while in Taiwan, firms in dynamic environments fared worse with increasing autonomy. Based on the statement, it can be formulated as the following hypothesis:

H₉: Autonomy significantly affects the entrepreneurial performance of students of public universities.

Proactiveness and Entrepreneurial Performance

Smith (2013) stated that openness to experience was

the proactive search and an appreciation for the experience itself and tolerance over the exploration of new things. On the other hand, Callaghan and Venter (2011) and Sutanto et al. (2019) mentioned that proactiveness was one dimension that was associated with the entrepreneurial performance. In the study, it was mentioned that openness to experience is one of the factors influencing entrepreneurial performance. It can be concluded that proactiveness has an impact on entrepreneurial performance. Chen et al. (2007) also stated it had a positive relationship between entrepreneurial orientations taking action against performance, wherein the entrepreneurial orientation there was a dimension of proactiveness. Linton (2019) highlighted that proactiveness could be meaningfully divided between the attributes of process and outcome. It shows that proactiveness has an impact on performance. Based on the arguments above, the hypothesis can be stated as the following:

H₁₀: Proactiveness significantly affects the entrepreneurial performance of students of public universities.

Based on the discussion above, the developed hypotheses are shown in Figure 1.

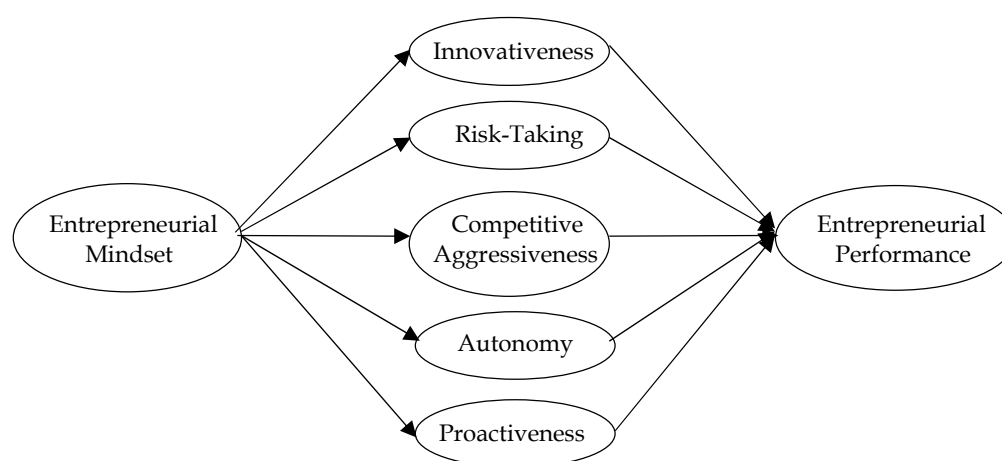


Figure 1. Research Framework

3. RESEARCH METHOD

The population of this study consists of undergraduate students of the management program in the public universities in Surabaya, Indonesia. There were four public universities in Surabaya having offered an entrepreneurship education for their students. The total number is 4,036, shown in Table 1. The sample was taken using a purposive sampling.

The criteria used for selecting the respondents are based on the research objectives. They were undergraduate students of the management program of the public universities in Surabaya, Indonesia, who have been involved in entrepreneurship. This study used 364 respondents as the sample taken from the population and determined using Slovin's formula. The researchers distributed the questionnaires to the students of the

universities. To control bias, the researchers tried out the questionnaires in advance on some respondents. Finally, the researchers screened the respondents orally by asking them one by one and done in-depth with the existing questions in the questionnaire.

The study utilized the PLS-SEM to analyze the data. The Partial Least Square function is divided into two groups: the inner and outer models. The outer model is more towards testing the validity and

reliability. Yet, the inner model is more towards regression, which assesses the effect of one variable on other variables. Model fit on Partial Least Square is not like SEM where there is a global match, such as RMSEA, AGFI, PGFI, PNFI, CMIN / DF, etc. In PLS, there are only two criteria for assessing the model's fit, namely the fit of the outer model that is called the outer model, and the inner fit, which is called the inner model (Ghozali, 2014).

Table 1. Number of Undergraduate Students in Management of Public Universities

Universities	Number of Students
Universitas Airlangga	2,026
Universitas Negeri Surabaya	997
Institut Teknologi 10 November Surabaya	109
Universitas Pembangunan Negeri Veteran Jawa Timur	904
Total Number of Students	4,036

Source: <http://forlap.dikti.go.id/>

4. DATA ANALYSIS AND DISCUSSION

Descriptive Analysis of the variables

All responses from the respondents to each variable were designed by Likert scale from 1 to 5. It was set categories of variables by this formula as shown in Table 2.

$$\text{Range} = \frac{\text{Maximum Value} - \text{Minimum Value}}{\text{Numbers of Category}} = \frac{5-1}{3} = 1.33$$

Table 2. Interval of Mean Scores

Range	Remarks
1.00–2.33	Low
2.34–3.67	Medium
3.67–5.00	High

Therefore, the evaluation of the answers for each of the variables can be described in Table 3.

Table 3. The Description of Entrepreneurial Mindset

Item	Statement	Mean	Remark
X _{1.1}	I want to create my own workplace	3.64	Medium
X _{1.2}	I have an aspiration to be an entrepreneur	3.32	Medium
X _{1.3}	I tend to seek business opportunities	3.84	High
X _{1.4}	I can identify a business opportunity based on the needs of consumers in the market	3.57	Medium
Entrepreneurial Mindset (X ₁)		3.59	Medium

Table 3 indicates that the average value of the entrepreneurial mindset is 3.59. It means that the entrepreneurial mindset of students of the public universities in Surabaya has a medium value. Table 3 also notes that the highest average value of the indicators is 3.84 in the statement "I tend to seek business opportunities." The lowest average value of the indicator is 3.32 in the statement "I have an aspiration to be an entrepreneur." These results indicate that respondents tend to seek business opportunities despite the aspiration to be an entrepreneur is not so great. It attributes to the

respondent's efforts to earn an income or meet his needs. The difference between the statement "I tend to seek business opportunities" and the other statements is far enough to be in the different categories (high, medium, low). It indicates that most respondents tend to think more about getting a business opportunity in a wide variety of ways, whether to become entrepreneurs or not. It shows that education succeeds in changing the students' mindset of entrepreneurship (Jung & Lee, 2020; Wardana et al., 2020).

Table 4. The Description of Innovativeness

Item	Statement	Mean	Remarks
Z _{1.1}	I tend to accept new things around me	3.31	Medium
Z _{1.2}	I have an innovative idea that can be implemented	3.50	Medium
Z _{1.3}	I have unique ideas that haven't been done before	3.34	Medium
Z _{1.4}	I can implement the unique ideas that I have	3.49	Medium
<i>Innovativeness (Z₁)</i>		3.41	Medium

Table 4 shows the average value of innovativeness is 3.41. It means students' innovativeness in the public universities in Surabaya is said to be medium. Besides, the highest average value of the indicators is 3.50 in "I have innovative ideas to be implemented." The lowest average value

of the indicator is 3.31 in "I am likely to receive new things around me." These results indicate that respondents have different ideas to be applied in their business. The entire statement is in the category of the medium. It means that innovativeness possibly is improved further.

Table 5. The Description of Risk-Taking

Item	Statement	Mean	Remarks
Z _{2.1}	I dare go to an entirely new place for me all alone	3.65	Medium
Z _{2.2}	I have a willingness to try new things	3.66	Medium
Z _{2.3}	I have the courage to decide with minimal information	3.77	High
Z _{2.4}	I felt challenged to do things outside of my comfort zone	3.69	High
Z _{2.5}	I have the desire to conquer my greatest fear	3.71	High
<i>Risk-taking (Z₂)</i>		3.69	High

Table 5 reveals that the average value of the variable risk-taking is 3.69. It means the risk-taking of students of the public universities in Surabaya has a value of high. The highest average value of the indicator is 3.77 in the statement I dare to decide with minimal information. The lowest average value of the indicator is 3.65 on the statement of I dare go to an entirely new place for me all alone. Respondents

make decisions with minimal information and illustrate that the respondent takes their decision quicker. Table 5 also pointed out that the existence of the respondent towards new things is medium. It is similar to the variable description analysis of innovativeness. The respondents need to enhance adaptation to new things.

Table 6. The Description of the Competitive Aggressiveness

Item	Statement	Mean	Remarks
Z _{3.1}	I am trying to find information to know the existence of competitors for my business	3.42	Medium
Z _{3.2}	I am trying to find information about my business competitors	3.31	Medium
Z _{3.3}	I have the desire to grow bigger than competitors	3.37	Medium
Z _{3.4}	I made the difference in the ability with competitors as a motivation to compete	3.41	Medium
Z _{3.5}	I can compete with business competitors	3.35	Medium
Z _{3.6}	I can overtake the position of the competitors who have a higher business position	3.37	Medium
<i>Competitive Aggressiveness (Z₃)</i>		3.37	Medium

Table 6 shows that the average value of the variable competitive aggressiveness is 3.37. It means the competitive aggressiveness of students of the public universities in Surabaya has a value the medium. Besides, the highest average value of the

indicator is 3.42 in "I am trying to find information to know the existence of competitors for my business." The lowest average value is 3.31 in "I am trying to find information about my business competitors." Respondents tend to recognize the surrounding

environment despite the statement with the highest value remaining in the category of "Medium." All Statements about competitive aggressiveness are medium. It indicates that respondents tend to be less

concerned with competitors to compete better. Lack of concern for the competitors to compete can come from ego and focus other own business.

Table 7. The Description of the Autonomy

Item	Statement	Mean	Remarks
Z _{4.1}	I work without relying on others	3.34	Medium
Z _{4.2}	I am working without being affected by other people's assumptions	3.49	Medium
Z _{4.3}	I believe with my ability to resolve the job	3.41	Medium
Z _{4.4}	I work in a field that I've mastered	3.50	Medium
Z _{4.5}	I can specify the time limit to finish the job	3.45	Medium
Z _{4.6}	I can determine the target of achievement for myself	3.55	Medium
Autonomy (Z ₅)		3.46	Medium

Table 7 shows that the average value of the variable autonomy is 3.46. It means the autonomy of students of the public universities in Surabaya is medium. Besides, the highest average value of the indicator is 3.55 can determine the achievement target. The lowest average is 3.34 of "I work without

relying on others." These results show that determine the targets for ourselves is easier to do than the other statements. All statements regarding autonomy are in the category of the medium. It shows that the autonomy of the respondents needs to improve regarding independence in work.

Table 8. The Description of Proactiveness

Item	Statement	Mean	Remarks
Z _{5.1}	I work with my initiatives and without being asked	3.64	Medium
Z _{5.2}	I get the job done faster than the given time	3.56	Medium
Z _{5.3}	I prefer to face rather than avoid the problem	3.60	Medium
Proactiveness (Z ₅)		3.60	Medium

Table 8 shows that the average value of the proactiveness is 3.60. It means that the proactiveness of students of the public universities in Surabaya is medium. In addition, the highest average value of the indicator is 3.64 in "I am working with the initiative." The lowest average is 3.56 in "I get the job done faster than the given time." These results indicate that

respondents may give rise to the initiative from themselves to do something. All statements about proactiveness are in the category of the medium. It suggests that respondents can enhance the initiative and tend to work on time and finish it sooner than the given time.

Table 9. The Description of Entrepreneurial Performance

Item	Statement	Mean	Remarks
Y ₁	I am trying to improve my business turnover	3.33	Medium
Y ₂	I am trying to hit the target that I set for my business	3.57	Medium
Y ₃	I have a high spirit in opening my business	3.55	Medium
Y ₄	I am pleased to have a new business	3.46	Medium
Y ₅	I feel excited when finding a breakthrough for my business	3.50	Medium
Y ₆	I can apply the ideas of my effort into my business	3.59	Medium
Entrepreneurial Performance (Y)		3.50	Medium

Table 9 reveals that the average value of the variable entrepreneurial performance is 3.50. It means the entrepreneurial performance of students of the

public universities in Surabaya has a medium value. Besides, the highest average value of the indicator is 3.59 in "I can apply the ideas of my effort into my

efforts." The lowest average is 3.33 in "I am trying to improve my business turnover." These results indicate that respondents can reasonably implement ideas into their business. All statements regarding entrepreneurial performance are in the category of the medium. It shows that entrepreneurial performance could still be improved, especially in terms of efforts on increasing turnover. More respondents need to pay close attention to the financial aspects.

Convergent Validity

Convergent validity is an agreement between measures of the same construct assessed by different methods (Guo et al., 2008). Convergent validity measurement carries out using the value of the outer-loading. An indicator is said to satisfy the convergent validity if it has the value of outer-loading > 0.5 (Muafi & Roostika, 2014). Here are the values of the outer-loading indicator on each variable dimensions and research. Table 10 shows that all indicators that make up the research dimensions and variables have a value of outer-loading > 0.5 . Based on these results, all indicators have met the convergent validity. They

can be used to do further analysis.

Discriminant Validity

Campbell and Fisk in Guo et al. (2008) stated that discriminant validity was the distinctiveness of different constructs. The measurement of Discriminant validity carries out using cross-loading values (Henseler, Ringle & Sarstedt, 2015). An indicator that satisfies to Discriminant validity of the indicator value of cross-loading on dimensions or from the variables is the largest when compared with other variables or dimensions (Muafi & Roostika, 2014).

Table 10 shows the value of cross-loading each indicator. It shows that all indicators have the largest cross-loading on their dimension or variables compared to others. Based on these results, the indicators used in this study have had good discriminate validity in drawing up each dimension or variable. Besides using the value of outer loading, testing validity can also be done by looking at the AVE value (Henseler et al., 2015). The indicators used are said to be valid if the value of AVE is above 0.5.

Table 10. Outer-Loading and Cross-Loading Value

	Autonomy		Competitive Aggressiveness		Entrepreneurial Mindset		Entrepreneurial Performance		Innovativeness		Proactiveness		Risk-Taking	
	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading	Outer Loading	Cross Loading
A1	0.7959	0.7959		0.5467		0.5461		0.5975		0.5175		0.4737		0.4828
A2	0.8201	0.8201		0.6369		0.5678		0.6744		0.6531		0.5997		0.4743
A3	0.7668	0.7668		0.6036		0.5338		0.6549		0.6238		0.5504		0.5084
A4	0.7912	0.7912		0.5531		0.5166		0.6429		0.5369		0.5606		0.4943
A5	0.8158	0.8158		0.5391		0.4813		0.6008		0.5414		0.4813		0.4641
A6	0.8905	0.8905		0.5725		0.5049		0.6705		0.5687		0.5504		0.4659
CA1		0.5972	0.8264	0.8264		0.4135		0.5886		0.5833		0.4496		0.4131
CA2		0.5689	0.7884	0.7884		0.5159		0.5771		0.5481		0.4476		0.4531
CA3		0.4548	0.7572	0.7572		0.4279		0.5085		0.5579		0.3978		0.3759
CA4		0.5815	0.7704	0.7704		0.4295		0.6426		0.6305		0.4609		0.4191
CA5		0.5733	0.7871	0.7871		0.4841		0.6115		0.6426		0.4344		0.4249
CA6		0.5876	0.8306	0.8306		0.5039		0.6394		0.5933		0.5688		0.5207
EM1		0.5782		0.5239	0.8471	0.8471		0.6015		0.5112		0.5762		0.7261
EM2		0.4691		0.4505	0.7781	0.7781		0.4832		0.3901		0.5923		0.6463
EM3		0.4804		0.4143	0.7877	0.7877		0.5861		0.4524		0.6646		0.7253
EM4		0.6001		0.5378	0.8891	0.8891		0.6622		0.5492		0.6114		0.8036
EP1		0.6909		0.6291		0.5929	0.7679	0.7679		0.5161		0.5814		0.5711
EP2		0.7103		0.6699		0.6673	0.8824	0.8824		0.6575		0.7145		0.6651
EP3		0.5479		0.5929		0.5434	0.7823	0.7823		0.6596		0.5959		0.5295
EP4		0.5751		0.5046		0.4659	0.7538	0.7538		0.5275		0.6133		0.5345
EP5		0.6302		0.6483		0.6105	0.8471	0.8471		0.6625		0.6169		0.6121
EP6		0.7341		0.6662		0.6156	0.9071	0.9071		0.6635		0.6713		0.6349
I1		0.5807		0.6197		0.4916		0.6057	0.8339	0.8339		0.4731		0.4012
I2		0.6126		0.6826		0.5221		0.6766	0.8388	0.8388		0.5201		0.4901
I3		0.5199		0.5629		0.4211		0.5678	0.8287	0.8287		0.4042		0.3876
I4		0.6427		0.6254		0.4941		0.6369	0.8444	0.8444		0.5174		0.4482
PA1		0.6481		0.5353		0.6795		0.7139		0.5031	0.9148	0.9148		0.6643
PA2		0.5067		0.5774		0.6522		0.6688		0.5325	0.8497	0.8497		0.6555
PA3		0.5511		0.3796		0.5689		0.5947		0.4503	0.8184	0.8184		0.5661
RT1		0.4663		0.4143		0.6926		0.5408		0.3724		0.6233	0.7645	0.7645
RT2		0.5514		0.5337		0.8057		0.6078		0.4943		0.5931	0.8471	0.8471
RT3		0.3708		0.3511		0.6373		0.5564		0.3582		0.5987	0.7991	0.7991
RT4		0.4289		0.3773		0.6585		0.5611		0.3619		0.6251	0.8132	0.8132
RT5		0.5841		0.5499		0.7932		0.6693		0.5163		0.5729	0.8721	0.8719

The AVE value of indicators is presented in Table 11. It shows that AVE value produced by all reflective indicators is above 0.5. Based on those results, all reflective indicators meet the validity requirements. Further examination is construct reliability by looking at the output of the composite reliability or Cronbach's alpha. The constructs are reliable if the composite reliability value or Cronbach's alpha is greater than or equal to 0.3. However, it will be better

if it is above 0.7 (Muafi & Roostika, 2014).

Table 11 shows the values of Cronbach's alpha of all constructs are good because they are above 0.7. Therefore, all reflective indicators are reliable or meet reliability test. Besides that, the composite reliability values of all reflective constructs are also good. So that it could be concluded that all the reflective indicators are reliable because they satisfy both reliability testing criteria.

Table 11. AVE Value and Reliability Test

Variable	AVE	Composite Reliability	Cronbach's Alpha
Entrepreneurial Mindset	0.6835	0.8960	0.8445
Innovativeness	0.6997	0.9031	0.8573
Risk-Taking	0.6725	0.9111	0.8780
Competitive Aggressiveness	0.6301	0.9108	0.8824
Autonomy	0.6631	0.9218	0.8978
Proactiveness	0.7429	0.8964	0.8261
Entrepreneurial Performance	0.6815		

R-Square

Table 12 shows the R-Square value of each variable. Risk-taking and proactiveness have a high magnitude of the research model (77% and 54%). This result

explains that the Indonesian students have strong entrepreneurial characteristics on those two. It may be the education of entrepreneurship has a positive contribution in building their entrepreneurship.

Table 12. R-square Value

Variable	R-Square
Entrepreneurial Mindset	
Innovativeness	0.3355
Risk-taking	0.7743
Competitive Aggressiveness	0.3418
Autonomy	0.4180
Proactiveness	0.5440
Entrepreneurial Performance	0.8030

Moreover, the R-Square value of Entrepreneurial Performance is high. It means that the magnitude of entrepreneurial performance is 80.3%. Autonomy, competitive aggressiveness, innovativeness, proactiveness, and risk-taking explain it. The rest amounted of 19.7%, are explained by other factors outside the model that is examined.

Hypothesis Testing and Discussion

Table 13 shows the results of hypothesis testing. The entrepreneurial mindset has a coefficient of effect on the innovativeness of 0.579 with a t-statistic of 7.696 outweighs 1.96. This result indicates that entrepreneurial mindset has significant effects against innovativeness. A higher entrepreneurial mindset will increase the innovativeness of students

of public universities. Based on this result, H_1 is accepted. It supports the previous researches that claimed that the entrepreneurial mindset significantly affects innovativeness. Herbig et al. (1994) stated that innovation required three basic components, namely infrastructure, capital, and the ability of the entrepreneur. They indicated that entrepreneurial mindset affected innovativeness. Entrepreneurship tailored to the market-oriented culture contribute significantly to the successful innovation (Ndubisi, 2014) Wang and Zang (2005) suggested entrepreneurship was one of the many areas that are relevant in the human resource and innovation. Gonthier and Chirita (2019) also found several factors that enable the entrepreneurial spirit fostered by corporate incubators to boost the

innovation capability in their parent companies.

The entrepreneurial mindset has a coefficient of effect on risk-taking of 0.879, with a t-statistic of 37.235 outweighs 1.96. This result indicates that entrepreneurial mindset has a significant effect towards risk-taking. A higher entrepreneurial mindset increases the risk-taking of students of public universities. Based on this result, H_2 is accepted. It supports the earlier researches that claimed that entrepreneurial mindset affects risk-taking. Wenhong and Liuying (2010) state that systems thinking owned by entrepreneurs would affect their tendency in risk-taking. Wang and Poutziouris (2010) say that

industrial entrepreneur ownership is associated with risk-taking. Segal, Borgia, and Schoenfeld (2005) mention that an entrepreneur receives personal financial risk existing in the ownership of a business but was also directly benefit from the potential success of that business. Jemal (2020) found that entrepreneurial mindset positively and significantly SMEs' performance, and parameters include seeking opportunity, creativity, innovation, risk-taking, proactiveness, and alertness to take action. All these findings indicate that the entrepreneurial mindset has a significant effect on risk-taking.

Table 13. The Results of Hypothesis Testing

Hypothesis	Effect	Coefficient	t-statistic	Decision
H_1	EM --> I	0.5792	7.6962	Accepted
H_2	EM --> RT	0.8800	37.2351	Accepted
H_3	EM --> CA	0.5846	7.8921	Accepted
H_4	EM --> P	0.7376	14.5843	Accepted
H_5	EM --> A	0.6465	9.8460	Accepted
H_6	I --> EP	0.1945	2.0400	Accepted
H_7	RT --> EP	0.1913	2.6804	Accepted
H_8	CA --> EP	0.1853	2.1528	Accepted
H_9	P --> EP	0.2471	2.3890	Accepted
H_{10}	A --> EP	0.2428	2.1129	Accepted

The entrepreneurial mindset has a coefficient of effect on competitive aggressiveness of 0.585 with a t-statistic of 7.89 greater than 1.96. This result indicates that the entrepreneurial mindset has a significant effect against competitive aggressiveness. A higher entrepreneurial mindset increases the competitive aggressiveness of students of public universities. Based on this result, H_3 is accepted.

This study also supports the previous research suggesting that entrepreneurial mindset affects competitive aggressiveness. Piperopoulos (2012) showed that entrepreneurship was somehow becoming synonymous with competitive aggressiveness. Through the internal factors, the entrepreneurial mindset improves competitive aggressiveness. Someone with high competitive aggressiveness will be able to analyze the activities of opponents, looking for loopholes, provide intense competition, and made it a motivation for him to reach a better performance. Neneh (2012) said that setting the mindset of entrepreneurship was important to sustain the competitiveness of economic organization. Paek and Lee (2017) also suggested that the dimensions of strategic entrepreneurship, which are environmental sensing, opportunity seizing,

strategic flexibility, and entrepreneurial orientation, play a critical role in the competitive advantage of firms.

The entrepreneurial mindset has a coefficient of effect on the autonomy of 0.647 with a t-statistic of 9.846 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect on autonomy. A higher entrepreneurial mindset increases the autonomy of students of public universities. Based on this result, H_4 is accepted. The result supports the research of McDonald et al. (2008), proving that the manager of subsidiaries who was involved in entrepreneurial behavior led to greater autonomy and attachment because of the policy of control in some multinational companies are not able to detect and or control such acts.

The entrepreneurial mindset has a coefficient of effect on the proactiveness of 0.738 with a t-statistic of 14.584 greater than 1.96. This result indicates that entrepreneurial mindset has a significant effect on proactiveness. A higher entrepreneurial mindset increases the proactiveness of students of public universities. Based on this result, H_5 is accepted. This result supports Zhang et al. (2014), finding that entrepreneurial companies tended to be more

engaged in risk than other companies and more proactive in looking for new opportunities.

The innovativeness coefficient affects the entrepreneurial performance of 0.195 with t-statistic of 2.0399 greater than 1.96. This result shows that there is a significant effect of innovativeness on entrepreneurial performance. A higher innovativeness increases the entrepreneurial performance of students of public universities. Based on this result, H_6 is accepted. This result supports previous scholars. Callaghan and Venter (2011) mentioned that innovativeness was one of the dimensions associated with entrepreneurial performance. Chen et al. (2007) stated that there was a positive relationship between innovativeness and performance. It shows that innovativeness has an impact on performance. Khalili et al. (2013), Linton (2019), and Sutanto et al. (2019) said innovativeness had a significant effect on performance. Further, Bor (2018) revealed that entrepreneurial innovativeness has a direct positive relationship with the performance of mid-sized firms. Falahat, Tehseen, and van Horne (2018) also revealed a significant positive impact of entrepreneurial innovativeness on three types of business performances namely perceived non-financial, perceived business growth, and perceived performance relative competitors except on financial performance.

The risk-taking coefficient affects the entrepreneurial performance of 0.191 with a t-statistic of 2.68 greater than 1.96. This result shows that risk-taking providing a significant effect against the entrepreneurial performance. A high-risk-taking increases the entrepreneurial performance of students of public universities. Based on this result, H_7 is accepted. It supports the studies of Chen et al. (2007), Callaghan and Venter (2011), Linton (2019), and Sutanto et al. (2019). It suggests that risk-taking has an impact on performance. Guo and Jiang (2020) also found that a focal firm's new product success benefits most from adopting a concurrently high level of sensing risk-taking and seizing risk-taking when market growth is high but a high level of sensing risk-taking with a low level of seizing risk-taking when market growth is low.

The competitive aggressiveness has a coefficient of effect on the entrepreneurial performance of 0.185 with a t-statistic of 2.152 greater than 1.96. This result suggests that competitive aggressiveness has a significant effect on entrepreneurial performance. A higher competitive aggressiveness increases the entrepreneurial performance in of students of public universities. Based on this result, H_8 is accepted. The result supports the studies of Chen et al. (2007),

Callaghan and Venter (2011), Khalili et al. (2013), Kosa et al. (2018), Sutanto et al. (2019), and Abdullahi et al. (2019), proving that competitive aggressiveness leads to performance.

Autonomy has a coefficient of effect on the entrepreneurial performance of 0.247 with a t-statistic of 2.389 greater than 1.96. This result explains that autonomy has a significant effect on entrepreneurial performance. A higher autonomy increases the entrepreneurial of students of public universities. Based on this result, H_9 is accepted. It supports what was found by Callaghan and Venter (2011), Chen et al. (2007), Yu et al. (2019), and Sutanto et al. (2019) previously argued that autonomy affects performance.

The proactiveness has a coefficient of effect on the entrepreneurial performance of 0.243 with a t-statistic of 2.112 outweighs 1.96. This result explains that proactiveness has a significant effect on entrepreneurial performance. A higher proactiveness increases the entrepreneurial performance of students of public universities. Based on this result, H_{10} is accepted. It convinces the previous findings of Callaghan and Venter (2011), Chen et al. (2007), Linton (2019), Smith (2013), and Sutanto et al. (2019) proving that proactiveness affects performance.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

In general, this study can be concluded that the entrepreneurial mindset of the Indonesian students has a positive and significant effect against their innovativeness, risk-taking, competitive aggressiveness, autonomy, proactiveness. Therefore, changing the students' mindset to entrepreneurship is essential. In addition, it implies that the entrepreneurship education of Indonesian public universities has succeeded in changing their mindset as well as their entrepreneurial orientation and performance. It can be done by promoting entrepreneurship education to develop the entrepreneurial competencies and mindsets of citizens has become a critical mission on the supranational educational policy agenda (Laalo & Heinonen, 2016).

On the contrary, Indonesian students' innovativeness, risk-taking, competitive aggressiveness, autonomy, and proactiveness are have been proved to have a significant effect on entrepreneurial performance. It convinces that the education of entrepreneurship should not only change the students' mindset but also cultivate all variables to reach high performance.

Some variables such as entrepreneurial

mindset, innovativeness, competitive aggressiveness, autonomy, proactiveness, as well as entrepreneurial performance of the Indonesian university students have medium mean. Some actions need to be done much more in the future, such as improving the entrepreneurship curriculum is vital. Inviting and connecting to successful business leaders and entrepreneurs. They can open and inspire students' minds and hearts to create a start-up business. Furthermore, universities should promote entrepreneurship as a career option and provide entrepreneurship experiences to students. The change in the academic culture is a common challenge, which includes introducing entrepreneurial thinking and acting as alternatives to traditional teaching approaches, and opening up the universities to the surrounding society and industrial ecosystem. The use of ICT and, in particular eLearning in delivering entrepreneurial education might be an additional option for expanding the outreach of the course.

This study is only to analyze the entrepreneurship of the students. However, to make sure whether the students really implement their entrepreneurship potential after finishing their education, it needs a further research to get result that is more generalizable.

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