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DETERMINANTS OF ENTREPRENEURIAL BEHAVIOUR AND BUSINESS PERFORMANCE OF PEPPER FARMER

DETERMINAN PERILAKU KEWIRAUSAHAAN DAN KINERJA BISNIS PETANI LADA

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Abstract

In the last few years, the business performance of muntok white pepper has gradually decreased. The reducing production of pepper, the declining area of pepper plantation, and the decreasing income of pepper farmer are the phenomenon that pepper's business performance is weak. The study aims to analyse the determinants of entrepreneurial behaviour and its business performance as well as to determine the dominant factors between internal and external factors. The survey was used as the research method with purposive sampling as the sampling method. 90 farmers involved as the respondents of the study. Structural equation modelling with smart partial least squares was applied to analyse the data. The study found that the entrepreneurial behaviour of pepper farmer was positively significant in affecting the business performance. The changing of pepper income was the most powerful indicator in reflecting the business performance. The entrepreneurial characteristics and the personal factors as the internal factor as well as environmental factor as the external factor influenced both entrepreneurial behaviour and business performance. The ethnicity as the internal factor played a vital role in affecting the entrepreneurial behaviour and business performance. Through entrepreneurial characteristics as the internal factor, the direct effect of entrepreneurial behaviour towards business performance was bigger than the indirect effect of both internal and external factors towards the business performance. It indicated that the internal and external supports were inadequate to improve the business performance if the pepper farmer had no entrepreneurial behaviour in managing farming activities.

Keywords: Entrepreneur; Muntok white pepper; Performance

Abstrak

Dalam beberapa tahun terakhir, kinerja bisnis lada putih muntok secara bertahap menurun. Menurunnya produksi lada, berkurangnya luas areal perkebunan lada, dan menurunnya pendapatan petani lada merupakan fenomena lemahnya kinerja usaha lada. Penelitian ini bertujuan untuk



DETERMINAN PERILAKU KEWIRAUSAHAAN DAN KINERJA BISNIS PETANI LADA

menganalisis determinan perilaku kewirausahaan dan kinerja usahanya serta untuk mengetahui faktor dominan antara faktor internal dan eksternal. Survei digunakan sebagai metode penelitian dengan simple random sampling sebagai metode pengambilan sampel. 90 petani dilibatkan sebagai responden penelitian. Pemodelan persamaan struktural dengan kuadrat terkecil parsial cerdas diterapkan untuk menganalisis data. Hasil penelitian menemukan bahwa perilaku kewirausahaan petani lada berpengaruh positif signifikan terhadap kinerja usaha. Perubahan pendapatan lada merupakan indikator yang paling kuat dalam mencerminkan kinerja usaha. Karakteristik kewirausahaan dan faktor pribadi sebagai faktor internal serta faktor lingkungan sebagai faktor eksternal mempengaruhi baik perilaku kewirausahaan maupun kinerja usaha. Etnisitas sebagai faktor internal memainkan peran penting dalam mempengaruhi perilaku kewirausahaan dan kinerja bisnis. Melalui karakteristik kewirausahaan sebagai faktor internal, pengaruh langsung perilaku kewirausahaan terhadap kinerja usaha lebih besar daripada pengaruh tidak langsung baik faktor internal maupun eksternal terhadap kinerja usaha. Hal ini menunjukkan bahwa dukungan internal dan eksternal belum memadai untuk meningkatkan kinerja usaha jika petani lada tidak memiliki perilaku kewirausahaan dalam mengelola kegiatan usahatani.

Keywords: Kewirausahaan; Kinerja; Lada Putih Muntok

1. Introduction

In Indonesia, pepper is one of the export commodities. The production of pepper in Indonesia has gradually decreased (figure 1). Vietnam becomes the largest exporter of pepper in the world. In 2016, the rate of growth of pepper in Vietnam is far bigger than Indonesia's production. Bangka Belitung Islands Province is a province that mainly produces pepper. The pepper is cultivated in the form of smallholdings with the involvement of 54,099 households (Indonesia, 2013) The pepper farming activity faces obstacles such as the declined business performance, the low production and productivity, as well as inability to achieve the optimal potential (Panggabean et al., 2016).

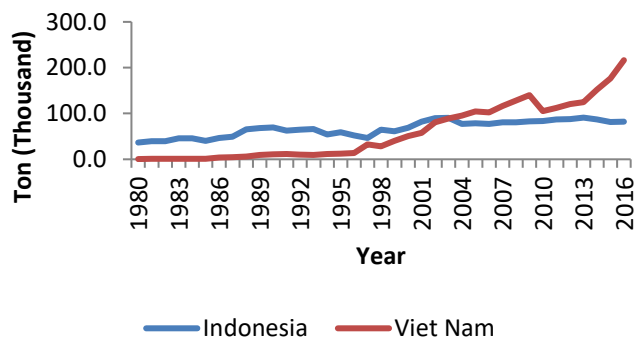


Figure 1. Pepper Production of Indonesia and Vietnam

The issue of declining business performance of muntok white pepper can be seen from the changing indicator of farmer's income. Maharani and sumiyanti (2019) states that the declining pepper price affects the going down farmers income in Bencah Village with declining rate about 70% to 100%. The business atmosphere of pepper has changed due to both more business player in the international market and the change of consumer's preference on the pepper derivative products. Thus, it requires the farmer-entrepreneur to determine the success and the sustainability of farming activity of smallholders in facing the business change.

The study contributes to fulfil the research gap on the less research related with the entrepreneurial behaviour on the farmers. Thus, it is vital to understand factors that affect the entrepreneurial behaviour and its business performance. In addition, it is also crucial to determine the dominant factors between internal and external factor.

Entrepreneurial culture is part of human capital variable that is endeavoured to develop the farmer. A farmer-entrepreneur should understand that his or her farming activity as his or her business activity. A farmer-entrepreneur has ability in production technique as the ability could support the business performance (Islam et al., 2011; Meredith et al., 1996). Thus, it is expected that the performance of pepper farming activity can be increased through the vital role of a farmer-entrepreneur. Previous research has found that the muntok white pepper farmer has a entrepreneurial behavior in managing farming activity (Astuti et al., 2019). The further question is whether the entrepreneurial behavior of farmer affects the business performance.

2. Literatur Review

Smallholders are able to survive and adapt who were those that could response the business change wisely. The business performance was affected by various factors. Human resource as the planner, manager, and decision maker is one of those factors in determining the business performance. The business performance was significantly influenced by the entrepreneurial behaviour. Ariesa (2013), Puspitasari *et al.*, (2018) and Saragih *et al.*, (2019) found on their studies that the entrepreneurial behaviour of smallholders significantly influenced the business performance. They argued that business performance could be improved through the vital role of entrepreneurial behaviour.

The entrepreneurial behaviour was a process formed by four factors: entrepreneurial characteristics, organization, process factor and environment. The forming process of entrepreneurial behaviour involved knowledge (cognitive), mental attitude (affective), and psychometric. Knowledge was formed due to believe of what one viewed and known that determined the mental attitude and entrepreneurial action (Bird, 1996). Entrepreneurial behaviour had a direct impact towards business performance. It was determined by two factors: individual and environmental factors known as internal and external factor (Delmar, 1996).

Delmar, (1996) provides a general model describing factors that affect the entrepreneurial behaviour which is shown in figure 1. The model figures that the entrepreneurial behaviour is determined by two factors: individual factor and environmental factor. Based on model in figure 1, environmental factor affects the entrepreneurial behaviour as well as contributes in determining the individual factor. Furthermore, the model illustrates that the entrepreneurial behaviour affect the business performance. Based on the model, the entrepreneurial behaviour of pepper farmer is observed from farming and business activity to reach the goal and to identify how the activity affects the business performance. It is expected that the business performance is affected by both farming activity that reflects the entrepreneurial characteristics and business environment that supports the entrepreneurial behaviour of farmer.

DETERMINAN PERILAKU KEWIRAUSAHAAN DAN KINERJA BISNIS PETANI LADA

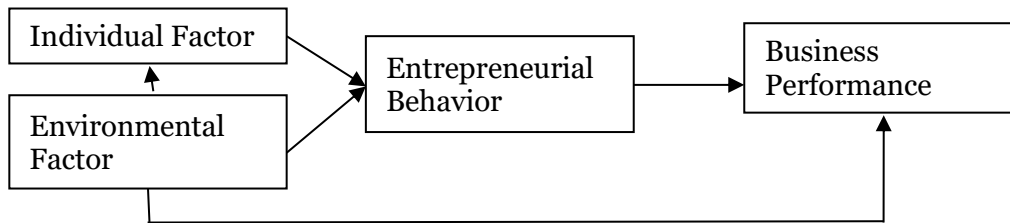


Figure 1. General model on entrepreneurial behavior and business performance

The ability of a business to survive and develop is determined by a vital role of entrepreneurial behavior. The attitude of an entrepreneur to innovate in producing new product is the attitude of entrepreneurship that positively contributed on business performance (Dirlanudin, 2010). The business performance is influenced by the innovative behavior. The innovative behavior could alter the business activity (Fauzi, 2013). The innovative behaviour in altering the business activity is also shown by broiler breeder in Jambi Province through the readiness in using the new method of production that is positively affected the business growth (Astuti *et al.*, 2016). The positive business performance is influenced by entrepreneurial behavior. The quality of human resource is one of the factors that affect the business performance (Munizu, 2010; Tambunan, 2002). In words, business performance is influenced by entrepreneurial behavior and formed by internal and external factors.

3. Sampling Method

Three regencies were chosen as the location of the study: Bangka Selatan, Bangka, and Bangka Tengah. The survey was used as the research method. 90 smallholders were selected as the respondent of the study with purposive sampling as the sampling method using various requirements to fulfil such as the active farmers who remained in farming and selling white pepper, and the farmers who had been chosen in the previous study with their entrepreneurial characteristics. Both primary and secondary data were the types of data. Interview guided with questionnaire was employed as the data collection technique.

3.1 Data analysis

The analysis data method in the study used structural equation modelling (SEM) with smart partial least squares (PLS) as the data analysis tools. The advantage of using PLS was that it did not require in fulfilling tremendous assumption such as the measurement and the statistics appropriate, sample measurement and distribution of residuals (Lowry & Gaskin, 2014). The PLS was used in the study to understand the direct impact of individual internal factor and external factor as the determinant factors in assessing the entrepreneurial behaviour and business performance. Two stages were applied in data analysis which were i) the evaluation of measurement model; and ii) the evaluation of structural model.

The evaluation of measurement model was applied as the first stage prior to the hypothesis testing. It aimed to verify the relationship between the observed variable and the latent variable (Ghozali & Latan, 2012). The result of evaluation of measurement model provided information about indicators and latent variables that could be used in the next stage. It had two stages: i) validity test and ii) reliability test. The validity test was applied by testing the validity of convergent and discriminant.

The convergent validity was related with the principles that measurements (manifest variables) from a construct should be highly correlated. The convergent validity test was applied by using the individual score of loading factor (λ) for each construct indicator that was 0.5 as the minimal score.

The reliability test in the evaluation of measurement model was aimed to identify the accuracy and consistency of the instrument in measuring the construct. In PLS-SEM, in order to measure the reliability of a construct with reflective indicator, it had two ways: i) Cronbach's Alpha (CA) and Composite Reliability (CR). Nevertheless, the use of CA in testing the construct reliability would offer the lower score (under estimate). Hence, it was suggested to use CR. The reliability assessment was conducted by identifying the CR score with 0.7 as the minimal score (Ghozali & Latan, 2012).

The evaluation of structural model was aimed to understand the relationship amongst the latent variables in the research model. It could be evaluated by identifying the variance percentage that could be explained by the R-squared (R^2) for the endogen variable and the score of path coefficient of the structural model. It was also aimed to test the hypothesis in predicting the relationship amongst the latent variables in the research model.

The hypothesis test was applied by using tests of significance based on the estimated score of path parameter coefficient. It was then applied by using the resampling method such as bootstrapping. The advantage of the method was the inaccuracy due to the mistake on using the normal distribution could be minimized. The sampling with replacement was employed in this method. The hypothesis test was then applied by analysing the t-test. If the score of the test was above the critical z-score with .5 as the level of significance, it could be stated that the coefficient path was significant (Hair et al., 2011).

Latent and manifest variable were employed in the study. The variables were derived from the theory and previous study. The latent variable was broken into four exogenous latent: entrepreneurial characteristics (KW), personal characteristics (KP), internal characteristics of business, and environmental characteristics (KL) whereas two endogenous latent was broken into two: entrepreneurial behaviour (PK) and business performance (KU). Four variables of exogenous latent were broken into two: internal and external factors that influenced the entrepreneurial behaviour of farmers. Furthermore, the entrepreneurial behaviour was assumed to influence the business performance. The constructed research model was used to answer two hypotheses, first the impact of internal and external factor towards the entrepreneurial behaviour and business performance both directly and indirectly (H1), second the impact of entrepreneurial behaviour towards the business performance (H2). The model was shown at figure 2:

DETERMINAN PERILAKU KEWIRAUSAHAAN DAN KINERJA BISNIS PETANI LADA

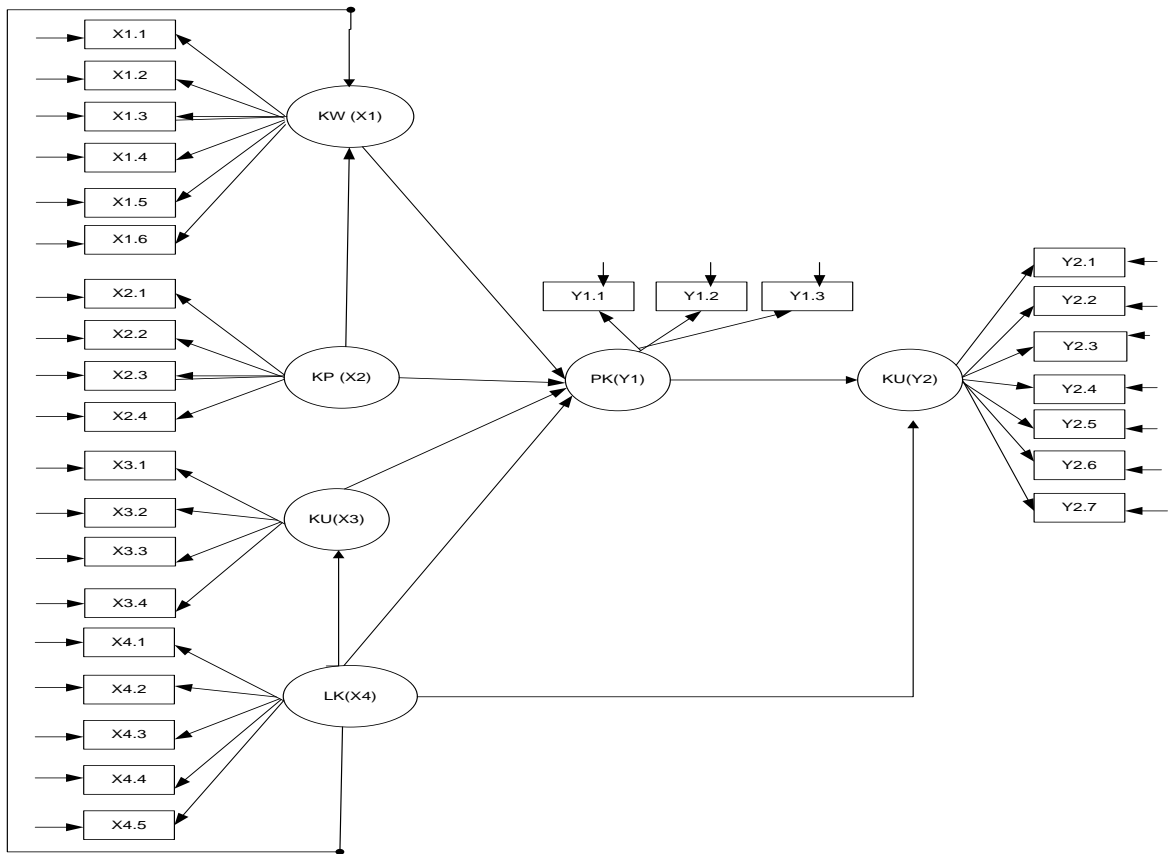


Figure 2. Diagram of Cross Interaction Model on the Impact of Entrepreneurial Behaviour of Farmers towards Business Performance

4. Results and Discussion

In this part, it would show two evaluation analysis: outer model analysis and inner model analysis. The main objective in conducting the evaluation was to identify whether a manifest variable was able to measure the latent variable.

4.1 Evaluation Of Measurement Model or Outer Model Analysis

The measurement model analysis showed that there were four invalid manifest variables due to having loading factor score less than 0.5. It indicated that the manifest variables had less ability in measuring the latent variable.

DETERMINAN PERILAKU KEWIRAUSAHAAN DAN KINERJA BISNIS PETANI LADA

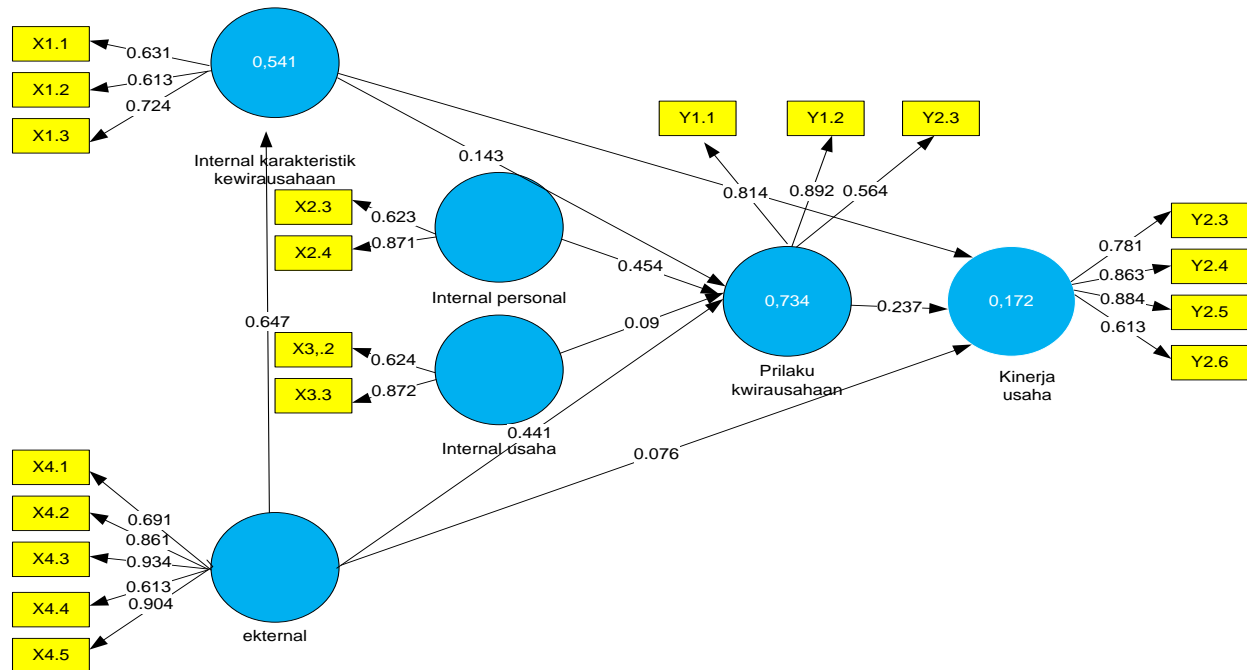


Figure 3. The last model of PLS

The second stage was retesting the validity excluding invalid manifest variables. The improved model showed the valid result based on the criteria on the evaluation of measurement model. The loading factor score at this stage was shown at table 1. Based on the criteria, the model was considered as reliable. The average variance extracted and composite reliability score was 0.5 and 0.7 respectively. The final model was considered as fit and useable in hypothesis test on the further evaluation of structural model.

Table 1. The contribution of Manifest Variable by Loading Factor Score on the Second Stage of Outer Model Evaluation

Latent Variable	Manifest Variable	Loading Factor	Validity	Average Variance Extracted	Composite Reliability	Reliability
Entrepreneurial characteristics (X1)	Innovation	0.63	Valid	0.51	0.85	Reliable
	Risk	0.61	Valid			
	Motivation	0.72	Valid			
	Experience	0.68	Valid			
Personal characteristics (X2)	Ethnics	0.77	Valid	0.53	0.89	Reliable
	Marketing	0.62	Valid			
Internal characteristics of business (X3)	technical production	0.87	Valid	0.59	0.75	Reliable
Business environment characteristics (X4)	Input availability	0.69	Valid	0.66	0.71	Reliable
	Government policy	0.86	Valid			
	Political situation	0.93	Valid			
	Farmer cohesiveness	0.61	Valid			

DETERMINAN PERILAKU KEWIRAUSAHAAN DAN KINERJA BISNIS PETANI LADA

	Training and extension	0.90	Valid			
Entrepreneurial behaviour (Y1)	Affective	0.81	Valid	0.59	0.75	Reliable
	Cognitive	0.89	Valid			
	Psychomotor	0.56	Valid			
	Production or land area change	0.78	Valid			
Business performance (Y2)	Productivity change	0.86	Valid	0.63	0.87	Reliable
	Income change	0.88	Valid			
	Selling volume change	0.61	Valid			

4.2 Evaluation of Inner Model or Structural Model

The objective of the evaluation was to examine the relationship amongst the latent variables and to identify the estimated value of the path parameter coefficient and its significant level (Ghozali & Latan, 2012). The significant test of the estimated path parameter coefficient was employed using resampling method.

The main objective in evaluating the structural model was to examine the relationship between entrepreneurial behaviour of farmer (Y1) and business performance (Y2). The evaluation was also applied to determine the dominant factor on the entrepreneurial behaviour and to examine the relationship between entrepreneurial characteristics (X1), personal characteristics (X2), internal characteristics of business (X3), business environment characteristics (X4) and entrepreneurial behaviour of farmers (Y1). The evaluation was also applied to identify the relationship between business environment characteristics (X4) and business performance (Y2) as well as the relationship between business environment characteristics (X4) and entrepreneurial characteristics (X1). The significant test scores of all developed hypotheses were illustrated at table 2.

Table 2. The Path Coefficient and Significant Score by Original Sample and T-Value Score

Hypothesis	Original Sample	T- value	Note
Entrepreneurial characteristics > Entrepreneurial behaviour	0.14	1.96*	Significant
Personal characteristics > Entrepreneurial behaviour	0.45	2.06*	Significant
internal characteristics of business > Entrepreneurial behaviour	0.09	1.01	Insignificant
Business environment characteristics > Entrepreneurial behaviour	0.44	2.79*	Significant
Entrepreneurial behaviour > Business performance	0.237	2.23*	Significant
Business environment characteristics > Business performance	0.076	0.4	Insignificant
Business environment characteristics > Entrepreneurial characteristics	0.647	12.3*	Significant

* t significance (0,05):1,96)



4.3 The Determinant Factor in Influencing the Entrepreneurial Behaviour of Farmers and Its Business Performance

The entrepreneurial behaviour of farmers and its business performance was significantly impacted by both internal and external factors. The processing and analysing data were shown at table 3. Windirah *et al.*, (2017) explained that the role of internal factor was able to improve the entrepreneurial behaviour. They found that by using smart partial least squares to analyse its data, it was only internal factor that affected significantly the entrepreneurial behaviour of women empowerment in Bogor Regency. Furthermore, the external factor also affected the entrepreneurial behaviour in which the external environment contributed in forming the entrepreneurial characteristics of pepper farmers (Astuti, Bahtera, & Atmaja, 2020). The result was also supported by Fereidouni *et al.*, (2010) who discovered the contribution of external factors in shaping the entrepreneurial characteristics in the early stage of running business: the forming variation in starting motivation and managing the business.

Table 3. The Original Sample Score on Factors in Influencing the Entrepreneurial Behaviour of Farmers and Its Business Performance

Factors in influencing the entrepreneurial behaviour and business performance		Direct effect	Indirect effect	Total Effect
		Entrepreneurial behaviour	Business performance	
Internal factor	Farmer entrepreneurship factor	0.14	0.07	0.21
	Personal factor	0.45	0.14	0.59
External factor	Environmental factor	0.44	0.1	0.53
	R-Square	0.73	0.17	

*significance level of α 0.05 (1,96)

4.3.1 Internal Factor in Influencing the Entrepreneurial Behaviour and Business Performance

The internal factors that significantly impacted the entrepreneurial behaviour and business performance were entrepreneurial and personal factor on farmer. Table 2 illustrated that the internal characteristics of business did not significantly influence the entrepreneurial behaviour and business performance.

Table 3 figured that both entrepreneurial and personal factor had a direct impact towards entrepreneurial behaviour and indirect impact towards business performance. The indirect impact was relative smaller than the direct impact one. The contribution of internal factor was significantly influenced by the personal characteristics. It showed that the coefficient scores in influencing the personal factor towards entrepreneurial behaviour were 0.45 and 0.14 on business performance. The total score of the effect of personal factor was 0.59.

The total score of the effect of internal factor towards entrepreneurial behaviour and business performance was 0.8 while the external factor was 0.53. It meant the entrepreneurial behaviour of farmer and its business performance were dominantly affected by internal factor towards the business performance.

The study supported by Ahmad *et al.*, (2015) who found the achievement motivation as the entrepreneurial factor had a positive impact towards the entrepreneurial behaviour. Sumantri (2013) argued that the personal characteristics influenced the entrepreneurship. The personal characteristics such as education, training, age, ethnics, experience, and family background influenced the motivation of farmers in running business. The experience in running business would lead to more intention in

developing the business than those who were inexperienced in business (Dirlanudin, 2010; Islam et al., 2011; Kellermanns et al., 2008; Riyanti, 2003; Sapar et al., 2006). Moreover, Astuti *et al.*, (2019) stated that the entrepreneurial behaviour of pepper farmer in farming activity was formed by attitude, knowledge and skills. Those were influenced by courage to take risks, ability to innovate and responsiveness to opportunities. Furthermore, Nurhayati *et al.*, (2011) argued that entrepreneurial and psychological characteristics positively influenced towards the entrepreneurial skills and business performance.

The entrepreneurial factor was measured by using some indicators such as innovation, risk-taking ability, and motivation, whereas the personal factor was measured by using some indicators: business experience and ethnicity. Table 3 figured that both of internal factors had a positive impact on both entrepreneurial behaviour and business performance. It indicated that as the indicator of internal factor increased, the entrepreneurial behaviour and business performance would also increase.

The previous research stated that the improvement of internal factor could be conducted through various variables such as education, experience, motivation, age, training, family background and ethnicity to increase the entrepreneurial behaviour (Sumantri, 2013; Windirah et al., 2017). However, the local government should concern on motivation, business experience, and ethnicity as the internal factor variables of the muntok white pepper farmer to improve their entrepreneurial behaviour and business performance.

The uniqueness of the entrepreneurial behaviour of the farmer in the study was mainly dominated by the influence of ethnicity. Indeed, the farming experience influenced the farmer behaviour but the culture played more significant role in affecting their behaviour. The pepper farming activity was taught and shared from generation to generation amongst the people in Bangka Belitung Island Province.

Both the native and immigrant had different motivation in the pepper farming activity. The study discovered that the non-Malay had more motivation in achievement and a profit-oriented farmer in pepper farming activity. On the other hand, some Malays did not have the mentioned motivation. Their farming activity tent only to keep the cultural heritage.

4.3.2 External Factor in Influencing the Entrepreneurial Behaviour and Business Performance

The environment as the external factor had a significant impact towards the entrepreneurial behaviour and business performance (De Bernardi & Pedrini, 2020). Table 3 showed that the external factor had a direct impact towards entrepreneurial behaviour and had an indirect impact towards the business performance. The coefficient scores of the external factors towards entrepreneurial behaviour and business performance were 0.44 and 0.1 respectively.

The environmental factor was measured by some indicators such as input availability, government policy, political situation, farmers' solidarity, and extension and training. The study was supported by Rahmi and Nursiah *et al.*, who found that the environmental factor influenced the entrepreneurial behaviour of farmers who implemented the farming integrated system (2015), tempeh craftsman (Nursiah et al., 2017) as well as people in the context of industrial firms (Zhang, O'Kane, & Chen, 2020) and in corporate ventures (Futterer, Schmidt, & Heidenreich, 2018).

The environmental factor also had a significant indirect impact towards entrepreneurial behaviour through internal factor. Table 2 showed that environmental factor had an indirect impact towards the entrepreneurial behaviour with 0.65 as the coefficient score. It meant that the endeavour in improving the business performance and entrepreneurial behaviour required the improvement on the indicator both internal and external factor simultaneously. Even though the internal factor was more dominant than the external factor in influencing the entrepreneurial behaviour and business performance, the external factor also contributed in forming entrepreneurial characteristics. Thus, the

endeavour in improving the indicator of internal factor should also consider the business environment (Astuti et al., 2020b)

4.4 The Effect of Entrepreneurial Behaviour of Pepper Farmer towards Business Performance

The entrepreneurial behaviour of farmer was all forms of entrepreneurial behaviour that was run by farmers in the farming activity. It was measured by the assessment of farmers' perception. The entrepreneurial behaviour of pepper farmer was strongly reflected by indicator variable of cognitive and affective. The evaluation of measurement model showed that both indicator variables had higher loading factor score than indicator variable of psychometric. The cognitive and affective had loading factor score at 0.89 and 0.81 with t-value at 3.86 and 3.62 respectively (table 4). The perception level on the cognitive and affective was relatively high with more than 50% of respondents stated agree and strongly agree. They were disciplined, firm, learner, and risk-taking. However, they were still considered as unskilled farmer.

Table 4. Loading Factor Score and T-value of Entrepreneurial Behaviour and Business Performance

Latent Variable	Manifest Variable	Loading factor	T-value
Entrepreneurial behaviour (Y1)	Affective	0.81	3.62
	Cognitive	0.89	3.86
	Psychometric	0.56	3.14
Business performance (Y2)	Changing of production/planting area	0.78	7.12
	Changing of productivity score	0.86	5.73
	Changing of income	0.89	7.20
	Changing of selling	0.61	3.29

The business performance was the expected result in running a business to achieve the goals. The business performance was measured by four indicator variables: changing of production/planting area, changing of productivity score, changing of income, and changing of selling. The evaluation of model measurement showed that the business performance was mainly reflected by the indicator variables of the change of productivity score and income. Both productivity and income's loading factor score were 0.86 and 0.89 with t-values 5.73 and 7.20 respectively (table 4).

Table 2 figured that factors that had direct impact towards the business performance was entrepreneurial behaviour. Its influence coefficient score was 0.24. The score was bigger than the indirect impact on both internal and external factor towards business performance. The direct impact of entrepreneurial behaviour towards the business performance had a positive direction. It meant that the increase of entrepreneurial behaviour would also increase the business performance. It also indicated that the value that was owned by farmers such as experience, firm, motivation, risk-taking ability, willing to innovate, extension and training, input availability as well as government policy would not reliable to improve the business performance if farmers did not consider the entrepreneurial behaviour in managing the pepper farming activity.

The relationship between entrepreneurial behaviour and business performance in general model adopted from Delmar (1996) was directly obtained without intermediary. The entrepreneurial behaviour had a direct and positive impact towards the business performance (Puspitasari et al., 2018; Saragih et al., 2019). The business ties were able to influence the entrepreneurial orientation and innovation performance (Urban, 2019; Zhang et al., 2020). The business performance depended upon the behaviour and personal condition of the person that influenced towards business decision-making.

The behaviour was an endeavour in acquiring the goals in business such as detecting and exploiting the opportunity, decision-making under uncertainty, hard-working, and business management (Ariesa, 2013).

5. Conclusion and Suggestion

5.1 Conclusion

The entrepreneurial behaviour of pepper farmer was significantly and positively influenced by internal factor such as entrepreneurial behaviour and personal characteristics. The entrepreneurial behaviour was dominantly influenced by personal characteristics of farmer. Ethnicity becomes the dominant indicator in reflecting the personal characteristics. The entrepreneurial behaviour was also influenced by business environment characteristics. Extension and training become the main indicator in reflecting the business environment. The external factor had a significant indirect impact towards the entrepreneurial behaviour through entrepreneurial characteristics. However, the external factor had no significant direct impact towards business performance. The entrepreneurial behaviour of pepper farmer had a significant positive impact towards the business performance. The change of income was the dominant indicator in reflecting the business performance

5.2 Suggestion

The study indicated that to improve the business performance of the farmer, the local government should consider entrepreneurial skills as the competence that farmer should acquire through training, workshop, and assistantship. At the same time, local government should also consider the external factor such as capital and price stability to support the farmer in the farming activity. The total respondents in the study were 90 farmers who lived in Bangka Island. The future study should get more farmers and involve farmers from Belitung Island as well. Furthermore, due to low price, some farmers had altered their farming commodity from pepper to the other agricultural commodities and due to pandemic Covid-19 some farmers tend to be reluctant as the respondent. It led to inability and difficult to collect the data. The observed variables of the study especially on internal factors were only innovation, ability to take risk and motivation. Further research should add various important variables such as independence, responsiveness, commitment, drive to achieve, opportunity orientation, initiative and responsibility, persistent, problem solving, seeking feedback, internal locus of control, tolerance for ambiguity, integrity and reliability, tolerance for failure, high energy level, vision, self-confidence and optimism, team building, and managerial Skills for entrepreneurs.

Reference

- Ahmad, S., Dhiana, P., & Warso, M. M. (2015). Pengaruh Antara Pengetahuan Kewirausahaan, Motif Berprestasi, Kemandirian Pribadi Terhadap Perilaku Kewirausahaan Pedagang Di Pasar Tegowanu. *Journal of Management*, 1(1).
- Ariesa, F. N. (2013). *Pengaruh Perilaku Kewirausahaan terhadap Kinerja Usahatani Tembakau Virginia di Jawa Timur*. IPB University.
- Astuti, R. P., Bahtera, N. I., & Atmaja, E. J. J. (2019). Entrepreneurial Characteristics and Behaviors of Muntok White Pepper Farmers. *Society*, 7(2), 101–115.
<https://doi.org/10.33019/society.v7i2.116>
- Astuti, R. P., Bahtera, N. I., & Atmaja, E. J. J. (2020a). The contribution of Business Environment Factor in Forming the Entrepreneurial Characteristics of White Pepper Smallholders. *IOP Conference Series: Earth and Environmental Science*, 599(1). <https://doi.org/10.1088/1755-1315/599/1/012077>
- Astuti, R. P., Pambudy, R., & Burhanuddin. (n.d.). Dampak tata ruang wilayah terhadap aktivitas kewirausahaan dan pertumbuhan usaha peternakan ayam. Retrieved July 7, 2022, from <https://ejournal2.undip.ac.id/index.php/tataloka/article/view/680>

DETERMINAN PERILAKU KEWIRAUSAHAAN DAN KINERJA BISNIS PETANI LADA

- Bird, B. (1996). *Entrepreneurial Behaviour*. McGraw-Hill Irwin.
- De Bernardi, C., & Pedrini, M. (2020). Entrepreneurial behaviour: Getting eco-drunk by feeling environmental passion. *Journal of Cleaner Production*, 256, 120367. <https://doi.org/10.1016/j.jclepro.2020.120367>
- Delmar, Frédéric. (1996). *Entrepreneurial Behavior and Business Performance*. Ekonomiska Forsknings Institute. https://www.researchgate.net/publication/246075162_Entrepreneurial_Behavior_and_Business_Performance
- Dirlanudin. (2010). *Perilaku Wirausaha dan Keberdayaan Pengusaha Kecil Industri Agro: Kasus di Kabupaten Serang Provinsi Banten*. [Institut Pertanian Bogor]. <https://repository.ipb.ac.id/bitstream/handle/123456789/55034/2010dir.pdf?sequence=3&isAllowed=y>
- Fauzi, D. (2013). *Strategi Pengembangan Agribisnis Kentang Merah di Kabupaten Solok*. <https://doi.org/10.18196/agr.2129>
- Fereidouni, H. G., Masron, T. A., & Nikbin, D. (2010). Consequences of External Environment on. *Academy of Management Journal*, 15(2), 175–196.
- Futterer, F., Schmidt, J., & Heidenreich, S. (2018). Effectuation or causation as the key to corporate venture success? Investigating effects of entrepreneurial behaviors on business model innovation and venture performance. *Long Range Planning*, 51(1), 64–81. <https://doi.org/10.1016/j.lrp.2017.06.008>
- Ghozali, I., & Latan, H. (2012). *Partial Least Squares: Konsep, Teknik dan Aplikasi SmartPLS 2.0 M3*. Universitas Diponegoro. <https://opac.perpusnas.go.id/DetailOpac.aspx?id=865950>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139–152. <https://doi.org/10.2753/MTP1069-6679190202>
- Indonesia, S. (2013). *Data Sensus pertanian Provinsi Bangka Belitung*.
- Islam, Md. A., Khan, M. A., Obaidullah, A. Z. M., & Alam, M. S. (2011). Effect of Entrepreneur and Firm Characteristics on the Business Success of Small. *International Journal of Business and Management*, 6(3), 289–299. <https://doi.org/10.5539/ijbm.v6n3p289>
- Kellermanns, F. W., Eddleston, K. A., Barnett, T., & Pearson, A. (2008). An exploratory study of family member characteristics and involvement: Effects on entrepreneurial behavior in the family firm. *Family Business Review*, 21(1), 1–14. <https://doi.org/10.1111/j.1741-6248.2007.00107.x>
- Lowry, P. B., & Gaskin, J. (2014). Partial least squares (PLS) structural equation modeling (SEM) for building and testing behavioral causal theory: When to choose it and how to use it. *IEEE Transactions on Professional Communication*, 57(2), 123–146. <https://doi.org/10.1109/TPC.2014.2312452>
- Maharani, A., & Sumiyanti. (2019). Pengaruh turunya harga lada terhadap perekonomian masyarakat desa bencah bangka belitung. *Jurnal Manajemen Dan Bisnis MEDIA EKONOMI*, XIX(2), 271–274.
- Meredith GG, RE Nelson, dan PA Nick. 1996. *Kewirausahaan Teori dan Praktek*. Dialihbahasakan oleh Andre Asparsayogi. Jakarta: Pustaka Binaman Pressindo.
- Munizu, M. (2010). Pengaruh Faktor-Faktor Eksternal dan Internal Terhadap Kinerja Usaha Mikro dan Kecil (UMK) di Sulawesi Selatan. *Jurnal Manajemen Dan Wirausaha*, 12(1), 33–41. <https://doi.org/10.9744/jmk.12.1.pp.33-41>
- Nurhayati, P. (2011). Prosiding Seminar Penelitian Unggulan Departemen Agribisnis. *Prosiding Seminar Penelitian Unggulan Departemen Agribisnis*, 271–285.
- Nursiah, T., Kusnadi, N., & Burhanuddin, B. (2017). Perilaku Kewirausahaan pada Usaha Mikro Kecil (UMK) Tempe di Bogor Jawa Barat. *Jurnal Agribisnis Indonesia*, 3(2), 145. <https://doi.org/10.29244/jai.2015.3.2.145-158>
- Panggabean, M. T., Amanah, S., & Tjitropranoto, P. (2016). Persepsi Petani Lada terhadap Diseminasi



DETERMINAN PERILAKU KEWIRAUSAHAAN DAN KINERJA BISNIS PETANI LADA

- Teknologi Usahatani Lada di Bangka Belitung. *Jurnal Penyuluhan*, 12(1), 61–73.
<https://doi.org/10.25015/penyuluhan.v12i1.11321>
- Puspitasari, Nurmawati, R., Fariyanti, A., & Marendra Kiloos, A. (2018). Pengaruh faktor internal dan eksternal terhadap perilaku kewirausahaan petani anggrek Effect of Internal and External Factors Toward the Entrepreneurial Behavior of Orchid Growers. *Journal Hort*, 28(2), 299–310.
- Rahmi, K. (2015). *Pengaruh Perilaku Kewirausahaan Petani Terhadap Kinerja Usaha Pada Sistem Integrasi Tanaman Dan Ternak (Kasus: Di Kabupaten Lima Puluh Kota Provinsi Sumatera Barat)*. IPB University.
- Riyanti, B. P. D. (2003). *Kewirausahaan Dari Sudut Pandang Psikologi Kepribadian*. PT.Grasindo.
- Sapar, Lumintang, R. W. E., & Susanto, D. (2006). Ural penyuluhan. *JURNAL P ENYULUHAN*, 2(2), 61–68.
- Saragih, E. C., Prihtanti, T. M., & Yuliawati. (2019). *The Effect of Farmers ' Entrepreneurial Behavior on Business Performance of PUAP Program in Pandawai Sub-district , East Sumba Regency*. 34(1), 43–54.
- Sumantri, B. (2013). *Pengaruh Jiwa Kewirausahaan terhadap Kinerja Usaha Wirausaha Wanita pada Industri Pangan Rumahan di Bogor* [IPB University]. <https://adoc.pub/queue/pengaruh-jiwa-kewirausahaan-terhadap-kinerja-usaha-wirausaha.html>
- Tambunan, T. (2002). *Usaha Kecil dan Menengah di Indonesia: Beberapa Isu Penting*. Salemba Empat.
- Urban, B. (2019). Entrepreneurial alertness and self-efficacy: A focus on social values and innovation performance. *SA Journal of Human Resource Management*, 17, 1–9.
<https://doi.org/10.4102/sajhrm.v17i0.1132>
- Windirah, N., Suwarsinah, H. K., & Adhi, A. K. (2017). The Influence of Internal and External Factors on Entrepreneurship Behaviour on Entrepreneur Woman (Case Study of Small and Medium Craftswoman Bogor City). *International Journal of Science and Research (IJSR)*, 6(1), 1693–1695.
<https://doi.org/10.21275/art20164471>
- Zhang, J. A., O'Kane, C., & Chen, G. (2020). Business ties, political ties, and innovation performance in Chinese industrial firms: The role of entrepreneurial orientation and environmental dynamism. *Journal of Business Research*, 121(August), 254–267.
<https://doi.org/10.1016/j.jbusres.2020.08.055>

