

A study on the entrepreneurial orientation of the 65-villagers in a part of slope of mountain Arjuno East Java Indonesia

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Abstract. Our interest is to explore such a characteristic of the villagers who live in a part of the slope of Mountain Arjuno, located in the East Java Province of Indonesia, before their existing entrepreneurial orientation. Using questionnaires - developed based on (Miller, 1983) definition about entrepreneurial orientation-, spread to the villagers there and their analysis, it was found that their entrepreneurial orientation E.O. following equation as $-0.003 + 0.334 \text{ innovativeness I} + 0.334 \text{ proactiveness P} + 0.333 \text{ risk-taking R}$.

Keywords: Innovativeness, proactiveness, risk-taking, entrepreneurial orientation, modeling, sustainable development.

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Оригинальная статья

Исследование предпринимательской ориентации 65 жителей сельских поселений, расположенных на склоне горы Арджуну (Восточная Ява, Индонезия)

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Аннотация. Наше исследование определяет/измеряет предпринимательскую ориентацию жителей деревни, расположенной на склоне горы Арджуну в Пасуруане, Восточная Ява, Индонезия.

Среди респондентов (шестьдесят пять местных жителей) были распространены анкеты. После сбора данных анкет, авторы проанализировали их с помощью программных статистических пакетов для социальных наук (SPSS) версии 21.0.

Были определены три показателя для оценки предпринимательской ориентации жителей деревни: инновационность (I), инициативность (P) и готовность к риску (R), влияющие на предпринимательскую ориентацию (EO), и описаны модельным уравнением регрессии: $EO = -0,003 + 0,334I + 0,334P + 0,333R$.

Ключевые слова: инновационность, инициативность, готовность к риску, предпринимательская ориентация, моделирование, устойчивое развитие.

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The concept of entrepreneurial orientation

the term of Entrepreneurial Intention (E.I.) was different from the term of Entrepreneurial Orientation (E.O.) (Ismail *et al.*, 2015; Ibrahim and Mas'ud, 2016). E.O. was considered as one of the few examples of stabilized concepts in management science. E.O. is a crucial idea when executives are crafting strategies in the hopes of doing something new and exploiting opportunities that other organizations cannot use (Kennedy, 2020). E.O. refers to organizations' processes, practices, and decision-making styles that act entrepreneurially (Lumpkin and Dess, 1996). Any organization's level of E.O. can be understood by examining how it stacks up relative to three dimensions: (1) innovativeness, (2) proactiveness, (3) and risk-taking. These dimensions are also relevant to individuals. Entrepreneurial intention can be defined as a state of mind that potentially fosters an individual's entrepreneurial action/behaviors. Entrepreneurial intention was commonly measured on a Likert using dimensions such as intention to start up a business; intention to take over/grow family business; intention to develop further a business idea being currently nursed, or intention to become an entrepreneur (Linan and Chen, 2011; Sari, 2013; Purba and Hermanto, 2020).

Currently, it was found that there are more than six enterprises in the location where some data was collected for this research, i.e., café 'Cempaka Kedai Hutan media humans (figure 1), 'POJOK DAYU' gift and snack's store (figure 2), banana farming (figure 3), goat farm (figure 4), chicken farm, a shop of various crops and flowers, live music show, camping, and its supported facilities with ATV (All-Terrain Vehicle), outbound, archery, and unique paintball.



Fig. 1. One of the banners shows the price list of the Café 'Cempaka Kedai Hutan'



Fig. 2. POJOK DAYU gift and snack's store (<https://cempakafoundation.org>)



Fig. 3. Banana Farming



Fig. 4. Goat Farm

Entrepreneurial orientation had become an essential and extensively researched topic in the literature such as (Lumpkin and Dess, 1996; Lee and Peterson, 2000; T. Lumpkin and G. Dess, 2001; Hughes and Morgan, 2007; Anderson, Covin and Slevin, 2009; Lee *et al.*, 2009; Yan, 2010; Ismail *et al.*, 2015; Ibrahim and Mas'ud, 2016; Haque *et al.*, 2017; Lomberg *et al.*, 2017; Olutuase *et al.*, 2018; Cho and Lee, 2018; Bakytgul, Ahmed and Kim, 2019; Wales *et al.*, 2021). (Olutuase *et al.*, 2018) proposed a model to measure effects of E.I. to E.O. overtime flag, namely Variability of Entrepreneurial Intention, Orientation within Entrepreneurial Ecosystem. The cognitive literature argues that entrepreneurship education stimulates entrepreneurial orientation and intention in individuals, making them more malleable to behave or act entrepreneurially at various levels over time.

Based on (Cho and Lee, 2018) stated that besides firms with E.O. trying to identify and exploit new opportunities persistently, create new values, and become leaders in the market, E.O. also was an essential factor that led to the successful development of new products, high financial and non-financial business performance and high social performance. They used three dimensions of the E.O., i.e., Innovativeness, proactiveness, and risk-taking as many researchers also use, for example (Kresna, 2009; Imma Andiningtyas R.S. and Ratna L. Nugroho, 2014; Ismail *et al.*, 2015; SINE, 2015; Lomberg *et al.*, 2017) and for sure that their E.O. dimensions are conceived initially based on the work of (Miller, 1983). They used the measurements to describe the character and examine entrepreneurship.

Innovativeness, as (Lumpkin and Dess, 1996) define the term, '... reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and cre-

ative processes that may result in new products, services, or technological processes.' According to (Miller 1983), proactiveness relates to the competitive nature of the firm, or more specifically, to the propensity of the firm to preempt its competitors by introducing new products, entering new markets, or aggressively changing competitive tactics. Risk-taking refers to a tendency to engage in high-risk activities with chances of high returns and bold actions in uncertain environments (Lomberg *et al.*, 2017). Risk-taking shows the will to submit relatively a lot of assets despite the increased potential for disappointment.

This research used the three dimensions to measure the E.O. of the villagers in a part of the slope of Mountain Arjuno in Pasuruan East Java, Indonesia. Our study ultimately defines/measures the entrepreneurial orientation of villagers in a part of the Mt. Arjuno after observing by spread questionnaires to 100 respondents in the places. The topic of this research was following the roadmap shown in Figure 5 (Directorate General of Research Enhancement and Development Ministry of Research Technology and Higher Education, 2019; Institute of Research and Community Services Darma Cendika Catholic University, 2020; Purba and Hermanto, 2020) as well as (Directorate General of Research Enhancement and Development Ministry of Research Technology and Higher Education, 2020) which is in line with spring and forest and preservation in the area (Nugroho *et al.*, 2019; Hermanto and Nugroho, 2021). Since until this paper was written, there is no one researcher yet that used E.O. definition for the villager, moreover villagers on the slope of Mountain Arjuno Indonesia.

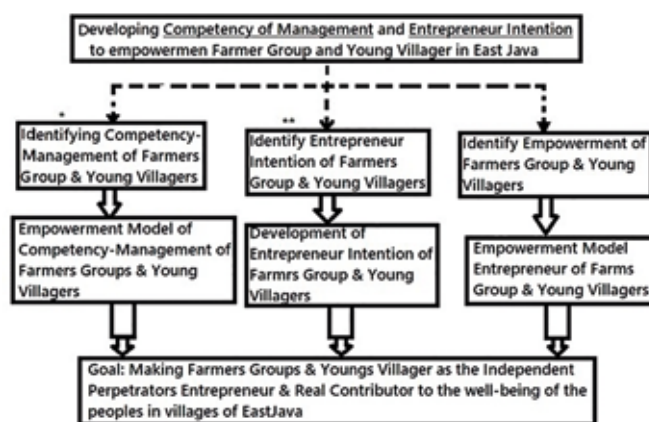


Fig. 5. Roadmap / Concept of our research

Methods

Based on the (Miller 1983) 's definition, a group of questions about entrepreneurial orientation was developed although (Lumpkin and Dess, 1996; Lee and Peterson, 2000; T. Lumpkin and G. Dess, 2001; Perera, Nag, and Venkateswarlu, 2019) use five dimensions of the E.O., i.e., autonomy, innovativeness, risk-taking, proactiveness, dan competitive aggressiveness. Here in

this research work, we put in the questionnaires with 14 indicators (4 indicators to measure innovativeness dimension, six indicators to measure proactiveness, and other four indicators for risk-taking measurement) used to detect the E.O. of the 65-villagers (48 respondents were young villagers (16 to 30 years old based-on (Badan Pusat Statistik Provinsi Jawa Timur, 2016)), 17 respondents were more than 30 years old). Our future research's goal is the villagers become an entrepreneur; their family economic-development becomes sustainable as SDGs (SustainAbility, 2020; Yulaswati, 2020) and or better qualities in life as the strategic planner and processed by (The Agricultural Services EAST JAVA, 2014, 2016; THE GOVERNMENT of EAST JAVA PROVINCE, 2015; The District Planning Agencies, 2017). Model E.O. of the 65-villagers in a part of the mountain Arjuno is shown in figure 6.

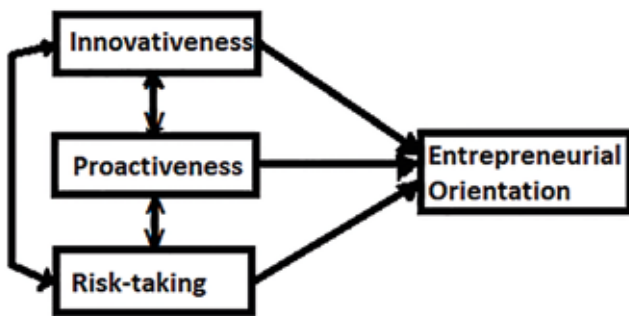


Fig 6. Concept development about Entrepreneurial Orientation model

The questionnaires spread to the villages in a part of the mountain slope to sixty-five villagers there. After collecting the data from the questionnaires, then proceeded and analyzed through software Statistical Packages for Social Sciences (SPSS) version 21.0, respectively.

Results

The villagers come from Prigen District 90.77% and 9.23 % from Purwodadi District. They are 73.85 % young villagers and 26.15 % old villagers, men 63.08% and women 36.92%. Of the villagers, 49.23% come from Senior High School and 50.77% from others (38.46% Junior High School, 10.77% graduated from Foundation School, and 1.54% do not graduate from any other school).

After analysis by using SPSS, there were two items from four items (Innovativeness, I dimensions) in the questionnaires that are valid with $r_{\text{calculated}} > r_{\text{table}}$ (0.317) as of Pearson correlation method (Product Moment) as $N=65$, $df=65-2=63$ for two-tailed of significant at least at 99% level ($p < 0.05$) for all of the indicators; there four of six items are valid (P.1, P.2, P.3 and P.6) of proactiveness, P dimensions are accurate. All of the four items of risk-taking, R dimensions of E.O. are valid.

To test the reliability of the proposed scales was using the usual threshold level of Cronbach's alpha 0.7 for newly developed measures (Sugiyono, 2019). In this

case, the four variables (I, P, R) values were 0.466, 0.736, and 0.620. Only the Innovativeness has Cronbach alpha < 0.6 , which means that the instrument to measure the Innovativeness of the villagers in a part of the slope of Mt. Arjuno was not good enough. It can be used (Cronbach's alpha < 0.5), but the result is low of reliability (Binus University, no date), and although we have the Corrected item-total Correlation 0.317 for significance 1%.

The independent (inputs) variables i.e.: I, P and R (together) effects the dependent (output) variable, EO with regression equation as:

$$EO = -0.003 + 0.334I + 0.334P + 0.333R. \quad (\text{Eq. 1})$$

Coefficient correlation (simultaneously) of inputs to output, R is 1.0. According to the interpretation of the coefficient correlation, R by (Sugiyono 2007, 2019), the R-value 1.0 falls in the range 0.80 – 1.000, so there is a robust correlation among inputs to affect output.

The value of R^2 (coefficient determination) was 1.0. It means that variation of input variables, i.e. innovativeness (I), proactiveness (P), and risk-taking (R), could explain the Entrepreneurial Orientation (E.O.) variation fully. Adjusted R Square were 1.0, with Std. An error of Estimate 2.66.

F-test results show that $F_{\text{calculated}}$ was 622102.42, which is more than F_{table} (2.755) with the level of significance, $=0.05$, which means that Innovativeness (I), Proactiveness (P), and Risk-taking (R) together affect Entrepreneurial Orientation (E.O.).

Because $T_{\text{calculated}}$ through SPSS for every independent variable was more than T_{table} 1.999), it means that every input variable partially gives a positive effect for the output variable.

Discussion

The characteristics of the peoples near the Mountain Arjuno, especially for the 65-villagers in their entrepreneurial orientation, could be stated as the linear regression model (Eq. 1). The equation can be said as an Entrepreneurial Orientation Model for the villagers based on the data analyzed.

Eq 1 is only based on the 65 data. This is an excellent point to generate better villagers and firms for better future goals that are a must following Sustainable Development Goals in the area (Yulaswati, 2020).

Conclusion

It was found what the characteristics of the people near the Mountain Arjuno are, especially for the 65- villagers in their entrepreneurial orientation. The Innovativeness (I), Proactiveness (P) and Risk-taking (R) together effects the Entrepreneurial Orientation (EO with model regression equation as:

$$EO = -0.003 + 0.334I + 0.334P + 0.333R.$$

REFERENCES

1. Anderson, B. S., Covin, J. G. and Slevin, D. P. (2009) ‘Understanding the relationship between entrepreneurial orientation and strategic learning capability: an empirical investigation,’ *Strategic Entrepreneurship Journal*, 3(3), pp. 218–240. DOI: 10.1002/sej.72.
2. Badan Pusat Statistik Provinsi Jawa Timur (2016) *STATISTIK PEMUDA PROVINSI JAWA TIMUR 2016*.
3. Bakytgul, T., Ahmed, M. and Kim, Y. (2019) ‘Corporate Entrepreneurship and Organizational Performance: The Moderating Role of Organizational Engagement’, *Annals of Contemporary Developments in Management & H.R.*, 1(1), pp. 39–45. doi: 10.33166/acdmhr.2019.01.005.
4. Binus University (no date) *UJI VALIDITAS DAN RELIABILITAS*. Available at: <https://qmc.binus.ac.id/2014/11/01/u-j-i-v-a-l-i-d-i-t-a-s-d-a-n-u-j-i-r-e-l-i-a-b-i-l-i-t-a-s/>.
5. Cho, Y. H. and Lee, J.-H. (2018) ‘Entrepreneurial orientation, entrepreneurial education and performance’, *Asia Pacific Journal of Innovation and Entrepreneurship*, 12(2), pp. 124–134. doi: 10.1108/apjie-05-2018-0028.
6. Directorate General of Research Enhancement and Development Ministry of Research Technology and Higher Education (2019) ‘Pengembangan Kompetensi Manajemen dan Orientasi Kewirausahaan dalam Rangka Pemberdayaan Kelompok Petani dan Pemuda Pedesaan Di Jawa Timur’. doi: 1a633551-34df-4b0e-9528-2b4d251bf984.
7. Directorate General of Research Enhancement and Development Ministry of Research Technology and Higher Education (2020) ‘Panduan Penelitian dan Pengabdian kepada Masyarakat Edisi XIII’, *וילען ווילען*, 66, pp. 37–39.
8. Haque, M. R. *et al.* (2017) ‘Entrepreneurial Intentions: A Study on Students from Countryside University’, *Asian Economic and Financial Review*, 7(10), pp. 972–980. doi: 10.18488/journal.aefr.2017.710.972.980.
9. Hermanto, Y. B. and Nugroho, M. (2021) ‘Communicating the springs and forest preservation in the Arjuna mount area, Indonesia’, *Jurnal Studi Komunikasi (Indonesian Journal of Communications Studies)*, 5(2), pp. 379–396. doi: 10.25139/jsk.v5i2.3785.
10. Hughes, M. and Morgan, R. E. (2007) ‘Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth’, *Industrial Marketing Management*, 36(5), pp. 651–661. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S0019850106000666?via%3Dihub%0A>.
11. Ibrahim, N. A. and Mas’ud, A. (2016) ‘Moderating role of entrepreneurial orientation on the relationship between entrepreneurial skills, environmental factors and entrepreneurial intention: A PLS approach’, *Management Science Letters*, (January), pp. 225–236. doi: 10.5267/j.msl.2016.1.005.
12. Imma Andiningtyas R.S. and Ratna L. Nugroho (2014) ‘Pengaruh orientasi kewirausahaan terhadap kinerja perusahaan kecil’, *Jurnal Manajemen Indonesia*, 14(1), pp. 37–46. Available at: <http://ijm.telkomuniversity.ac.id/wp-content/uploads/2015/02/Vol.14-No1.-April-2014-PENGARUH-ORIENTASI-KEWIRAUSAHAAN-TERHADAP-KINERJA-PERUSAHAAN-KECIL-Imma-Andiningtyas-R.S.-Ratna-L.-Nugroho.pdf>.
13. Institute of Research and Community Services Darma Cendika Catholic University (2020) *RENCANA INDUK PENELITIAN 2020-2023*. Edited by LEMBAGA PENE-LITIAN DAN PENGABDIAN MASYARAKAT UKDC. SURABAYA.
14. Ismail, K. *et al.* (2015) ‘Entrepreneurial Intention, Entrepreneurial Orientation of Faculty and Students towards Commercialization’, *Procedia - Social and Behavioral Sciences*. Elsevier B.V., 181, pp. 349–355. doi: 10.1016/j.sbspro.2015.04.897.
15. Kennedy, R. (2020) *Strategic Management, Virginia Tech’s Pamplin College of Business in association with Virginia Tech Publishing*. Blacksburg, VA, USA. Available at: <https://pressbooks.lib.vt.edu/strategicmanagement/chapter/7-2-entrepreneurial-orientation/>.
16. Kresna (2009) *Dimensi Orientasi Kewirausahaan (skripsi dan tesis)*. Available at: <https://konsultaskripsi.com/2019/07/10/dimensi-orientasi-kewirausahaan-skripsi-dan-tesis/> (Accessed: 5 March 2021).
17. Lee, L. *et al.* (2009) ‘Entrepreneurial intentions : The influence of organizational and individual factors’, *Munich Personal RePEc Archive*, (16195), pp. 1–38.
18. Lee, S. M. and Peterson, S. J. (2000) ‘Culture, entrepreneurial orientation, and global competitiveness’, *Journal of World Business*, 35(4), pp. 401–416. doi: 10.1016/S1090-9516(00)00045-6.
19. Linan, F. and Chen, Y.-W. (2011) ‘Development and Cross-Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions’, *Development Dialogue*, (56), pp. 35–39.
20. Lomberg, C. *et al.* (2017) ‘Entrepreneurial Orientation: The Dimensions’ Shared Effects in Explaining Firm Performance’, *Entrepreneurship: Theory and Practice*, 41(6), pp. 973–998. doi: 10.1111/etap.12237.
21. Lumpkin, G. T. and Dess, G. G. (1996) ‘Clarifying the entrepreneurial orientation construct and linking it to performance’, *Academy of Management Review*, 21(1), pp. 135–172. doi: 10.5465/AMR.1996.9602161568.
22. Miller, D. (1983) ‘The Correlates of Entrepreneurship in Three Types of Firms’, *Management Science*, 29(7), pp. 770–791. doi: 10.1287/mnsc.29.7.770.
23. Nugroho, M. *et al.* (2019) ‘Forest Vegetation Profile for Springs Preservation in Arjuna Mount, East Java-Indonesia’, *American Journal of Agriculture and Forestry*, 7(6), pp. 290–296. doi: 10.11648/j.ajaf.20190706.17.
24. Olutuase, S. O. *et al.* (2018) ‘Entrepreneurial Orientation and Intention: Impact of Entrepreneurial Ecosystem Factors’, *Journal of Entrepreneurship Education*, 21(1S). Available at: <https://www.abacademies.org/articles/entrepreneurial-orientation-and-intention-impact-of-entrepreneurial-ecosystem-factors-7293.html>.
25. Perera, D. N., Nag, D. and Venkateswarlu, P. (2019) ‘A Study on the Relationship of Entrepreneurial Orientation and Business Performance in the SMEs of Kurunegala District in Sri Lanka’, *Theoretical Economics Letters*, 09(07), pp. 2324–2336. doi: 10.4236/tel.2019.97147.
26. Purba, L. P. and Hermanto, Y. B. (2020) ‘MANAGEMENT COMPETENCY AND ENTREPRENEURIAL INTENTION OF THE 60-YOUNG VILLAGERS IN A PART OF SLOPE OF MT. ARJUNA EAST JAVA INDONESIA’, *Journal’ Sustainable Development of Mountain Territories*, 12(4), p. 7.
27. Sari, E. T. (2013) ‘Entrepreneurial Intention among Employees’, *Jurnal Entrepreneur dan Entrepreneurship*, 3, pp. 39–48.
28. SINE, K. (2015) ‘Membangun Orientasi Kewirausahaan

Untuk Meningkatkan Kinerja UKM', *Jurnal Manajemen dan Bisnis Sriwijaya*, 13(4), pp. 427–442. doi: 10.29259/jmbs.v13i4.3145.

29. Sugiyono (2007) *Metode Penelitian Bisnis*. Bandung: CV. Alfabeta.

30. Sugiyono (2019) *Metode Penelitian & Pengembangan Research and Development Untuk Bidang: Manajemen Sosial Teknik*. Bandung: ALFABETA, CV.

31. SustainAbility (2020) 'What' s next for sustainable business ? Trends 2020'.

32. T. Lumpkin, G. and G. Dess, G. (2001) 'Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle', *Journal of Business Venturing*, 16(5), pp. 429–451. doi: [https://doi.org/10.1016/S0883-9026\(00\)00048-3](https://doi.org/10.1016/S0883-9026(00)00048-3).

33. The Agricultural Services EAST JAVA (2014) 'Rencana Strategis Satuan Kerja Perangkat Daerah (RENSTRA SKPD)'.

34. The Agricultural Services EAST JAVA (2016) 'PEMER-

INTAH PROVINSI JAWA TIMUR HORTIKULTURA JAWA TIMUR ISSN – 1412-1352'.

35. The District Planning Agencies (2017) 'Data Dinamis Provinsi Jawa Timur', pp. 1–144.

36. THE GOVERNMENT of EAST JAVA PROVINCE (2015) *RENCANA KINERJA TAHUNAN (RKT) DINAS PERTANIAN PROVINSI JAWA TIMUR TAHUN 2015*.

37. Wales, W. J. *et al.* (2021) 'The status quo of research on entrepreneurial orientation: Conversational landmarks and theoretical scaffolding', *Journal of Business Research*, 128, pp. 564–577. doi: 10.1016/j.jbusres.2020.10.046.

38. Yan, J. (2010) 'The impact of entrepreneurial personality traits on perception of new venture opportunity', *New England Journal of Entrepreneurship*, 13(2), pp. 21–35. doi: 10.1108/nej-13-02-2010-b002.

39. Yulaswati, V. (2020) 'SDGs IMPLEMENTATION IN INDONESIA'.

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