



Ethical Leadership Style in Moderating the Influence of Green Organizational Culture on Green Innovative Behavior: SMEs Cases

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ABSTRACT

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This study aims to test: 1) the influence of green organizational culture on innovative green behavior, 2) the role of ethical leadership in moderating the influence of green organizational culture on innovative green behavior. This research was conducted with a survey and involved all Batik Small & Medium Enterprises (SMEs) employees in Berbah subdistrict, Sleman, Yogyakarta, Indonesia. The number of employees is 115 people and work in 12 SMEs. The researcher used mixed methods (quantitative and qualitative) to obtain factual data. Interviews and questionnaire were data carried out. Researchers used the qualitative method by conducting in-person interviews of SMEs owners and workers. Instrument tests use confirmatory factor analysis and reliability tests. The research instruments are examined using confirmatory factor analysis and reliability tests. The hypothesis testing is done by simple regression and moderation regression. Hypothesis test results show that green organizational culture positively affects innovative behavior, and ethical leadership moderates the influence of green organizational culture on innovative green behavior. The results of this study have theoretical implications and managerial implications that are beneficial to leaders in improving innovative environmentally friendly behaviors. Given the lack of analysis of the role of ethical leadership in increasing the influence of green organizational culture on innovative behavior that is environmentally friendly, further research is needed in the future.

1. INTRODUCTION

The rapid change that occurs in the environment demand every organization to always be dynamic and reactive, including dealing with severe ecological dynamics in form of degradation. Degradation is mainly caused by industry, both directly or indirectly. Most of the economical, technological, institutional and organizational barriers are predicted to vary between industry and country [1]. According to Venkatesh and Goyal [2], individual needs start from materialism (the body) but it also needs physical, emotional, and spiritual balance in life. Similarly, industrial ecology tries to achieve sustainability goals as realized. The economic benefits will lose their appeal in the long run, so that a spiritual outlook will be indispensable for global sustainability.

Theories about innovation often focus on being broader than creativity, and in the theory, there is an implementation of created ideas. The digital era as it is today increasingly stress the need for a higher level of innovation and creativity from each member of the organization. De Jong and Den Hartog [3] developed innovative work behavior (IWB) to expose problems and generate ideas to build the behavior needed to implement ideas. The ultimate goal of the IWB development process is to improve the performance of individuals and organizations.

According to De Jong and Kemp [4] innovative behavior can be defined as all individual actions directed at the

organization's interests in which introductions and applications of new ideas are profitable. Intrinsic or internal factors do not solely influence innovative behavior. Innovative behavior at work often arises when an employee faces challenges, gaining broad authority in carrying out his duties and responsibilities. Today many businesses are aware of the importance of developing innovative employee behavior but care less about environmental conservation. Innovative behaviors that arise increase the greenhouse effect, such as products from plastic materials, infrastructure development, the number of industrial factories, aerosol gas sprays, forest burning, and so on. Therefore, employees with green innovation are needed by the organization.

One thing that influences the realization of individual innovation behavior is organizational culture. Manik and Megawai [5] stated that corporate culture is one of the opportunities to build human resources through aspects of changing attitudes and behaviors, which is expected to adjust to ongoing and future challenges. Organizational culture is an invisible social force that can move people to carry out work activities. A solid corporate culture supports the goals of a company or organization. Organizational culture plays an essential role in managing organizations because it creates the exact and complete perception of the true meaning of co-life.

Green organizational culture (GOC) is a significant variable for any organization to build on innovative green behavior to achieve organizational performance and competitiveness.

GOC is an interpretive and symbolic concept that guides all employee and corporate behavior in environmental management and protection [6]. Green organizational culture is a perspective of sharing social beliefs, values, norms, symbols, and stereotypes about organizational environmental management and shaping the standard behavior expected of individuals [4]. The development of green organizational culture can create a positive organizational climate as an absolute necessity to encourage the creation of green innovation behavior [7].

Strengthening the role of green organization culture to green innovation behavior is primarily determined by the ability of leaders to internalize green values to employees. Leadership Success in internalizing green cultural values, directly and indirectly, can reduce the effects of global warming. A leadership style closely related to the internalization of green organizational culture is an ethical style [8]. Ethical leadership as a process influenced employees through values, principles, and beliefs that broadly border on accepted norms in organizational behavior [9]. Based on the above background, research that tests green organization culture against green innovation behavior in moderation ethical leadership becomes very important.

This research focusses on examining the Green Organization Culture associated with Green Innovation Behavior that requires the role of Ethical Leadership in Batik SMEs in Berbah Subdistrict, Sleman, Yogyakarta, Indonesia. This model is at once a novelty of researchers and at the same time fills research gaps with reasons:

1. There have been some previous studies on the characteristics of green innovation, but representation and reference value are not strong [10]. Thus, businesses have difficulty finding their position and must learn from the results of current studies. Batik SMEs until now still have difficulty finding positions in the era of competition and digitalization. When it is not clear its position, Batik SMEs can lose potential customers.
2. Schiederig et al. [11] adopted a content analysis method (analyzing content relevant to the research) to analyze data of companies registered in China, finding that green process innovation positively impacts green product innovation. Although content analysis has been widely used in managerial research, content analysis in previous research explores green innovation practices in large companies more. The practice of green innovation in specific SMEs that produce products from direct human handicrafts (such as batik, handicrafts, carving arts, and so on) is limited.
3. Research testing the role of ethical leadership in moderating the influence of organizational culture on innovative behavior is minimal. Previous research tested the moderating effects of psychological empowerment [12]; organizational support [13]; green identity [14]; Team learning [14].
4. The emergence of environmental damage harms society, raising consumer awareness about the environment. This environmental damage changes consumers' appetite for choosing environmentally friendly products and ecological sustainability.
5. Research with batik SME objects implementing green organizational culture on business orientation companies is minimal [15]. Green organization culture utilizes natural dyes such as turmeric, tea, onion, teak, avocado, secang, manga, indigofera, coconut, putri malu, and noni. Workers

and owners of Batik SMEs crucially on green innovative behavior Batik materials derived from synthetic dyes cause adverse effects on the surrounding community, such as: River water becomes smelly, murk, and black, which results in death for the water, causing skin pain for its users. In addition, batik waste from synthetic dyes endangers fisheries fields and agriculture.

2. LITERATURE REVIEW

Organizational culture is defined as "a set of shared mental assumptions that guide actions and interpretations within an organization by defining appropriate behavior for a situation" [16]. Green Organizational Culture is a set of values, symbols, assumptions, and organizations. It can also be understood as artifacts that reflects an obligation or desire to be an environmentally friendly organization [6]. In addition, it is also defined as a "common archetype" of assumptions about environmental issues and environmental management [6, 17]. Green organizational culture integrates environmental management with corporate culture [13]. Green Organizational Culture encompasses shared beliefs, values, norms, social symbols, and stereotypes about organizational environmental management and shapes the standard behavior expected of individuals [18]. Symbolism for the management and protection of the environment in the eco/green culture of the organization shapes the perception and behavior of the organization members [18, 19]. Several factors such as encouraging participation, increasing motivation, introducing reward and incentive systems, better communication, and training will be essential to building a green culture in organizations [20-23]. Muafi et al. [24] found that green organizational culture positively affects green innovation and competitive advantage. Asbari et al. [25] study have shown innovation activities mediate green human capital's influence on organizational performance. The results of the study from Parashakti et al. [26] show that corporate culture and leadership styles significantly influence innovation behavior. A study conducted by Sloan et al. [14] on employees of the tourism industry in Malang stated that ethical leadership positively affects innovative work behavior.

From this background, this study aims to test the direct influence of green organizational culture on green innovative behavior and examine the role of ethical leadership in moderating the influence of green organizational culture on green innovative behavior in Batik SMEs in Sleman Regency, Yogyakarta.

2.1 Green organizational culture – green innovative behavior

"Green innovation" is still an exciting topic to research. The researchers describe green innovation as an effort to help reduce the impact on the natural environment. Schiederig et al. [11] show that green innovation is a general term for a series of innovative activities. It helps improve the quality of the ecological environment and contributes to sustainable development. through a comprehensive discussion of these concepts, the researchers form a consensus on the definition of green innovation, including the following: (a) the entire lifecycle of the product; (b) Innovative objects, are products, processes, services, and methods; (c) the purpose of innovation is to reduce or eliminate the impact on the

environment. Schiederig et al. [11] note that green innovation introduces ecological ideas to develop new products, markets, systems, or economic strategies. Schiederig et al. [11] state that green innovation is a series of applications in newly developed or improved processes about technologies, practices, systems, and products. The goal is to avoid or reduce environmental hazards. The study of reducing negative impacts on the environment began in the early 1990s [11]. Thus, environmental improvements should be integrated into all aspects of the business.

Green Organizational Culture is a set of values, symbols, assumptions, and organizations. It can also be understood as artifacts that reflects an obligation or desire to be an environmentally friendly organization [7]. A holistic approach to hospitality and tourism to long-term strategic positions is indispensable [27]. Regardless of its size, sustainable forms, solutions, and practices in the lodging company's business operations explicitly or implicitly embrace the triple bottom line (TBL) sustainability principle. The conceptual approach of green organizational culture is about being aware of environmental risks. There is ample evidence of a paradigm shift in today's highly competitive and ever-changing business climate. Top-level management must demonstrate and share sustainability practices with simple programs or examples to be more acceptable to lower management and employees [28].

Business people (hotels, SMEs, and other service industries) must develop green organizational culture and invest in green innovation activities to gain a competitive advantage [12]. Hotels and SMEs that demonstrate TBL reported that they have been able to increase profits, higher asset returns, capital profitability, better cash flow solvency ratios, customer satisfaction, cooperation with residents, environmental cooperation of Non-Governmental Organizations, less dense waste, less water consumption, lower CO₂ emissions, and better-quality recycled waste [12].

The batik industry certainly results in various wastes, one of which is waste from batik dyes that can cause water pollution. Therefore, the batik production process and waste disposal must be thought thoroughly in such a way by craftsmen so as not to pollute the environment. Business owners need to instill understanding to all members who produce batik products, that they must take into account the environmental impact. Supposedly, members already have the same perception as business owners in preventing environmental pollution due to product waste. In that case, this becomes an organizational culture that leads to green corporate culture. The green organizational culture perceived as high by all SME members will positively impact the behavior of environmentally friendly employee innovation (innovative green behavior).

According to Gürlek and Tuna [27] green innovative behavior is a series of work activities that are gradually carried out by workers in developing and improving effective work behavior towards the environment. Individual levels of attention to environmental issues are useful environmental predictors for environmentally conscious behaviors that start with recycling behavior [29] to green purchasing behavior [15]. For example, consumers with a vital concern for the environment are more likely to buy products due to their environmental claims [30]. The stages towards environmentally friendly behavior activities are as follows: First, know and understand the scope of work and the potential problems. Second, have a high awareness of the quality of work and creatively strive for solution actions. Third, build together and commit to realizing innovative improvement

proposals in the group work process. Fourth, apply the proposed improvements in the work.

De Jong and Den Hartog [31] found that green organizational culture positively affects green innovation and competitive advantage. Shashwat [32], Küçüköğlü and Pınar [1] demonstrates green organization culture's positive and significant influence on green innovation behavior.

H1: Green organizational culture positively affects green innovative behavior.

2.2 Green organizational culture – ethical leadership – green innovative behavior

Ethical leadership is a leadership style that emphasizes the necessity of using ethical considerations and makes it the foundation for decision-making or action. When expanding business, the impact of the expansion of the company on many parties, especially for the local community, must be considered and used as one of the bases for decision making. It is highly unethical when a company gets a significant result or profit, but the surrounding community suffers losses, such as pollution or environmental damage, and so on. Just as personal integrity has negative and positive traits or minimal and maximal levels, ethical leadership in a business also has such distinctions. The minimum obligation is considered the principle of not harming other people or parties. The maximum obligation is to share the large profits obtained to parties directly or indirectly involved in running the business. Morally the first obligation or minimal obligation is an ethical imperative. All business people must be able to fulfill that imperative. There must be a high commitment (ethical) not to harm people or others to benefit oneself (organization). An attempt to achieve personal or organizational goals must sacrifice no one. All losses incurred operation of the business in that place must be borne entirely by the company. It must provide proper redress, which satisfies a sense of justice and truth. Waste produced by the plant must not pollute the environment. All these efforts must be maximal so that it is guaranteed not to cause negative impacts on the environment and surrounding communities, both in the short term and in the long term [33].

Social learning theory [34] can explain the antecedents and consequences of ethical leadership. Social learning theory highlights why some individual characteristics of leaders and situational factors relate to member perception. According to social learning theory, ethical leaders must be attractive, credible, and able to be role models in the presence of members. Ethics and leadership literature identifies several situational factors and individual characteristics that enhance the attractiveness and credibility model. In addition, social learning theory helps explain why and how ethical leaders influence their followers. Social learning theory [11] was based on the idea that individuals learn by paying attention to and mimicking attractive and credible leaders [20]. Ethical leaders become a source of reference for behavior that members deserve because of their attractiveness and credibility. Power and status are two characteristics of models that enhance the attractiveness of ethical leaders [22]. Most leaders have authority because they occupy positions of status relative to followers. Beyond that, attraction involves more than just authority and status. Ethical leaders can be trusted because they can practice what is said. It becomes more valuable for an ethical leader as a role model.

The changes that occur change human thinking about the

meaning of ethical values for business success. Ethical values are increasingly being left behind in human behavior. An ethical leader in these conditions is essential to communicate his ideas ethically to members. They set clear and high ethical standards for others and follow these standards. They also use rewards and penalties to influence members' ethical behavior. Research shows that reinforcement plays an important role in the effectiveness of ethical leaders as role models. Social learning theory assumes that being a human learner is very important. Through organizational learning, the ethical behavior in all members can be trained. Employees can learn about what behaviors are acceptable and unacceptable, how members are valued, and be allowed to organize themselves into disciplined human beings. In addition, ethical leaders communicate the importance of ethical standards and use performance management systems to hold employees accountable for their behavior.

Ethical leadership is considered necessary because it significantly influences members' behavior. Many leaders who maintain ethical values fail to realize the importance of role models for members [20]. Consistent with a social learning perspective, members mimic the behavior of ethical leaders because such leaders are attractive and credible models that model appropriate normative behavior. Therefore, ethical leaders influence ethically related behaviors such as employee decision-making and prosocial behavior through modeling and learning processes. In addition, ethical leaders positively and relevantly associated with the social exchange. Recent research is specifically designed to develop a formal definition of ethical leadership [20] and a valid and reliable measure of ethical leadership [21].

In addition to being moral, ethical leaders undertake their honest daily management. Ethical leaders expect followers to have high moral standards and use transactional methods, such as rewards and punishments, to ensure that followers meet their expectations [21]. Ethical leadership has a positive effect (e.g., improving the performance and behavior of organizational citizenship) [22]. A further review revealed whether ethical leadership could be associated with reducing adverse outcomes such as counterproductive behavior, deviance, and unethical behavior. Ethical leaders are honest and principled individuals who make fair decisions [21]. They communicate ethical expectations, set clear ethical standards, and award, as well as punishment for ensuring compliance [22]. Competence refers to a person's desire to accept, control, and master environmental challenges. Ethical leaders create an organizational environment where employees develop abilities that enable them to achieve their goals while ensuring that employees' competencies are in line with moral values [23]. Employee competence then develops to improve innovative behaviors that bring about the advancement of an organization.

According to De Jong and Den Hartog [31], organizations must develop green organizational culture and invest in green innovation activities to gain a competitive advantage. Leadership style can affect the increasing influence of green corporate culture on innovative green behavior. Bertels et al. [35] shows that leader behavior has a positive effect on the innovative work behavior of its members. Ethical leadership styles that perceive as high by members will increase the influence of green organizational culture on innovative green behavior. Wang et al. [33] shows that ethical leadership style indirectly affects green innovation behavior through corporate social responsibility. Aisyah et al. [36] shows that the ethical

leadership style carried out by Kyai as a leader of boarding schools has a vital role in improving the cultural values of the cottage towards innovative behavior.

H2: The more accepted ethical leadership style by members will increase the influence of green organizational culture perception on the perception of innovative green behavior and vice versa

Based on the above hypotheses, Figure 1 shows the research model.

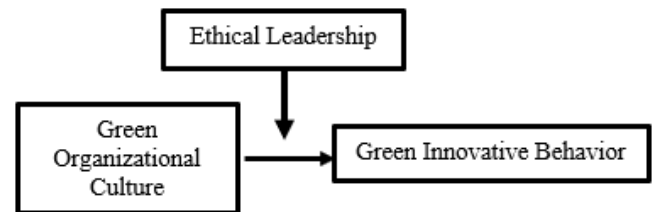


Figure 1. Hypothesized model

3. METHOD

- a. This research was conducted with a survey and involved all Batik Small & Medium Enterprises (SMEs) employees in the District of Berbah, Sleman, Yogyakarta, Indonesia. The number of employees is 115 people and works in 12 SMEs. Researchers distributed questionnaires by directly visiting Batik SMEs by the schedule determined by the owner of the SMEs. Berbah Subdistrict is one of the batik centers in Sleman Regency, in addition to other batik centers in the area of Plalangan Hamlet (Pandowoharjo Village), Mantara Hamlet (Trimulyo Village), Margokaton Village, Seyegan) and Prambanan. Types of batik produced in the SMEs include: batik jumput, batik siori, batik with natural dyes, batik tulis. Sleman batik motifs inspired by the diversity of flora (plants), fauna (animals), and natural or geographical conditions in Sleman Regency Yogyakarta. The batik SMEs in Berbah Subdistrict also follows the motif of Sleman Regency. There are several typical motifs of Sleman batik, namely: sinom parihotho, Salak Pondoh motif, batik eel and salak motif, batik elephant motif combination of broken machete baron, batik motif sinom parihotho salak, and cashew motif.

The reason for the selection of objects in The District of Berbah is because this area has a uniqueness that is not owned by other batik producing regions, namely:

- 1). Batik businesses in this region preserve the plants on which natural dyes are based, such as morengo flowers, indigo, and kesumba rivet plants. With this behavior, batik business is oriented towards environmentally friendly behavior.
- 2). Batik business actors have an awareness of applying green innovation. Green innovation consists of new or modified processes, practices, systems, and products that benefit the environment and contribute to environmental sustainability.
- 3). Batik business actors carrying out the production process received assistance from the Ministry of Industry and MSMEs, Sleman Regency for adopting green product innovation. Green product innovations include:
 - (a) the use of materials that have the most negligible

negative impact in developing or designing the product

- (b) Selection of materials that consume the least energy and resources in the development or design of products,
 - (c) Assistance by always considering whether the product is easily recycled, reused, and outlined in the development or design of the product.
- b. The data type includes secondary data (data on the number of Batik SMEs in Berbah Subdistrict, Sleman Yogyakarta) and primary data. Primary data was obtained through research questionnaires and interview results with batik SMEs owners.
- c. Research variables include green organizational culture (independent variable), ethical leadership (moderating variable), and innovative green behavior (dependent variable).
- d. The method of collecting data in this study is through interviews and questionnaires.
- e. Research Instruments
Green Organizational culture is measured by instruments developed by Chen [37]. Green innovative behavior is adopted from instruments developed by Choi et al. [38]. Ethical leadership is adopted from instruments developed by Brown and Trevino [21].
In this study, there is still a validity test (Confirmatory Factor Analysis / CFA method) and a reliability test (by looking at Cronbach's Alpha coefficient). Researchers set the Alpha level coefficient of 5%. Instrument test results show all items show high validity (loading factor coefficient above 0.5) and reliability above 0.6.
- f. Hypothesis test: use simple regression analysis (H1 test) and gradual regression (H2 test).

4. RESULT

4.1 Response rate and respondent

Details of the demographic statistics of the respondents involved are shown in Table 1.

Table 1. Characteristics of respondents

Characteristics	Category	Sum	Percentage
Gender	Man	45	39.13%
	Woman	70	60.87%
	Total	115	100.00 %
Age	18-24 years	12	10.43 %
	25-31 years	39	33.91 %
	32-38 years	44	38.26 %
	39-45 years	20	17.39%
	Total	115	100.00%
Education	Primary school	8	6.96%
	Junior high school	17	14.78%
	High School	79	68.69%
	Diploma	7	6.09%
	Bachelor	4	3.48%
	Total	115	100.00%
		1-3 years	41
	4-6 years	24	20.86%
	7-9 years	19	16.52%
	10-12 years	31	26.95%
	Total	115	100.00%

Source: Primary data processed, 2022

Table 1 shows that most of the respondents (batik SMEs in Berbah Subdistrict) are women at 6 (87%), the age of 32 to 38 years (38.26%), have the last education as high school (68.69%), and the working period in SMEs is dominated by 1 to 3 years (36.94%).

4.2 Hypothesis 1 test results

The results of hypothesis 1 test that green organizational culture has a positive effect on green innovation behavior can be seen in Table 2. The simple regression test result shows that green organizational culture has a positive and significant effect on innovative green behavior because the significant coefficient is 0.030 (< 0.05), so H1 is accepted.

Table 2. Hypothesis 1 test results

Coefficients ^a						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)		.087	.610	.175	.760
	GOC (X)	472	.105	.386	2.674	.030

a. Dependent Variable: *Green Innovative Behavior* (Y)

Source: Primary data processed, 2022

4.3 Hypothesis 2 test result

The results of the hypothesis 2 test, which states that the more accepted ethical leadership style by members, it will increase the influence of green organizational culture perception on the perception of green innovation behavior and vice versa, can be seen in Table 3.

Table 3. Moderation regression test

	R Square	B	S.E	t	P
GOC → GIB	.041	.545	.0583	8.191	.030
GOC, EL, Interaction → GIB	.077	.631	4.362	7.832	.020

Source: primary data processed, 2021

GOC: Green Organizational Culture

GIB: Green Innovation Behavior

EL: Ethical leadership

The phase 2 regression test is 0.077, and the R Square stage 1 regression value is 0.041. These results show an increase in the influence of green organizational culture on innovative green behavior when accompanied by acceptance of ethical leadership styles.

Thus H2 is supported, meaning that ethical leadership style plays a role in moderating the influence of green organizational culture on innovative green behavior. We can say that the more accepted ethical leadership style by members, the more the impact of green corporate culture on innovative green behavior will increase, and vice versa.

5. DISCUSSION

The results of the hypothesis 1 test showed green organizational culture had a positive and significant effect on innovative green behavior. The results of this research support

the research of ref. [24, 26]. The organizational culture that leads to being environmentally friendly is more than just accounting calculations. It involves managing TBL taking into account the environmental, social, and economic risks in decision making. In addition to creating economic value, sustainable businesses can be more resilient and make ecosystems healthier [39]. A healthy corporate culture will impact environmentally friendly employee innovation behavior as well. Organizations that pay attention to environmental health will make employees healthier, confident and increase their creativity and innovation abilities. Symbolism for environmental management and protection in an environmentally friendly culture will shape more innovative organization members [6, 40]. An ecologically friendly organizational culture will make administrative modifications. The process can increase the efficiency of using non-renewable and renewable resources, reduce pollution, and carry out activities in a sustainable manner called greening [39].

The results of the H2 test showed that the ethical leadership practiced by SME owners towards members was able to significantly increase the influence of green organizational culture on innovative green behavior. Ethical leadership in the business world applies the principle of not harming others (at a minimum) and sharing happiness for others (maximum). Ethically the first principle (at least) is necessary, while the second principle (maximal) is a moral appeal. When we can implement both principles sincerely, the positive impact on the organization is tremendous. Those who feel the fulfillment of that principle by the organization will respond positively. Employees will work more earnestly, and the wider community, significantly the surrounding community, will help secure the organization's existence in their midst. Positive responses from employees and the surrounding community will impact the increasingly high power of member innovation. The members' performance in the batik business will increase.

Behavior about green organizational culture (examples: member discipline in removing batik waste, use of natural dyes, availability of landfills according to the material, the comfort of the room when producing, adequate air ventilation while producing) will be able to increase the innovation power of SMEs members to produce batik that is more varied (motifs, colors), more beautiful, more elegant and make the wearer confident. This positive influence is reinforced by leaders who apply ethical styles because there is a high commitment (ethical) not to harm people or others for the benefit of themselves (the organization). Ethical leaders have the principle that they should sacrifice to achieve personal or organizational goals. Thus the ethical leadership in this research demonstrates its ability to increase the influence of green organizational culture on innovative green behavior.

6. CONCLUSION AND LIMITATION

6.1 Conclusion

The results of hypothesis 1 show that green organizational culture had positive effects on innovative green behavior. The culture of green organization implemented into SME Batik to all workers well, in the form of getting used to removing batik waste in safe channels, the use of natural dyes with the right portion, distinguishing and removing waste according to the basic materials results in increasing innovative behavior of

workers who always maintain the environmental sustainability. The results of the H2 test showed that the ethical leadership practiced by SMEs owners towards members was able to significantly increase the influence of green organizational culture on innovative green behavior. Green organization culture that is carried out ranging from the use of natural dyes, clean production processes, energy conservation, resource efficiency, correct recycling processes to low-carbon technology, will be able to improve green innovation behavior in the form: the more varied the motif of natural-patterned batik, the higher the economic value of batik compared to batik from synthetic dyes.

Increasing innovative behavior of green cannot be separated from the role of the owner and leader of Batik SMEs in implementing ethical leadership values to members. Through organizational learning, the ethical leader can be trained to all members. Employees can learn about what behaviors are acceptable and unacceptable, how members are valued, and be allowed to organize themselves into disciplined human beings. In addition, ethical leaders communicate the importance of ethical standards and use performance management systems to hold employees accountable for their behavior.

This study has some limitations, including: first, population uptake is still minimal because SMEs are studied in only one sub-district and on one type of product. Further research should be expanded in the scope of the population, not only in one sub-district but in one country or abroad. Respondents should also extend the type of product produced to other SMEs. Second, that ethical leadership will assimilate the values of subordinates. However, cross-sectional data collection of this study requires a more longitudinal design in the future to get better study results. Third, the focus of this study is on the innovative behavior of environmentally friendly employees on an individual level. Further studies are needed to identify individual and team processes that influence the innovative behavior of ecologically friendly employees, so research with a multilevel approach is essential.

6.2 Implications and limitation

The theoretical implications of this research result are: (1) academics and researchers have a perception of the contribution of ethical leadership to the improvement of environmentally friendly innovation behavior to have the opportunity to conduct research that can improve the ethical performance of members/employees. The results of this research support and strengthen the Theory of social learning. The Theory of social learning helps explain why and how ethical leaders influence their followers. According to Brown and Mitchell [22], social learning theory is based on the idea that individuals learn by paying attention to and imitating attractive and credible attitudes, values, and behaviors [20]. Ethical leaders become a source of behavioral references worthy of member attention because of their attractiveness and credibility. Power and status are two characteristics of models that increase the attractiveness of ethical leaders [41]. (2) The results of this research add to the theoretical study of the role of ethical leadership styles in moderating the influence of green organizational culture on green innovation behavior because previous studies have never been done. Previous research of ref. [5, 42] includes other variables (beyond ethical leadership) as moderation variables. In the past, innovative employee work behavior improvements, in general, were through internal and external rewards. Leaders are not yet fully

aware that their role models can serve to improve members' innovative work behavior.

The managerial implications associated with the results of this study are: first, having a green organizational culture, pushing organizations towards increased transparency that can convince stakeholders of the capabilities of leaders. Thus organizations can take accountability to a higher level, adapt to increasingly friendly environmental changes, and create various green policies that lower the risk of public scrutiny, risks that harm society, stakeholders, and the workers themselves. Green organizational culture is a path to sustainable development that only be achieved by incorporating pro-environmental values into the organization's culture. Green Organizational Culture values in batik SMEs include: the use of natural dye materials, providing special batik waste disposal sites, choosing and grouping waste according to the basic materials (sorting organic and non-organic waste), disposing of waste in the places provided, imposing strict sanctions on people who do not adhere to the culture of green organizations, using enough water, reduce the use of detergents when washing batik, and recycling waste into valuable items. Human Resources Management Internalization of the cultural values of green organizations can only be done because it is the guardian of culture to strengthen the organization's culture driven by the values contained in the vision and mission of the organization. Second, the influence shown by ethical leadership is seen significantly with the increasing influence of green organizational culture on green innovation behavior. This study proves that when organizations successfully internalize environmentally friendly cultural values, it will positively impact employees' innovative behavior by always trying to produce environmentally friendly products and maintain ecological sustainability.

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