The contribution of Business Environment Factor in Forming the Entrepreneurial Characteristics of White Pepper Smallholders

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Abstract. Nowadays, entrepreneurship is required by white pepper smallholders to face the challenge of the change in the business environment. The study on the entrepreneurial characteristics also contributes to equipping the appropriate training program related to the psychological characteristics of smallholders. Its study has not massively being done by scholars. The study aims to identify the entrepreneurial characteristics of white pepper smallholders in Bangka Belitung Islands Province that can be formed by the influence of the business environment. The questionnaire was used as the data collection technique. Simple random sampling was employed as the sampling method. 90 white pepper smallholders were the total of respondents. Structural equation modelling analysis using smart partial least squares was applied to analyse the data. The study revealed that there was a significant factor in the business environment in shaping the entrepreneurial characteristics of white pepper smallholders. The input availability became the main factor of the business environment in affecting the entrepreneurial characteristics. It concluded that the factor of the environment contributed to form the entrepreneurial characteristics of white pepper smallholders. It suggested that the policymaker should concern about creating the proper business environment in developing the entrepreneurial characteristics of white pepper smallholders so that the number of smallholder agribusiness entrepreneurship in the province can be exponentially raised.

1. Introduction
Pepper becomes one of the export commodities in Indonesia. As a producer, the pepper has experienced as the highest number of pepper production in the world. However, in 2017 the contribution of pepper production of Indonesia to global consumers is 19 % while Vietnam is 27% [1]. Its contribution has weakened by the following year at 14 % contribution to the world.

The Bangka Belitung Islands Province contributes as the pepper producer province in Indonesia. The produced pepper is known as muntok white pepper. The white pepper is planted in the rural area. The smallholders in rural area are difficult to get access, financial support, management, technology, information and innovation [2]. This includes smallholders in Bangka. As a result, it can lead to lack of entrepreneurial skills.

White pepper smallholders are the entrepreneur smallholders. Astuti et al.[3], explain the entrepreneurial attitude of white pepper smallholders: discipline and perseverance in the white
pepper farming activity [3]. This can be explained by the entrepreneurial characteristics of smallholders: courage to take risks, the ability to respond to opportunities, highly motivated and innovative smallholders. It indicates the entrepreneurial skills can be developed.

The entrepreneurial skills create its point of view to face the problems, take decision, and act and apply the decision by knowing the risk and counting on the knowledge and competencies [4]. The entrepreneurial skills of smallholders in rural area require to be improved. It will contribute to the better productivity of pepper in Indonesia.

The entrepreneurial environment is around the entrepreneur. It can affect the entrepreneur such as customer, supplier, competitor, creditor, economy, social, politic, technology and ecology. However, not all external environments have the same role in affecting the creation and development of the smallholder entrepreneurship [5-8]. Hence, the effect of business environment towards the forming of entrepreneurial characteristics of pepper smallholders is analyzed in the study. The further analysis can be used to understand the contribution of business environment factors in forming the entrepreneurial characteristics of pepper smallholders.

2. Research Methodology

South Bangka, Central Bangka and West Bangka were selected as the location of the study. The location was chosen due to as the pepper production center.

Simple random sampling was applied as the sampling method. 115 pepper smallholders were chosen as the respondents. The respondents were selected as they entrepreneurial characteristics and attitude has been identified. Both primary and secondary data were used. Questionnaire and observation were conducted as the data collection method.

| Variable | Note |
|----------|------|
| **Entrepreneurial Characteristics (EC)** | |
| Innovative / INOV(X1.1) | Frequency and willingness to alter the change in running a business |
| Courage to take risk / RSKO (X1.2) | Courage in facing the risk of production, investment and finance |
| Motivation to be entrepreneur / MOTV (X1.3) | Being entrepreneur with motivation based |
| Responsive towards opportunity / TGTP (X1.4) | The ability to identify the opportunity and opportunity-oriented |
| **Business Environment (BE)** | |
| Input availability (X2.1) | The input availability (fertilizer, seed), Facility to get the input |
| Government policy (X2.2) | Program to develop business (capital, production tools) |
| Political situation (X2.3) | A platform to the political interest |
| Smallholders solidarity (X2.4) | Attitude to help each other |
| Extension and training (X2.5) | The conducted program of government such as extension and training on the farming activity |

Source: [9],[10]

Both qualitative and quantitative analyses were utilized as the data analysis method. Descriptive non parametric analysis was used to analyze the qualitative data. Structural equation modelling with smart partial least squares was used to analyze the quantitative data.
The process of data analysis was broken into two stages, outer model analysis (measurement model) and inner model analysis (structural model).

The evaluation of measurement model was conducted by analyzing the loading factor score ($\lambda$). It was considered as valid when the loading factor score ($\lambda$) was above 0.5. Furthermore, in the stage of structural model evaluation, the significant test was based on the estimated value of the path coefficient. The bootstrapping was employed to test the significance.

3. Results and Discussion

3.1. Entrepreneurial Characteristics

Entrepreneur was a person who is able to express the creative idea to innovate in utilizing the opportunity. The entrepreneurial characteristics was part of internal factor. It was derived from individual person and attached on an entrepreneur.

Muharastri [11] stated that the entrepreneurial characteristics was needed in the process of achieving the successful entrepreneur. The entrepreneurial characteristics was measured by using three indicator variables: willing to innovate, eager to taking risk, and responsiveness to opportunity.

| Latent Variable                  | Manifest Variable      | Loading factor | T-value |
|---------------------------------|------------------------|----------------|---------|
| Entrepreneurial Characteristics  | Innovation            | 0.590          | 4.074   |
|                                 | Risk-taking            | 0.803          | 5.379   |
|                                 | Responsiveness to opportunity | 0.741  | 6.495   |

The result showed that the three indicator variables, innovation, risk-taking, and responsiveness to opportunity were valid in reflecting the entrepreneurial characteristics of respondents. The outer model had loading factor bigger than or equal with 0.5. The validity score of the three indicator variables also illustrated the t-value score bigger than 1.96 (Table 2). It indicated that the entrepreneurial characteristics was mainly reflected by the risk-taking ability. The similar result was also found by Astuti et al. [3] that the white pepper farmer was an entrepreneur that its entrepreneurial characteristics was mainly dominated on risk-taking ability with 0.742 score loading factor.

Risk-taking ability was required by entrepreneur. “There was no business without risk”, stated the white pepper farmer in answering the given question. It explained that farmer was tolerant with failure. It leaded them to keep maintaining and even extending the area of white pepper irrespective with the obstacles on the issue of diseases and price.

Bosma [12] argued that entrepreneur is a person who manage creativity and innovation to create wealth. One of its aspects was risk-taking ability. The study also discovered that the white pepper had become source of income and culture of people in the province. That was the reason why they bore the risk. On the other hand, the ability to minimize and control risk remained to be taken into account.

3.2. Business Environment

The entrepreneur activity was run by an entrepreneur in the uncertainty business environment. Business environment in the study included the external environment. The business environment was measured by using the indicator variables such as input availability, government policy, political situation, training and extension as well as the farmer solidarity.

| Latent Variable       | Manifest Variable      | Loading factor | T-value |
|-----------------------|------------------------|----------------|---------|
| Business Environment  | Input availability     | 0,909          | 6,590   |
|                       | Government policy      | 0,706          | 5,376   |
The result figured that there were two valid indicator variables. It reflected the external environment variables which were input availability and government policy. The outer model of both variables discovered the loading factor bigger than or similar with 0.5. The t-value was bigger than or similar with 1.96. The loading factor in table 3 described that the input availability was dominant to reflect the business environment. The input availability showed the situation whereby farmers had the access on input such as seed and fertilizer.

The ability of farmer to survive and ensure the sustainability of pepper farming activity was supported by the condition of external environment. It provided the access on input from the distribution of free seeds and subsidized fertilizer. However, the other support of external environment such as training and extension was inadequate. Those required to be taken into account in terms of the intensity of the activity, the appropriateness of the lesson materials, equal distribution of services, and the ability of field counselor on selecting the right communication channels so the adoption process could be effective among the farmers.

The accompaniment on farmers through the farmer group development remained to be intensified. The togetherness, collaboration and solidarity were not formed among the members of farmer group. The farmer group had a crucial role in creating the collaboration between business actor and supporting access towards the other institutions. It meant that the pepper farmer group needed to be developed. In addition, the monitoring and evaluation on the activity of all members in farmer group required to get attention.

### 3.3. The Contribution on Business Environment in Forming the Entrepreneurial Characteristics

The measurement on the entrepreneurial characteristics and business environment as the indicator variables were considered as reliable. The cronomch’s alpha score and composite reliability score were higher than or similar with 0.5 (Table 4).

| Variables               | Cronbach’s Alpha | composite reliability | AVE  |
|-------------------------|------------------|-----------------------|------|
| Entrepreneurial          | 0.851            | 0.758                 | 0.514|
| characteristics          |                  |                       |      |
| Business Environment     | 0.713            | 0.794                 | 0.662|

Business environment had two sides. One was as the obstacle while the other was as the booster to be a successful entrepreneur. It meant that it can be not only as opportunity but also as the threat to be entrepreneur in the farming activity. The tempe craftsmen experienced the business environment could be the booster as it had an access on input to run the farming activity [10]. The study discovered that there was an impact of business environment as the external environment towards the entrepreneurial characteristics.

The business environment had a significant positive impact towards entrepreneurial characteristics of farmers with 5% significance level. The value of the path parameter coefficient in table 5 illustrated that business environment was considered as having high score in forming the entrepreneurial characteristics, 0.674.

### Table 5. Path Coefficient and T-value Score of the impact of Business Environment towards Entrepreneurial Characteristics

| Hypothesis                                    | Path coefficient | T-value  |
|-----------------------------------------------|------------------|----------|
| Business Environment > Entrepreneurial         | 0.674            | 12.349   |
| Characteristics                               |                  |          |
The farmer entrepreneur was determined by innovation, risk-taking ability and responsiveness to opportunity. Dumasari [13] classified those as the internal factors which needed to be managed and maintained to develop the farmer entrepreneur. Wulandari [5] stated that external environment had a positive impact towards the innovation, risk-taking ability, and responsiveness to opportunity with the scarcity of resource as the external environment. The better external environment situation could increase the ability to gain those abilities [14],[15].

The positive score on the estimated value of the path coefficient demonstrated that the more support on the agricultural inputs access, the higher ability on utilizing opportunity, thinking innovatively and being risk-taker.

The contribution on external environment to form the entrepreneurial characteristics was able to be improved through the improvement of the support on training, extension, human resources in farmer group as well as the government policy.

4. Conclusion

The study concluded that business environment had significant positive impact towards forming the entrepreneurial behavior of white pepper farmers. Furthermore, the input availability the ease to access the input became the main variables in forming the contribution of business environment to the entrepreneurial characteristics of white pepper farmers. Finally, the value of the path coefficient on the impact of business environment towards the entrepreneurial characteristics with 0.674. It then described the dominant indicator of entrepreneurial characteristics were risk-taking ability and responsiveness to opportunity.

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**Acknowledgement**

The authors would like to thank the Ministry of Education and Culture, Republic of Indonesia for the financial support and facilities for making this study a success through Beginner Lecturer Research Grant Scheme 2020 (Bahasa: Hibah Penelitian Dosen Pemula 2020). The authors also would like to thank the Institute of Research and Community Service (Bahasa: Lembaga Penelitian dan Pengabdian kepada Masyarakat or LPPM) of Universitas Bangka Belitung for pleasant administration.