

The Benevolent of Eco-phronesis Local Wisdom for Preserving the Environment

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Abstract. This study intends to explore research on the ecological aspects of women entrepreneurs in promoting the performance of their companies through the local wisdom of *Ecophronesis*. This study also investigates how SME environmental-friendly entrepreneurs can improve the performance of their companies through the local knowledge of *Ecophronesis*. Their Business aligns with nature conservation through natural dyes and according to life cycle assessment from raw materials to product delivery to their customers (green logistics). The production of environmental-friendly batik (Indonesian waxy handy craft painted textile) complies with the LCA, which ponders environmental-friendly entrepreneurs. Furthermore, the local wisdom of *Eco-phronesis* explores its role in encouraging company performance. The census method used with the number of respondents is 180, drawn from female entrepreneurs who run environment-friendly Businesses. This research will be carried out in Bayat, Indonesia, in 2021. This research may contribute to the body of knowledge of green business literature, particularly by applying *Ecophronesis* as a realization of local wisdom.

1 Introduction

This research reveals the task of female environmental-friendly entrepreneurs to perform their duty to their SMEs via the local wisdom of Eco-phronesis. Women entrepreneurs pertain to inequality. Among seven hundred Small and Medium Enterprises, businesswomen have provided nine per cent of the national amount of GDP, which is half of the GDP's provision of SMEs to the national economy.

The environment-friendly entrepreneur is an entrepreneur towards environmental care; there are many meanings, such as eco-entrepreneur, enviro-entrepreneur, and sustainable entrepreneur [1]. Ecopreneurship incorporates the traditional entrepreneurial concepts of market direction and novelty and leads to the ideas of sustainability and ecosystem. Research on environmentally friendly entrepreneurship has developed fast in the last decade. Furthermore, societal and environmental forces intensely affect women's environment-friendly entrepreneurship [1, 2], the study on ecological entrepreneurship dates back twenty years. The development of environmental entrepreneurship is still ongoing, and it has a commonly putative explanation for an environmental entrepreneur

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[3,4]. Generally, an ecological entrepreneur articulates a courageous activity ingrained in environmental consciousness. The responsibility of SMEs as environmental entrepreneurs is accentuated by [5,6]. They found out that SMEs keenly integrate entrepreneur talents and viability.

The research of environmental entrepreneurs is inspiring to further develop. Thus, the earlier study used an approach of qualitative rather than an approach of quantitative with problem and case affinity [7,8]. Moreover, [4] contended that there was little quantitative research that deliberate environmental entrepreneurship as the dependent variable. The lack of available data and robust instrument techniques makes the study of ecological entrepreneurship classified in the initial stages of progress.

[9] environmental entrepreneurship is a challenging topic; it is likely to contribute theoretically and practically to organizational, community, and individual change, especially in incorporating entrepreneurship and the environment. Environmental entrepreneurship is not a panacea for ecological problems. Still, strong linkages between industry, government, local communities, and organizations are needed to build green entrepreneurship research—the process of practical eco-phronesis mediation between environmental-friendly entrepreneurship orientation acquired by society from generation to generation. Eco-phronesis is a practice of local ecological wisdom, and this mediation has not been widely studied to mediate between the Orientation of green entrepreneurship and the performance of SMEs [10,11]. This research intends to examine the novel green entrepreneurship orientation model, local wisdom Eco-phronesis and the implementation of SMEs.

1.1 Women's Environmentally Friendly Entrepreneur

Discussing women's and women's environment entrepreneurship, [12] combined their research on the supremacy of entrepreneurial masculinity and female character. Entrepreneurship is described as firm, impartial, objective, action-oriented, logical, assertive, leading, strong, and confident. The characterization of Womanhood is kindness, accommodating, and tolerant.

2 Method

We undertook this research in Bayat Klaten Central Java, where a cluster of Batik natural dyes in August 2021 to December 2021 during the severe outbreak of Covid-19; therefore, the research was undertaken mainly by conducting either online depth interviews, online group discussions, and Google form questionnaires distribution. Our research withdrew all 180 businesswomen from the business cluster. The questionnaire success rate factor was 100 per cent, the census method was applied, and data analysis was done using structural equation modelling (SEM) version 24. Women's environment-friendly entrepreneurship orientation indicators, such as gender-based risk-taking, consumer orientation, creative environment preservation, and life cycle assessment practice, were described. Eco-phronesis local wisdom was depicted as indicators such as moral obligation practice, performing local wisdom practice, the Right Way to do things in harmony, skill to conduct meaningful life, and ecological commitment practice. Finally, SME performance can be portrayed as indicators such as sales volume, market size, ROA and sales development.

3 Hypotheses Development

3.1 Women Environment-Entrepreneurship Orientation and Performance

Primarily, before the environment entrepreneurial orientation became a rigorous debate in current studies, the practical gap of research between E.O. (entrepreneurship orientation) and the accomplishment of SMEs is comprehensive in extent; several results bolster firms that embrace E.O. achieve meaningfully better than those who do not practice [13,14, 15, 16]. In brief, E.O. implementation will perform better. In contrast, some research has uncovered a tiny correlation between E.O. and the SME's performance [17,18]. Moreover, specific results do not have a significant correlation between E.O. and the performance of SMEs [9,18,13]. Earlier research has described a substantial difference in research on the E.O.'s correlation and performance of SMEs. Until now, the demand to attain a sustainable, ecological-based, environmental-friendly way of doing Business has become a significant concern and topic in the discussion of an entrepreneur. Various terms pertained to entrepreneurship sustainability, such as enviro-preneurship, eco-preneurship, green, and environmentally friendly entrepreneurship. Nevertheless, the development of studies and writings on environmental-friendly entrepreneur orientation is relatively fledgling. The integrated research results describe ecological entrepreneurship as a sub-domain of entrepreneurship research. [19,20,21]. In the literature, very few studies on the environment-friendly Orientation of entrepreneurship and its Influence on the performance of SMEs. Thus, the gap in research analysis in this research utilizes SMEs' entrepreneur orientation and performance. [22] classify company performance as increased revenue, development of market apportions, new product improvement and quality, loyalty of employees, flow of cash, Return on Equity, and Return on Investment.

Most E.O. studies concerning company performance have not addressed the topic of gender disparities, and women entrepreneurs have not been examined rigorously. Women entrepreneurs are the economy's driving force and show high representation in various organizations. [13,23,24]. To fill the gap and make an effort to mediate E.O. and SME performance, it needs to intervene in local wisdom Eco-phronesis to improve the performance of SMEs adopted to reveal whether women's green entrepreneurial Orientation adversely affects the performance of SMEs. Consequently, this research proposes to investigate the Influence of women's environment-friendly entrepreneur orientation on the implementation of SMEs in the hypothesis as follows:

H1. Women's environment-friendly entrepreneurship orientation has significantly correlated to SME Performance.

3.2 Eco-phronesis of local wisdom concerning SMEs Performance

The use of local wisdom Eco-phronesis is currently still under research. Eco-phronesis is a shortened form of ecology phronesis wisdom implementation. Eco-phronesis is the superior ability of moral creativeness to enable and react well to the preservation of the suitable environment, the proper choice in certain situations of ecological implementation, driven by a human, rationalized self-interest, to foster thoughtful environmental performance. Eco-phronesis inherits and maintains the relationship of the characteristics in harmony between humans and the environment above social relations [11]. Eco-phronesis identified indicators as the practice of moral obligation, local wisdom, the harmonious Way of doing things, the skills to live a meaningful life, and the rule of ecological commitment.

The study investigated the practice of local wisdom on SME marketing performance, resulting in the preparation of local ecological knowledge strengthened and had a

substantial effect on the marketing performance of SMEs [21]. Furthermore, SMEs adopt the ubiquitous operation of the values of local wisdom of the community referred to as Ibu Pertiwi (mother earth), and Bapak Akasa (God's grace) means respecting the importance of preserving the environment as a gift from Mother Earth and a gift from the sky; the environment has inspired the local wisdom and knowledge.

H2. The use of local wisdom *Eco-phronesis* has a positive correlation with the performance of SMEs.

3.3 Eco-phronesis of local Wisdom concerning Environmental-friendly Entrepreneurship Orientation

An entrepreneurship orientation is an imperative asset for SMEs to compete in a competitive environment. It has the meaning of truth, the practice of moral obligation, local wisdom, the right Way of doing things in harmony, and the skills to work together. An entrepreneurship orientation is considered an essential power for SMEs in a competitive environment. It describes managers' methods, application, and policymaking to be entrepreneurs. It combines experimentation with new techniques, eagerness to seize new market opportunities, and taking to endure challenging endeavours [25,12,26,27] adds that community networking is necessary to improve competencies; it enhances knowledge and SME relationships. Socio-cultural norms have a more substantial effect on entrepreneurship than performance-based cultural norms. Research on cultural aspects of entrepreneurial Orientation and organizational performance is carried out in developed rather than developing countries.

Eco-phronesis local wisdom allows environment-friendly entrepreneurs to gain extra goodwill such as funds, intangible assets such as status, and entrepreneurial orientation spirit [28]. This research proposes the hypothesis as follows:

H3. Utilizing local wisdom *Eco-phronesis* positively correlates with the Orientation of environment-friendly entrepreneurship.

4 Hypothesis Testing

Table 1. Measurement, Confirmatory Factor & Reliability

Measurement & Construct	L	α	R	AVE
Environment-friendly entrepreneurship Orientation		0.7	0.8	0.59
Gender-Based Risk Taking	0.86			
Consumer Orientation	0.83			
Creative environment preservation	0.98			
Life Cycle Assessment Practice	0.90			
Honesty & Truthfulness	0.02			
Eco-phronesis Local Wisdom		0.7	0.8	0.58
Moral Obligation Practice	0.82			
Performing Local Wisdom Practice	0.82			
Proper Way to do things in harmony	0.81			
Skill to conduct meaningful life	0.91			
Ecological Commitment Practice	0.84			
SMEs Performance		0.7	0.8	0.61
Volume of sales	0.81			
Size of market	0.77			
ROA	0.78			
Sales development	0.79			

L=Loading Factor; R=Reliability; AVE=Average Variance Extracted

Table 2. Hypotheses Tests

Variables		Estimate	SE	CR	H	Description
Performance of SME	Women environment-friendly entrepreneur Orientation	0.216	0.73	3.022	H1	Supported
Performance of SME	<i>Ecophronesis</i> Local Wisdom	0.272	0.71	3.765	H2	Supported
Women's environment-friendly entrepreneur Orientation	<i>Ecophronesis</i> Local Wisdom	0.336	0.75	4.414	H3	Supported

SE=Standard of Error; CR=Critical Ratio; H=Hypothesis

We test the hypothetical relationship among the model. Table 2 portrays the model of SEM. It shows the standard path coefficient. Women's environmentally friendly entrepreneur orientation has a considerable effect on the performance of SMEs (0.216) because H1 is supported. In addition, H2, local wisdom Eco-phronesis has also been proven to be the primary driver performance of SME (0.272), and H3 is also supported (0.336). H1, which states that women's environmental-friendly Orientation affects the performance of SMEs, is proven significantly (C.R.>2). In contrast, H2, which mentions that local wisdom Eco-phronesis has a positive impact on the performance of SMEs, is also proven (C.R.>2), and H3, which states that local wisdom Eco-phronesis has a significant influence on women's environmental-friendly entrepreneur orientation is also supported by the hypothesis (C.R.>2).

5 Discussion and Conclusion

Eco-phronesis of local wisdom considers the promotion of SMEs' performance and the environmental-friendly entrepreneurship orientation of women. The Significant Influence of Eco-phronesis local wisdom on women's environment-friendly direction of entrepreneurship is supported by earlier studies by [10,28,29,30]. Those revealed that the local wisdom of Eco-phronesis has a considerable effect on encouraging entrepreneur orientation among users. The widespread use of smartphones makes connecting with local wisdom networks of Eco-phronesis such as Facebook, Twitter, and WhatsApp, easier since the latter is predominantly social media use in Indonesia. Interest groups are formed by women, environment-friendly entrepreneurs, and socializing with others, including foreigners. In so doing, language barriers are accomplished by Google translate sites. SMEs avail themselves of environment-friendly entrepreneurship orientations such as readiness to take risks, focus on customers, and creative exposure. Social media has facilitated SME actors to have networks and customers from Europe, the United States, and Japan. There are extraordinary phenomena in that SMEs in remote Indonesia can access global markets at reasonable costs. The utilization of social media has developed the starting point for being proactive in approaching their customers and, at the same time, maintaining an intensive relationship with their customers. SMEs use Instagram, Telegram, WhatsApp, and chat groups with trustworthy suppliers, customers, and other relevant groups such as university professors and public officers to avoid hoaxes and hackers disturbing their business operations. This affiliation is not inclusively inside the cohort but involves another SME's cohorts. Yet mainly SME players have low education on average and foreign language and technology barriers; therefore, through university social contribution, they take responsibility for providing them with capacity building through some form of technical assistance.

Eco-phronesis of local wisdom has a considerable impact on the performance of SMEs; this result is bolstered by earlier studies undertaken by [9,31,4,10]. The research results show that proactive, intensive relationships, active collaboration, effectiveness, and customer care in utilizing local wisdom Eco-phronesis have improved the performance of SMEs. The local knowledge of Eco-phronesis has allowed SMEs to introduce various unacquainted markets. It enables to gain several foreign patrons, unknown environment-friendly customers in large towns, and Batik actors to contact natural dye groups in the United States, Japan, and Italy, a similar concern group to promote natural dye to nurture the environment. After socializing with new consumers, several interested partners came from foreign countries to buy batik products and visit a gallery of natural batik dyes in Bayat, Indonesia. Then they learn how to colorize and craft genuine dyed batik; This is a marketing experience for foreign visitors.

Moreover, several craftswomen were requested to attend in a foreign country by sponsorship to socialize for creating naturally dyed batik. The result is consistent with earlier research that the Internet is vital in intensifying socialization amongst businesswomen [30]. The indicator variables are environmental-friendly entrepreneurship orientation; innovativeness in sustainability illustrates its evidence, meaning that respondents exercise life cycle assessment to run their SMEs, starting from delivering raw materials, production process, and logistics activity.

Women's environmental-friendly Orientation toward entrepreneurship considerably influences SMEs' performance, as depicted in H1. Environment-friendly entrepreneur orientation companies encourage the implementation of SMEs as bolstered by earlier research undertaken by [19,21,20]. Their Orientation to entrepreneurship, an environment-friendly paradigm, and the values of their local wisdom significantly influence SMEs' performance comprising the market's size, return on assets, sales, and sales growth. Women's environment-friendly entrepreneurship orientation mediated by Eco-phronesis local wisdom can be categorized as a new model that contributes significantly to SME research performance. Entrepreneurial Orientation based on the ecological paradigm of local wisdom Eco-phronesis can be faithful in the consumers' viewpoint.

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References

1. D. M. Hechavarría, *Int. Entrep. Manag. J.* **12**, 1025 (2016)
2. B. Cohen, B. Smith, and R. Mitchell, *Bus. Strateg. Environ.* **17**, 107 (2008)
3. H. I. Stål, K. J. Bonnedahl, and J. Eriksson, *Eur. Manag. J.* **32**, 203 (2014)
4. R. Antolín-López, J. Delgado-Ceballos, and I. Montiel, *J. Clean. Prod.* **136**, 5 (2016)
5. S. Indaco-Patters, C. Fearon, C. Nolan, and K. Warden, *Ind. Commer. Train.* **45**, 330 (2013)
6. J. Pinkse and K. Groot, *Entrep. Theory Pract.* **39**, 633 (2015)
7. (n.d.)
8. A. De Bruin and K. V. Lewis, *J. Soc. Entrep.* **6**, 127 (2015)
9. T. Galkina and M. Hultman, *Small Enterp. Res.* **23**, 58 (2016)
10. N. Austin, Heythrop J. - Q. *Rev. Philos. Theol.* **59**, 1009 (2018)
11. D. Guleria and G. Kaur, *Libr. Hi Tech* **39**, 1001 (2021)

12. N. Patterson, S. Mavin, and J. Turner, *Gend. Manag.* **27**, 395 (2012)
13. W. Yu, J. Wiklund, and A. Pérez-Luño, *Entrep. Theory Pract.* **45**, 92 (2021)
14. A. B. Awang, A. R. B. Said Asghar, and K. A. B. Subari, *Int. Bus. Res.* **3**, 34 (2010)
15. S. Van Doorn, J. J. P. Jansen, F. A. J. Van Den Bosch, and H. W. Volberda, *J. Prod. Innov. Manag.* **30**, 821 (2013)
16. J. Schepers, W. Voordeckers, T. Steijvers, and E. Laveren, *Small Bus. Econ.* **43**, 39 (2014)
17. G.T. LUMPKIN and GREGORY G. DESS, *J. Econ. Econ. Educ. Res.* **16**, 119 (2015)
18. P. Dimitratos, S. Lioukas, and S. Carter, *Int. Bus. Rev.* **13**, 19 (2004)
19. S. Schaltegger and M. Wagner, *Bus. Strateg. Environ.* **20**, 222 (2011)
20. J. Gast, K. Gundolf, and B. Cesinger, *J. Clean. Prod.* **147**, 44 (2017)
21. V. D. W. Aryanto, *Int. J. Soc. Ecol. Sustain. Dev.* **8**, 17 (2017)
22. L. Teeratansirikool, S. Siengthai, Y. Badir, and C. Charoenngam, *Int. J. Product. Perform. Manag.* **62**, 168 (2013)
23. Z. J. Acs, E. Bardasi, S. Estrin, and J. Svejnar, (2011)
24. K. Fellnhofer, K. Puumalainen, and H. Sjögrén, *Int. J. Entrep. Behav. Res.* **22**, 346 (2016)
25. D. A. Colton, M. S. Roth, and W. O. Bearden, *J. Int. Mark.* **18**, 1 (2010)
26. C. Lechner, M. Dowling, and I. Welpe, *J. Bus. Ventur.* **21**, 514 (2006)
27. A. P. Olugbenga, *J. Bus. African Econ.* **1**, 1 (2015)
28. S. D. Sarasvathy, *Acad. Manag. Rev.* **26**, 243 (2001)
29. Y. W. Cheng, Y. Wang, I. L. Cheng, and N. S. Chen, *Interact. Learn. Environ.* **27**, 782 (2019)
30. A. R. Reuber and E. Fischer, *Int. Small Bus. J. Res. Entrep.* **40**, 3 (2022)
31. S. Ainin, F. Parveen, S. Moghavvemi, N. I. Jaafar, and N. L. M. Shuib, *Ind. Manag. Data Syst.* **115**, 570 (2015)