Factors affecting risk perceptions of young entrepreneurs in agricultural startup business

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Abstract. Young entrepreneurs often experience failure in maintaining the startup businesses they build. This also happens to entrepreneurs in the agricultural sector. This causes them to be more aware of risks. This study aims to find out what types of risks actually makes them insecure and turns into a risk averse person which will hinder the development of their startup business. The risk perceptions discussed in this study include production risks, marketing risks, financial risks and human resource risks. The assessed production risks are related to the risks to production inputs, use of production technology, climate and pests and diseases. The risks associated with marketing are risks related to post-harvest processing, sales and market prices. The financial risks mentioned is related to the availability of credit and interest. The risks associated with human resources is a matter of labour availability as well as health. The method used is multiple linear regression to look for factors that influence the perceptions of young entrepreneurs towards risks.

1. Introduction
Young entrepreneurs often experience failure in maintaining the startup businesses they build. five years which is the length of time that is assessed as an indicator of the level of sustainability or failure of a new business. Many new businesses in Indonesia did not reach that 5 years [1]. Failure rate of around 80% which states that the majority of new businesses fail in Indonesia. Many reasons led to the failure of this new business [2]. One of them is young entrepreneurs often do not have sufficient knowledge in the field of business that they are engaged in [3,4]. This causes young entrepreneurs to face difficulties in dealing with the various risks and uncertainties that occur in running a business. This also happens to entrepreneurs in the agricultural sector where in fact agricultural businesses are riskier because they are very dependent on environmental conditions and the nature of their products that are not durable [3-5].

Failure in maintaining the startup businesses causes entrepreneurs in the agricultural sector to be more aware of risks [6,7]. Entrepreneurs should be a people with a high level of persistence and skills. Optimistic, creative and innovative attitudes must continue to exist in every activity undertaken by entrepreneurs [1]. Therefore, they will be able to take risks. Because business is going to be risky by default and there’s no guarantee of succeed. Entrepreneurs in the agricultural sector need to embrace risk as an entrepreneur not as a farmer [2]. There are many reasons why entrepreneurs should take risks in order to pursue something new and maintain the startup businesses they build.
Failure to mitigate the risk usually make entrepreneurs in the agricultural sector become risk averse person. This study aims to find out what types of risks actually makes them insecure and turns into a risk averse person which will hinder the development of their startup business.

2. Materials and methods
The risk perceptions discussed in this study include production risks, marketing risks, financial risks and human resource risks. The assessed production risks are related to the risks to production inputs, use of production technology, climate and pests and diseases. The risks associated with marketing are risks related to post-harvest processing, sales and market prices. The financial risks mentioned is related to the availability of credit and interest. Finally, the risks associated with human resources is a matter of labour availability as well as health. This study uses multiple linear regression to analyse the factors that cause entrepreneurs to become apathetic towards risk and cause them to become risk averse persons.

3. Results and discussion
Based on the results of a study of 69 young entrepreneurs in the agricultural sector, it was found that they were young entrepreneurs with an average age of 25 to 26 years. More than half of the respondents are young and productive, namely between 25 and 29 years. This is certainly very encouraging considering that most of the workforce in agriculture is decreasing and aging. The education of respondents is also dominated by university graduates with the total length of education undertaken is 16 years, if it requires four years in college. Respondents’ area of land is only small considering that they are young entrepreneurs who are just starting their business. Most respondents have a land area of only 0.4 ha. The small area of land is not always detrimental but also provides convenience and flexibility for entrepreneurs to experiment with new technologies and things.

| Table 1. Summary of general data of respondents |
|-----------------------------------------------|
| Age (years)                          | Number | Percentage |
| 21-24                                | 22     | 32         |
| 25-29                                | 36     | 52         |
| 30-35                                | 11     | 16         |
| Education                           | Number | Percentage |
| SMA (12 y)                           | 27     | 39         |
| University (16 y)                    | 40     | 58         |
| University (17 y)                    | 2      | 3          |
| Farm size (ha)                      | Number | Percentage |
| 0.3                                  | 27     | 39         |
| 0.4                                  | 34     | 49         |
| 0.5                                  | 8      | 12         |

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Table 2. Descriptive study of risk perceptions

| Risk perception | Number | Percentage |
|-----------------|--------|------------|
| Low             | 54     | 78         |
| Middle          | 5      | 7          |
| High            | 10     | 14         |
| Total           | 69     | 100        |

Table 1 shows that most respondents did not view the ten risk statements classified as production risk, marketing risk, financial risk and human resource risk as important risks. This is indicated by the selection of answers that tend to state that this risk rarely occurs or if this risk occurs, they can immediately overcome. If it is related to the age of the respondent and the respondent's education, this is not surprising because most of the respondents are still young and are entrepreneurs who are equipped with sufficient knowledge to open a business with a low land area. The characteristics of the respondents also show that the respondents are still ready to learn, discovering something new, new technology that will increase their profits in the future.

The results of multiple linear regressions regarding the factors affecting the perceptions of young entrepreneurs are presented in Table 3 and Table 4. As a prerequisite for continuing or seeing the t test results in multiple regression is a significant F test value. In this study it was found that the F test in Table 3 was found to be significant.

Table 3. F Test results

| Model | Sum of Squares | df | Mean Square | F     | Sig. |
|-------|----------------|----|-------------|-------|------|
| 1     | Regression     | 7.897 | 6 | 1.316 | 7.005 | 0.000b |
|       | Residual       | 11.648 | 62 | 0.188 |
| Total |                | 19.545 | 68 |       |

a. Dependent Variable: Perception
b. Predictors: (Constant), Previous Risk, Land Area, Education, Progress, Prospects, Age

Table 4. T Test results

| Model       | Unstandardized Coefficients | Standardized Coefficients | T     | Sig. |
|-------------|-----------------------------|---------------------------|-------|------|
| 1 (Constant)| B 2.184                     | Std. Error 0.927          | Beta 0.253 | 2.356 | 0.022 |
| Age        | 0.041                       | 0.017                     | 0.072 | 2.385 | 0.020 |
| Education  | -0.057                      | 0.027                     | -0.212 | -2.079 | 0.042 |
| Land Area  | 0.509                       | 0.813                     | 0.063 | 0.626 | 0.533 |
| Progress   | -0.044                      | 0.073                     | -0.062 | -0.597 | 0.553 |
| Progress   | -0.178                      | 0.068                     | -0.267 | -2.626 | 0.011 |
| Previous Risk | 0.268                      | 0.108                     | 0.265 | 2.482 | 0.016 |

a. Dependent Variable: Perception

The results of the follow-up t test as can be seen in Table 4 show that the sociodemographic variables, namely age and education, have a significant effect on risk perception. Land area variable as a variable related to land conditions was found to have no significant effect on perceptions of risk. The opinions of entrepreneurs related to the prospects for on-farm agribusiness businesses were also found to have no effect on risk perceptions. On the other hand, the variables of previous progress and perception of risk were found to have a significant effect on risk perception.
A person's age can influence their perception of risk. This study proves that the higher the age of respondents' entrepreneurs, the higher their risk perception. This can be seen from the positive and significant coefficients. This finding is according to [6,8] are in accordance with the general statement that older people are more cautious and risk averse than younger people. In agriculture, it is also found that a person's age is related to their perception of risk [3,6,7].

The test results on the education variable are the same as hypothesized, namely the level of education has a significant negative effect on risk perception. This is because the higher a person's education, the higher the understanding of his agricultural conditions, the lower the risk perception. Conversely, the lower a person's education, the higher the risk perception [9].

In fact, land area is an important variable in determining risk perceptions, the larger the land area, the greater the risk and vice versa. However, in this study, the entrepreneurs' land area was not too different, ranging from 0.3 to 0.5 hectares only. Based on this not much different land area, it is not surprising that land area has no effect on risk perceptions.

The entrepreneurs engaged in agribusiness who were the respondents in the study were entrepreneurs who had been interested in agriculture since they were young. This is evident from the age of the respondents who are still young and have little experience. Almost all respondents stated that they did not agree if it was said that business in agriculture was not profitable and had bad prospects, including respondents who viewed agricultural risks as high. This results in no visible significant relationship between agricultural prospects and risk perceptions.

The progressive nature of this study is the desire to master the latest technology, willing to experiment and learn new things related to the business field at hand. Trying to learn new things will give birth to entrepreneurs who don't hesitate to try new ideas and have a different point of view from other people who think something new is a risky thing [8]. Something new in this study can reduce the risk perception that is indicated by a negative and significant relationship such as in this study.

Finally, the risk-related variables experienced in the previous period in this study appear to positively and significantly influence respondents' risk perceptions. If the respondent experienced problems with income in the previous period, then this condition tends to also affect the income of the family as a whole. This causes the perception of risk to increase in the next period, the nature of caution will be even higher because you don't want the incident to happen again. The same result was found [5] in Poland where the increase in risk perceptions occurred due to production failures in the previous period.

4. Conclusions

The conclusion of this research is young agricultural entrepreneurs with educational backgrounds who are more inclined to the nature of perception– risk taker, however The positive and significant things that have an impact on risk perception (leading to risk averse) of agricultural entrepreneurs are age and previous failures

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