

THE ROLE OF ENVIRONMENTAL KNOWLEDGE AND ATTITUDE IN SHAPING THE BEHAVIOR OF SME ACTORS (A MULTI-CASE STUDY IN KEDIRI CITY)

Yuliani^{1*}, Suprihantosa Sugiarto²

^{1,2}IAIN Kediri

*yuliani@iainkediri.ac.id

Abstract: *In Indonesia, Small and Medium Enterprises (SMEs) make up approximately 99% of the total businesses and absorb 97% of the workforce, making SMEs a key contributor to the economic sector. However, the waste produced by SMEs is also considerable when compared to large-scale businesses. Research discussing the environmental impact of SME economic activities is still very limited, despite the importance of the relationship between SMEs and the environment as a critical issue to study. The aim of this study is to obtain an in-depth and holistic description of the knowledge, attitude, and production behavior of SME actors regarding environmentally conscious production. This research is qualitative in nature. Three data collection procedures will be used in this study: interviews, observations, and documentation. Based on the analysis conducted, the research findings are: (1) business owners have limited knowledge of environmentally conscious economics; (2) SME owners have a positive attitude towards environmentally conscious business practices; (3) some SMEs still use raw materials harmful to the environment and do not engage in waste management.*

Keywords: *Knowledge, Attitude, Environmentally Conscious Behavior*

Abstrak: *Di Indonesia, jumlah pelaku Usaha Kecil dan Menengah (UKM) sekitar 99% dari total perusahaan/usaha yang ada di Indonesia dan menyerap 97% tenaga*

kerja sehingga UKM memainkan peran penting memberikan kontribusi di sektor ekonomi. Namun, limbah yang dihasilkan oleh UKM juga tidak kalah besar jika dibandingkan dengan usaha skala besar. Penelitian yang membahas dampak aktivitas ekonomi dari UKM terhadap permasalahan lingkungan juga masih minim sekali. Padahal, antara UKM dan lingkungan merupakan permasalahan yang penting untuk diteliti. Tujuan dari penelitian ini adalah untuk memperoleh deskripsi secara mendalam dan holistik tentang pengetahuan, sikap, perilaku produksi yang dimiliki oleh pelaku UKM tentang produksi berwawasan lingkungan. Sehingga penelitian ini merupakan penelitian kualitatif. Ada tiga prosedur pengumpulan data yang akan digunakan dalam penelitian ini, yaitu: wawancara, observasi, dan dokumentasi. Berdasarkan analisis yang telah dilakukan, temuan penelitian adalah (1) pengusaha memiliki pengetahuan yang terbatas tentang ekonomi berwawasan lingkungan. (2) pemilik UKM memiliki sikap yang setuju/mendukung terhadap usaha yang berwawasan lingkungan. (3) masih terdapat UKM yang menggunakan bahan baku yang membahayakan lingkungan dan tidak melakukan pengolahan limbah.

Kata Kunci: Pengetahuan, Sikap, Perilaku Berwawasan Lingkungan

Introduction

Businesses that contribute to environmental degradation in Indonesia are not limited to large-scale companies but also include micro, small, and medium-sized enterprises. In Indonesia, SMEs account for approximately 99% of the total businesses and absorb 97% of the workforce, making SMEs crucial contributors to the economic sector by providing employment opportunities, reducing poverty, and stimulating economic growth¹. Statistical data indicates that Indonesia's economic growth in 2009 remained strong at 4.6%, reaching 6.5% in 2011. In 2013, the GDP still stood at 5.8%. This achievement was significantly contributed to by SMEs and cooperatives, which accounted for 56% of the GDP.

¹ OECD Publishing, "Promoting SME Development in Indonesia," 2012.

Research discussing the environmental impact of SME economic activities remains very limited, despite the importance of investigating the relationship between SMEs and the environment. There are four reasons behind this issue. First, small businesses contribute significantly to the economy of every country. Second, the environmental impact of the small business sector cannot be underestimated. Third, environmental management theories and strategies developed for large companies cannot be automatically applied to small-scale businesses. Fourth, the literature on environment and business tends to overlook the importance and unique characteristics of small-scale enterprises².

The environmental issues caused by SMEs are equally concerning when compared to large-scale companies. Walker, E.A and Redmond, J, state that small businesses have a significant negative impact on the environment, with industrial pollution generated by SMEs reaching 60%³. However, the owners/managers of these small businesses often fail to understand the importance of behavioral change. Schaper further explains that global pollution caused by SMEs accounts for 70%, yet the role of SMEs in sustainable development is frequently overlooked⁴. Natarajan adds that the large number of SMEs often results in environmental problems, as many are unregulated and lack environmental management systems⁵. SMEs are often not proactive and, in some cases, are unaware of the environmental impact of their activities.

In addition, several studies have shown that small businesses have not yet engaged in addressing environmental issues. Small enterprises often neglect participation in discussions about the need to change their environmentally harmful business practices or take affirmative action⁶. Many small businesses have not paid attention to the environmental consequences of their

² Fiona Tilley, "Environmental Attitudes and the Environmental," *Business Strategy and the Environment* 248, no. 1999 (1999): 238–48.

³ Janice Redmond and Elizabeth Walker, "Environmental Education in Small Business: The Owner-Manager's Perspective," *Australian Journal of Environmental Education* 25 (2009): 117–28, <https://doi.org/10.1017/s0814062600000458>.

⁴ Michael Schaper, "Environmental Attitudes and Practices amongst Small Business Owner/Managers in the Western Australian Community Pharmacy Sector," 2001, 2001, https://espace.curtin.edu.au/bitstream/handle/20.500.11937/10338/19702_downloaded_stream_220.pdf?seq.

⁵ Ganapathy Subramanian Natarajan, "Developing an Environmental Sustainability Index (EnvSI) for Small and Medium-Sized Enterprises (SMEs) in the United States: The Case of West Texas," *Sustainability (Switzerland)* (2019), http://sciotea.caf.com/bitstream/handle/123456789/1091/RED2017-Eng-8ene.pdf?sequence=12&isAllowed=y%0Ahttp://dx.doi.org/10.1016/j.regsciurbeco.2008.06.005%0Ahttps://www.researchgate.net/publication/305320484_SISTEM_PEMBETUNGAN_TERPUSAT_STRATEGI_MELESTARI.

⁶ Beth Walker, Janice Redmond, and Ute Goeft, "Edith Cowan University," *The Grants Register* 2025, 2024, https://doi.org/10.1057/978-1-349-96110-8_416.

economic activities, even though the impact of SMEs on the environment is no less significant than that of large-scale businesses.

Literature Review

A. Knowledge, Attitude, and Behavior

a. Knowledge

The knowledge possessed by an individual in relation to any subject is multilayered. Knowledge as the source from which environmental attitudes are formed and behavior is manifested⁷. Meanwhile, according to Laroche, Bergeron, & Forleo, environmental knowledge refers to an individual's ability to identify various symbols, concepts, and behavioral patterns associated with environmental protection⁸.

There are two approaches to analyze an individual's environmental knowledge:

1. Objective knowledge (actual knowledge), which refers to how much a person truly knows about a specific product, issue, or object.
2. Subjective knowledge (perceived knowledge), which reflects how much a person thinks they know⁹.

b. Attitude

Attitude is a stable pattern of evaluative responses toward people, objects, or issues¹⁰. It is a tendency to react in a favorable or unfavorable way toward an object¹¹. Attitude is an inclination to act toward people and objects in a manner that involves expressions of appreciation, offering, and so forth¹². Attitudes are opinions and beliefs individuals hold about other people, objects, and

⁷ Anja Kollmus and Julian Agyeman, "Mind the Gap : Why Do People Act Environmentally and What Are the Barriers Mind the Gap : Why Do People Act Environmentally and What Are the Barriers To," *Environmental Education Research*, no. August 2002 (2015): 37–41, <https://doi.org/10.1080/1350462022014540>.

⁸ Michel Laroche, Jasmin Bergeron, and Guido Barbaro-Forleo, "Targeting Consumers Who Are Willing to Pay More for Environmentally Friendly Products," *Journal of Consumer Marketing* 18, no. 6 (2001): 503–20, <https://doi.org/10.1108/EUM00000000006155>.

⁹ S Barber, N., Taylor, David C & Strick, "Environmental Knowledge And Attitude: Influencing The Purchase Decisions Of Wine Consumers" (In: Int. Chrie Conference-Referred Track. Event 16 (2009), 2009).

¹⁰ A.M Colman, *Oxford Dictionary of Psychology* (New York: Oxford University Press Inc., 2006).

¹¹ F Hanurawan, *Psikologi Sosial, Suatu Pengantar* (Bandung: Remaja Rosdakarya Offset, 2010).

¹² Social Psychology, *Newcomb, TM* (New York: A Holt Dryden Book, Henry Holt and Company, Inc., 1958).

ideas—in other words, how a person views the world¹³. Attitude is a disposition to respond positively or negatively to objects, people, institutions, or events¹⁴. Based on these views, it can be concluded that attitude is an individual's response toward a particular object.

Although formal definitions of attitude may vary, most contemporary social psychologists agree that the characteristic attribute of attitude is its evaluative nature (pro-contradiction, pleasant-unpleasant). Attitude is a multidimensional construct consisting of cognitive, affective, and conative components¹⁵. Attitudes, along with the cognition and feelings that support them, can generate intentions and behavioral actions¹⁶.

According to Mednick et al in Dayakisni & Hudaniah, the formation of attitudes is influenced by three factors: (a) Social influences, such as norms and culture; (b) Individual personality characteristics; (c) Information that the individual has received over time¹⁷.

c. Behavior

Attitudes influence behavior through a careful and reasoned decision-making process, and their impact is limited to three factors. First, behavior is not primarily determined by general attitudes but by specific attitudes toward something. Second, behavior is influenced not only by attitudes but also by subjective norms our beliefs about what others expect us to do. Third, attitudes toward a behavior, together with subjective norms, form an intention or a commitment to engage in a particular behavior¹⁸.

Method

To obtain an in-depth and holistic understanding of the environmentally conscious production behavior of SME producers, the researcher carefully and thoroughly collected research data through an exploratory approach to SME production behavior. Therefore, this study employs a qualitative research design. In qualitative research, the researcher serves as the key instrument (researcher as key instrument).

¹³ L King, *The Science Of Psychology-An Appreciative View* (New York: Mc Graw Hill Education., 2017).

¹⁴ I Ajzen, *Attitudes, Personality And Behavior* (Bershire, England: Open University Press, 2005).

¹⁵ Ajzen.

¹⁶ I. A Bordens, K.S & Horowitz, *Social Psychology, Third Edition* (Oregon: Freeload Press, 2001).

¹⁷ T & Hudaniah Dayakisni, *Psikologi Sosial* (Malang: UMM Press, 2015).

¹⁸ Ajzen, *Attitudes, Personality And Behavior*.

This research was conducted in Kediri City. The study locations include Batik SMEs, Tofu SMEs, and Ikat Weaving SMEs.

This research uses primary data sources from individual SME entrepreneurs. In addition to data from SME entrepreneurs, the research data is also supplemented by information obtained from the children and/or employees who are involved in addressing the research issues.

The data collection procedures consist of interviews, participant observation, and documentation. Data analysis is carried out through data reduction, data presentation, and conclusion drawing.

Results and Discussion

A. SME Entrepreneurs' Knowledge of Environmentally Conscious Business Practices

Based on the analysis conducted, the findings from the first focus reveal that SME entrepreneurs possess varying levels of understanding regarding the definition and benefits of environmentally conscious business practices. SME entrepreneurs have limited knowledge of the laws and regulations issued by the government aimed at regulating environmental sustainability. Initially, the business owners were unfamiliar with the term "environmentally conscious business." The researcher then introduced a similar term, "eco-friendly business," to provide a comparable concept. Through this terminology, the SME entrepreneurs were able to define the meaning of eco-friendly business practices.

The findings of this study are consistent with previous research conducted by several other scholars. SMEs have a low level of understanding regarding sustainable practices¹⁹. SMEs' limited knowledge and understanding of environmental laws necessitate organizational support²⁰. Similarly, Patton and Worthington also reported that SMEs have inadequate knowledge of environmental issues as well as environmental laws and regulations²¹.

¹⁹ Ganapathy Subramanian Natarajan, "Developing an Environmental Sustainability Index (EnvSI) for Small and Medium-Sized Enterprises (SMEs) in the United States: The Case of West Texas."

²⁰ Ganapathy Subramanian Natarajan.

²¹ Dean Patton and Ian Worthington, "SMEs and Environmental Regulations: A Study of the UK Screen-Printing Sector," *Environment and Planning C: Government and Policy* 21, no. 4 (2003): 549–66, <https://doi.org/10.1068/c0321>.

SME owners have limited knowledge of environmental laws, cost-benefit analysis, environmental planning, recyclable materials, and air pollution²². The research also revealed that SME entrepreneurs hold differing views, understandings, and aspirations regarding environmental issues²³. SMEs face knowledge barriers in implementing environmental innovations²⁴.

A deeper understanding of environmental issues and how to solve them increases the likelihood that individuals will take action to protect the environment^{25,26}. Similarly, Oguz, Cakci, & Kavas stated that people with strong knowledge of environmental problems are more likely to behave in environmentally friendly ways²⁷. Individual knowledge influences behavior and performance²⁸. Knowledge is crucial for understanding the fundamental technology behind the green economy.

B. SME Entrepreneurs' Attitudes Toward Environmentally Conscious Business Practices

The findings from the second focus indicate that SME owners generally have a positive and supportive attitude toward environmentally conscious business practices. All three SMEs expressed support for the necessity of managing waste produced during the production process, especially hazardous waste. However, some SMEs still believe that their waste does not pose a threat to environmental sustainability. The limited knowledge about environmentally conscious business practices, combined with the lack of negative responses from the local community or

²² Janice Redmond and Elizabeth Walker, "Environmental Education in Small Business: The Owner-Manager's Perspective," *Australian Journal of Environmental Education* 25, no. 2009 (2009): 117–28, <https://doi.org/10.1017/s0814062600000458>.

²³ Craig M. Parker, Janice Redmond, and Mike Simpson, "A Review of Interventions to Encourage SMEs to Make Environmental Improvements," *Environment and Planning C: Government and Policy* 27, no. 2 (2009): 279–301, <https://doi.org/10.1068/c0859b>.

²⁴ Amandine Pinget, Rachel Bocquet, and Caroline Mothe, "Barriers to Environmental Innovation in SMEs: Empirical Evidence from French Firms," *Management (France)* 18, no. 2 (2015): 132–55, <https://doi.org/10.3917/mana.182.0132>.

²⁵ Jacqueline Frick, Florian G. Kaiser, and Mark Wilson, "Environmental Knowledge and Conservation Behavior: Exploring Prevalence and Structure in a Representative Sample," *Personality and Individual Differences* 37, no. 8 (2004): 1597–1613, <https://doi.org/10.1016/j.paid.2004.02.015>.

²⁶ S.L Mobley, C& Vagias, W.M & DeWard, "Exploring Additional Determinants Of Environmentally Responsible Behaviour: The Influence Of Environmental Literature And Environmental Attitude," *Environ. Behav* 42, no. 4 (2010): 420–47.

²⁷ O Dicle, I Çakci, and Safiye Kavas, "Environmental Awareness Of University Students," *Çankırı Karatekin Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* 7, no. 2 (2016): 187–200.

²⁸ Amir Maleki and Sara Karimzadeh, "A SURVEY OF RELATIONSHIP BETWEEN THE ENVIRONMENTAL ATTITUDES AND ENVIRONMENTAL KNOWLEDGE AND ENERGY CONSUMPTION BEHAVIOR AMONG CITIZENS OF URMIA, WEST AZERBAIJAN, IRAN Amir," *International Journal Of Social Sciences And Humanity Studies* 3, no. 1 (2011).

warnings from relevant authorities, has led some SMEs to feel comfortable with their current practices.

The findings of Maleki & Karimzadeh indicate that environmental attitudes have a significant relationship with behavior²⁹. SME owners are aware of the importance and benefits of environmentally conscious practices for the future³⁰. However, the environmentally conscious attitudes of SME owners do not always translate into proactive environmental practices or behavior. Merritt similarly noted that most managers exhibit a high level of concern regarding environmental management³¹.

Furthermore, according to Kollmuss & Agyeman, environmental awareness is determined by several aspects, including knowledge, environmental values and attitudes, as well as emotional involvement³². The age of SME owners also contributes to shaping environmental attitudes³³. Managerial attitudes and characteristics are key driving factors for SMEs to adopt green practices³⁴. A primary driving factor for implementing environmental practices is the personal attitude of SME owners³⁵.

In addition, Cassells & Lewis found that most SME owners are aware of the environmental risks posed by their business activities. However, SME owners believe that environmental regulations alone are insufficient to address environmental problems³⁶. Therefore, there is a need for awareness, willingness, and voluntary initiative from SME owners. Nonetheless, the positive

²⁹ Maleki and Karimzadeh.

³⁰ Maleki and Karimzadeh.

³¹ J. Quentin Merritt, "EM into SME Won't Go? Attitudes, Awareness and Practices in the London Borough of Croydon," *Business Strategy and the Environment* 7, no. 2 (1998): 90–100, [https://doi.org/10.1002/\(sici\)1099-0836\(199805\)7:2<90::aid-bse141>3.3.co;2-6](https://doi.org/10.1002/(sici)1099-0836(199805)7:2<90::aid-bse141>3.3.co;2-6).

³² Kollmus and Agyeman, "Mind the Gap : Why Do People Act Environmentally and What Are the Barriers Mind the Gap : Why Do People Act Environmentally and What Are the Barriers To."

³³ Schaper, "Environmental Attitudes and Practices amongst Small Business Owner/Managers in the Western Australian Community Pharmacy Sector."

³⁴ Bilge Aykol and Leonidas C. Leonidou, "Researching the Green Practices of Smaller Service Firms: A Theoretical, Methodological, and Empirical Assessment," *Journal of Small Business Management* 53, no. 4 (2015): 1264–88, <https://doi.org/10.1111/jsbm.12118>.

³⁵ Francesco Testa et al., "Factors Affecting Environmental Management by Small and Micro Firms: The Importance of Entrepreneurs' Attitudes and Environmental Investment," *Corporate Social Responsibility and Environmental Management* 23, no. 6 (2016): 373–85, <https://doi.org/10.1002/csr.1382>.

³⁶ Sue Cassells and Kate Lewis, "SMEs and Environmental Responsibility: Do Actions Reflect Attitudes?," *Corporate Social Responsibility and Environmental Management* 18, no. 3 (2011): 186–99, <https://doi.org/10.1002/csr.269>.

attitudes of SME owners do not always translate into greater involvement in environmental practices, such as waste management, operational activities, and environmental design.

C. SME Entrepreneurs' Behavior in Raw Material Procurement, Production Process, Product Marketing, and Waste Management

The findings from the third focus of this study indicate that SMEs with strong, proactive environmentally conscious behavior exhibit the following characteristics: (a) They use natural or eco-friendly raw materials; (b) They do not add hazardous substances during their production activities; (c) They manage their waste, even if it incurs personal costs; (d) They are proactive in addressing environmental issues.

SMEs with moderate environmentally conscious behavior demonstrate the following traits: (a) They have a moderate profit orientation but still maintain an environmental sustainability focus during production; (b) They use reusable packaging materials; (c) The raw materials they use may cause environmental pollution, but at a low intensity.

SMEs with low or reactive environmentally conscious behavior are characterized by: (a) Using raw materials that are harmful to environmental sustainability and human health; (b) Not managing waste, with direct disposal into rivers; (c) Using hazardous packaging materials, such as plastic bags; (d) Refusing to allocate funds for the construction and management of wastewater treatment facilities (IPAL); (e) Focusing solely on business continuity and high profits; (f) Being reactive or indifferent to environmental issues caused by their business activities.

The primary barriers for SMEs to engage in environmentally conscious behavior are issues related to time and cost³⁷. Government regulations alone are not sufficient drivers for SMEs to adopt green behavior, due to varying enforcement capacities³⁸. Some SMEs have environmental managers, but the time available to address environmental issues is very limited³⁹. Many SMEs lack environmental policies, resulting in the absence of environmental reports. Most SMEs believe

³⁷ Beth Walker and Janice Redmond, "Changing the Environmental Behaviour of Small Business Owners: The Business Case," *Australian Journal of Environmental Education* 30, no. 2 (2015): 254–68, <https://doi.org/10.1017/ae.2015.6>.

³⁸ Ralph Hamann et al., "Why Do SMEs Go Green? An Analysis of Wine Firms in South Africa," *Business and Society* 56, no. 1 (2017): 23–56, <https://doi.org/10.1177/0007650315575106>.

³⁹ D. Williamson and G. Lynch-Wood, "A New Paradigm for SME Environmental Practice," *TQM Magazine* 13, no. 6 (2001): 424–32, <https://doi.org/10.1108/EUM00000000006179>.

that having an environmental policy is necessary, as it would positively impact their business. However, stakeholders' perceptions of environmental issues remain ambivalent. Furthermore, while SMEs are aware of environmental issues, they tend to demonstrate low commitment to addressing them.

Conclusion

The knowledge of SME entrepreneurs regarding environmentally conscious production varies, ranging from high to moderate. The attitudes of SME entrepreneurs toward environmentally conscious business practices are very positive. However, these positive attitudes are not consistently reflected in environmentally conscious production behavior. There are still SMEs whose practices in raw material usage, production processes, and waste management do not align with environmentally conscious behavior.

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