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The Influence of Internal Environmental Capabilities on Sustainable Competitive Advantage through Green Innovation with Corporate Reputation Moderation: A Study on Natural Dye Batik SMEs in Yogyakarta

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ABSTRACT

This study aims to analyze the influence of internal environmental capabilities on sustainable competitive advantage mediated by green innovation and the role variable of corporate reputation that affects the relationship between green innovation and sustainable competitive advantage. This study uses a quantitative method with a survey research design. The research sample is 72 batik SMEs with natural dyes in the Special Region of Yogyakarta. Data analysis uses the smartPLS 4.0 technique. The results of the study show that there is an indirect influence between the ability of the internal environment to sustainable competitive advantage, namely through the variable of green innovation. This study did not find any direct influence between internal environmental capabilities and sustainable competitive advantage. Furthermore, another finding is that the Company's reputation strongly influences the relationship between green innovation and sustainable competitive advantage. These findings have implications for practitioners to develop green innovations to achieve sustainable competitive advantages for their SMEs.

INTRODUCTION

Increased awareness of the risk of pollution to the environment caused by activities arising from economic activities that make stakeholders interested in paying more attention to management in a company (Thomas et al., 2021). Companies in recent years have adopted various measures to make sustainability practices a core aspect of their goals so that they are encouraged to include economic prosperity, social welfare and promotion/concern for the environment in the products and services they provide (Adu-Yeboah et al., 2023).

SMEs have become an important role in environmental sustainability because of their increasingly rapid development. Almost 70% of industrial pollution comes from the activities of SMEs (Johnson, 2017). SMEs in Asia contribute greatly to environmental issues that cause climate change and natural disasters with consumption and wasteful use of resources (Kiranantawat & Ahmad, 2022). SMEs must structure and combine their resources and capabilities to align with environmental requirements while maintaining their competitiveness (Mishra & Yadav, 2021).

The debate over the ability of SMEs to achieve sustainability and economic goals has become a debate. Due to limited resources, SMEs face great challenges in developing sustainability capabilities that may require additional costs, making it difficult to maintain their competitiveness (Hockerts & Wüstenhagen, 2010). SMEs often face challenges in achieving green business opportunities because they do not have the capability to develop their abilities (Chang & Chen, 2013). This finding contradicts other studies that say that SMEs are able to develop their abilities simultaneously to drive social and environmental efforts and economic performance (Eikelenboom & de Jong, 2019).

Table 1
Small and Medium Business Growth 2018-2023

Year	2018	2019	2020	2021	2022	2023
Number of SMEs	259.581	262.130	287.682	337.060	342.924	342.586

Source: Bappeda Yogyakarta Province

SMEs in Indonesia have experienced rapid growth from year to year, which makes SMEs the most powerful driver of the country's economy (Ministry of Economy, 2022). Yogyakarta, according to data from the Yogyakarta Provincial Bappeda, has quite good SME growth. However, as shown in the data in the table, in 2023 the number of SMEs in Yogyakarta will decrease. In addition, data from the Yogyakarta Provincial Bappeda shows that SMEs in this region have not experienced development in their business until 2022. This shows that SMEs, especially in Yogyakarta, are experiencing difficulties in maintaining and developing their businesses.

A study conducted by Bank Indonesia in 2016 stated that one of the reasons for this problem is the lack of innovation in product development during increasingly fierce market competition. Now, the SME industry that has a high level of competition is one of the batik industries. The rise of sustainable fashion practices (sustainable fashion) encourages business actors in this industry to innovate better to be able to compete and survive in the market. Sustainable fashion has the definition of ecological integrity, social quality, and human prosperity through products, actions, relationships, and usage practices (Mukendi et al., 2020). The innovations carried out are diverse including the use of organic materials, natural dyes, recycled products and resource saving in the process. Many batiks SMEs in Indonesia are now relying on synthetic dyes to be able to produce batik at affordable prices, faster production processes with larger quantities. However, now there are many natural dye batik SMEs that are developing in the Central Java and West Java areas that have prioritized strategies that are oriented to green management to be able to last for a longer period of time (Sugarindra, 2023). Natural dye batik SMEs are able to boost the image, value and uniqueness of the batik industry and become a product that is expected to increase economic growth and the welfare of the surrounding community as well as help the government to reduce carbon emissions, provide jobs, and contribute to the division of the country (Muafi & Uyun, 2019).

The theory of the "Natural Resource-based View" (NRBV) researched by Hart in 1995 states that environmental resources and capabilities can be the main source of competitiveness for companies facing difficulties in the environment. RBV, which is the basis of the NRBV theory, states that the competitiveness of resources and capabilities depends on the extent to which these resources and capabilities can meet the VRIN test for sustainable competitive advantage, namely value, rare, imperfect, imitability and non-substitutability (Barney et al., 2001).

Facing high environmental pressure, business actors need to implement proactive behavior by; developing, configuring, and updating the capabilities of their internal environment, which can simultaneously increase the competitiveness of their business (Mady et al., 2022). Several studies have explored the relationship between the Company's internal environmental capabilities and its impact on sustainable competitive advantage and have shown inconsistent results. The research conducted by Maddy et al. (2023) shows that the capabilities of the internal organizational environment do not have a positive impact on sustainable competitive advantage. However, several studies related to internal environmental capabilities consisting of organizational capabilities, green absorption capacity and strategic environmental orientation have shown their positive impact on sustainable competitive advantage (Battour, et al., 2021; Shahzad et al., 2020; Zacharia et al., 2011; Zameer, et al., 2020 a, b). Due to the inconsistency in the literature, it is necessary to conduct further studies on the relationship between internal environmental capabilities and sustainable competitive advantages.

Sustainable competitive advantage can be achieved through the coordination and integration of several capabilities, which are seen as the result of collective learning from each individual asset or also known as competencies (Hafeez et al., 2002). Green innovation is a competency that can be achieved by using and combining the right resources that enable companies to align with environmental goals and maintain their competitiveness (Cui & Jiao, 2011). Green innovation itself provides a wide opportunity for companies to develop environmentally friendly products that offer new value to customers and in return maintain a competitive advantage (Cheng et al., 2014).

Another important key for a company to achieve long-term success is the company's reputation while a company with a bad reputation can have an impact on the growth and development of a company (Gazzola, 2014). This makes the company's reputation important in running a business.

Previous research by Olaleye (2023) found that a company's reputation can moderate the relationship between competitive advantage and a company's green product innovation. In this context, a company's reputation can trigger a company's competitive advantage and even make the company to invest in environmentally friendly production because a high company reputation can attract competent human resources and increase the company's revenue (Afum et al., 2020; Morales-Raya et al., 2019; Singh et al., 2020). The existence of competent human resources and a good company economy can encourage the company to innovate.

This research was conducted with the aim of filling the gaps and phenomena that exist in current research on the capabilities of the internal environment and its relationship with sustainable competitive advantages. In addition, research related to corporate reputation that moderates the relationship between green innovation as a whole and sustainable competitive advantage is still very limited and still needs further research. Therefore, the author is interested in conducting further research based on previous research by raising a study entitled **"The Influence of Internal Environmental Capabilities on Sustainable Competitive Advantages and Green Innovation as a Mediation Variable in Natural Dye Batik SMEs in Yogyakarta"**.

METHOD

The method used in this study is a quantitative method by collecting data with a questionnaire survey. The quantitative method is a scientific method that has data in the form of numbers or numbers that can be processed and analyzed by mathematical calculations or. Furthermore, the type of research used is hypothesis testing. Hypothesis testing is a type of research that explains the relationships and influences between variables. The use of this hypothesis test to test the hypothesis proposed regarding the influence of independent variables, namely internal environmental capabilities (including organizational capabilities, green absorption capacity and strategic environmental orientation) with dependent variables of sustainable competitive advantage mediated by green innovation mediating variables. The study also examines how a company's reputation as a mediator variable moderates the relationship between green innovation and sustainable competitive advantage. The time horizon used in the study was a cross-sectional approach. Cross-sectional is a set of data that will be used in research in a period of time only.

RESULTS AND DISCUSSION

Hypothesis testing uses the Partial Least Square (PLS) analysis technique with the Smart PLS 4.0 program. The following are the components in the test, namely the outer model or measurement model, the inner model or structural model and the model schema.

Results of Measurement Model Analysis or Outer Model

Outer model analysis defines how each indicator relates to its latent variable.

a) Convergent Validity

Convergent Validity is a statistical concept that assesses whether a measurement accurately reflects the construct to be measured (Sekaran & Bougie, 2016). The expected value is >0.7. However, for the initial study of measurements, a loading value of 0.5-0.6 is considered sufficient (J. Hair et al., 2014). Here are the outer loading values of each indicator:

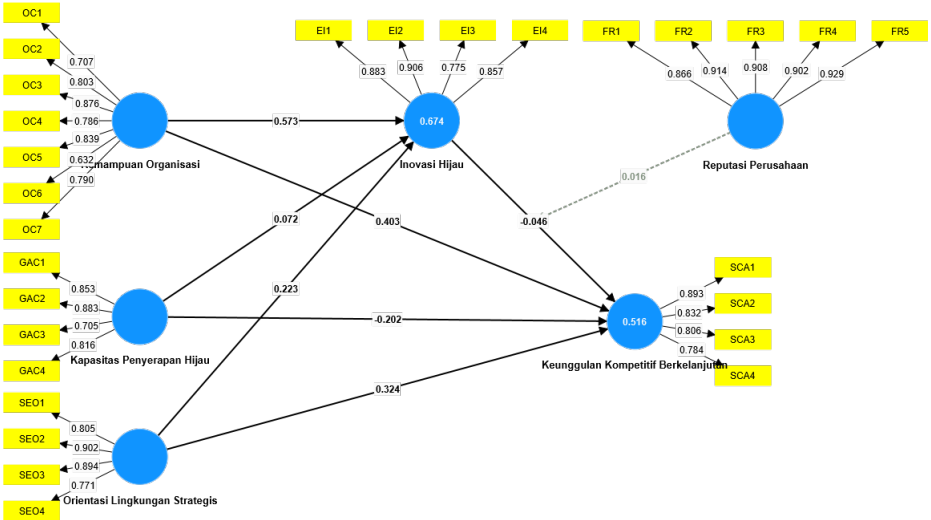

Figure 1
Outer Model

Tabel 2 Outer Loadings

Variable	Outer loadings
Organizational Ability (OC)	0,707
	0,803
	0,876
	0,786
	0,839
	0,632
	0,790
Green Absorption Capacity (GAC)	0,853
	0,883
	0,705
	0,816
Strategic Environment Orientation (SEO)	0,805
	0,902
	0,894
	0,771
Green Innovation (EI)	0,883
	0,906
	0,775
	0,857
Company Reputation (FR)	0,866
	0,914
	0,908
	0,902
	0,929
Continuous Competitive Advantage (SCA)	0,893
	0,832
	0,806
	0,784

Source: data output processed from Smart PLS 4.0, page attachment

Based on table 5.17, it is known that all variable items are valid. This is because the value of loading factor above 0.50 (J. Hair et al., 2014).

b) Discriminant Validity

Value discriminant validity is a value cross loading factor which is used to find out whether a variable has an adequate discrimination, i.e. in a way greater than the value of the loading Other variables (J. Hair et al., 2014).

Table 3 Cross Loading Results

	Green Innovation	**Green Absorption Capacity**	**Organizational Capabilities**	**Sustainable Competitive Advantage**	**Strategic Environmental Orientation**	**Company Reputation**
OC 1	0,477	0,574	0,707	0,753	0,604	0,484

OC 2	0,616	0,683	0,803	0,494	0,704	0,497
OC 3	0,786	0,669	0,876	0,558	0,678	0,632
OC 4	0,631	0,554	0,786	0,463	0,521	0,557
OC 5	0,712	0,597	0,839	0,564	0,667	0,644
OC 6	0,432	0,644	0,632	0,313	0,512	0,542
OC 7	0,689	0,748	0,790	0,397	0,588	0,638
GA C1	0,592	0,853	0,668	0,396	0,481	0,562
GA C2	0,661	0,883	0,776	0,510	0,637	0,730
GA C3	0,474	0,705	0,588	0,393	0,578	0,487
GA C4	0,499	0,816	0,591	0,372	0,532	0,482
SEO 1	0,738	0,699	0,780	0,565	0,805	0,623
SEO 2	0,593	0,559	0,642	0,622	0,902	0,541
SEO 3	0,551	0,561	0,639	0,608	0,894	0,580
SEO 4	0,531	0,448	0,563	0,362	0,771	0,413
EI1	0,883	0,596	0,753	0,494	0,709	0,647
EI2	0,906	0,639	0,686	0,592	0,696	0,745
EI3	0,775	0,447	0,529	0,401	0,509	0,566
EI4	0,857	0,652	0,769	0,554	0,546	0,794
FR1	0,736	0,711	0,710	0,498	0,579	0,866
FR2	0,797	0,679	0,666	0,558	0,509	0,914
FR3	0,662	0,606	0,608	0,522	0,551	0,908
FR4	0,743	0,563	0,647	0,564	0,640	0,902
FR5	0,721	0,632	0,674	0,596	0,651	0,929
SCA 1	0,580	0,471	0,593	0,893	0,555	0,574
SCA 2	0,456	0,267	0,490	0,832	0,567	0,390
SCA 3	0,510	0,400	0,478	0,806	0,471	0,568
SCA 4	0,446	0,565	0,625	0,784	0,563	0,481

Source: data output processed from Smart PLS 4.0, page attachment

In Table 3, the correlation value of the indicator in this variable is greater than the correlation in other variables, therefore it is concluded that all variables are valid for use.

c) Average Variance Extracted (AVE)Composite Reliability

The validity test can be found through other methods, namely by looking at the average variance extracted (AVE) value. The following are the results of the validity test using the AVE value.

Table 4 AVE Test Results

Variable	Average variance extracted (AVE)
Green Innovation	0,734
Green Absorption Capacity	0,668
Organizational Capabilities	0,608
Sustainable Competitive Advantage	0,688
Strategic Environmental Orientation	0,714
Company Reputation	0,817

Source: data output processed from Smart PLS 4.0, page attachment

Based on Table 4, it is known that all research variables are valid. This is because the AVE value is above the requirement of 0.50 (J. F. Hair & Ringle, 2019).

d) Composite Reliability

Composite Reliability Evaluating how well items in the scale work together to measure a single construct and a variable can be said to be qualifying. composite Reliability if it has a > value of 0.6 (J. Hair et al., 2014).

Tabel 5 Test Results Composite Reliability

Variable	Composite Reliability
Green Innovation	0,917
Green Absorption Capacity	0,889
Organizational Capabilities	0,915
Sustainable Competitive Advantage	0,898
Strategic Environmental Orientation	0,908
Company Reputation	0,957

Source: data output processed from Smart PLS 4.0, page attachment

Based on Table 5, it can be seen that all constructs in the study are declared reliable because the Composite Reliability value for all constructs is above 0.6.

e) Cronbach Alpha

The reliability of a variable can be further tested using the cronbach's alpha. Cronbach alpha calculated based on the average of the intercorrelation between the items that measure the concept. Getting closer cronbach alpha 1st, the higher the reliability of its internal consistency (Cronbach's alpha > 0,70) (Sekaran & Bougie, 2016)

Table 6 Cronbach Alpha Test Results

Variable	Cronbach alpha
Green Innovation	0,879
Green Absorption Capacity	0,832
Organizational Capabilities	0,891
Sustainable Competitive Advantage	0,848
Strategic Environmental Orientation	0,866
Company Reputation	0,944

Source: data output processed from Smart PLS 4.0, page attachment

Based on table 6, it can be seen that all constructs in the study are declared Reliable because the Cronbach Alpha value for all constructs is above 0.70.

Structural Model Analysis or Inner Model

The inner model is an influence test or hypothesis test aimed at predicting the relationship between latent variables. The analysis of the inner model is carried out to ensure that the structural model that has been created is accurate. The assessment of the inner model can be measured through several indicators as follows:

1. **Uji Path Coefficient**

Coefficient of determination () is a measure of the model's predictive accuracy. The following are the results of the values from the research construct:R^2 R^2

Table 6 Determination Coefficient Test

Variable	R-square	R-square adjusted
Green Innovation	0,674	0,659
Sustainable Competitive Advantage	0,516	0,471

Source: data output processed from Smart PLS 4.0, page attachment

Based on Table 6, it can be seen that the Adjusted R-Square value for the green innovation construct is 0.659. This means that the model has a high level of good-fit model. This also means that the variability of green innovation can be explained by the variables in the study of 65.9%.

The Adjusted R-Square value for the sustainable competitive advantage construct is 0.471. This means that the model has a high level of good-fit model. This also means that the variability of the intention of sustainable competitive advantage can be explained by the variable in the study of 47.1%.

Uji Q^2predictive relevance is a test to evaluate the PLS model. The taller the model, the better or fitter the model is. A value of >0 indicates that the observed value has been well reconstructed by having predictive relevance Q^2Q^2(J. Hair et al., 2014) Meanwhile, a value of <0 shows no predictive relevance.Q^2

Table 7 Q Square Test

Variable	SSO	SSE	Q^2 (=1-SSE/SSO)
Green Innovation	288,000	152,796	0,469
Green Absorption Capacity	288,000	288,000	0,000
Organizational Capabilities	504,000	504,000	0,000
Sustainable Competitive Advantage	288,000	198,926	0,309
Strategic Environmental Orientation	288,000	288,000	0,000
Company Reputation	360,000	360,000	0,000

Source: data output processed from Smart PLS 4.0, page attachment

In table 7 above, the value of the green innovation variable is 0.469. Therefore, it is concluded that variables that affect green innovation have a strong influence.Q^2

The value of the sustainable competitive advantage variable was 0.309. Therefore, it is concluded that variables that affect sustainable competitive advantage have a moderate influence.Q^2

2. **Hypothesis Test Results**

To see the results of the significance of the parameter coefficient, it can be calculated from the dimensions of the variables that have been validated. The researcher wanted to find out whether there was a positive or negative influence and significant or insignificant based on the calculation of P Values which must be below 0.05 and t statistically greater equal to 1.96 (J. Hair et al., 2014). If the statistical t is greater than the table t (1.96) then the two constructs are declared significant and vice versa.

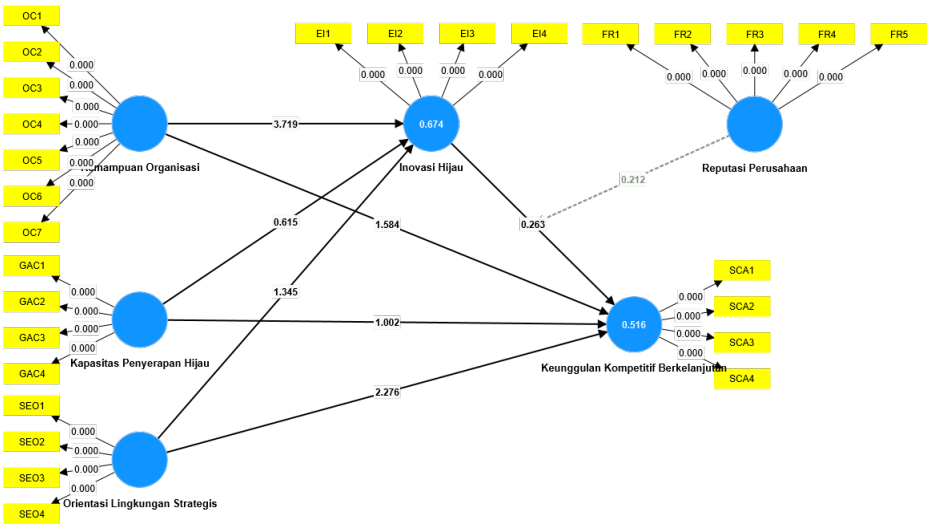

Figure 2
Inner Model

Table 8 Direct Influence Hypothesis Test

	Original sample (O)	T statistics (|O/STDEV|)	P values
Organizational Capabilities → of Continuous Competitive Advantage	0,103	1,797	0,090
Green Absorption Capacity → Sustainable Competitive Advantage	0,102	1,631	0,112
Strategic Environmental Orientation → Sustainable Competitive Advantage	0,124	1,119	0,256
Green Innovation →Organizational Capabilities	0,573	10,614	0,000
Green Absorption Capacity → of Green Innovation	0,172	2,092	0,034
Strategic Environmental Orientation → for Green Innovation	0,223	3,683	0,000
Green Innovation → Sustainable Competitive Advantage	0,246	2,086	0,038
Corporate Reputation → Continuous Competitive Advantage	0,288	5,637	0,000
Corporate Reputation x Green Innovation → Sustainable Competitive Advantage	0,216	2,062	0,045

Source: data output processed from Smart PLS 4.0, page attachment

Based on Table 8, the Research Hypothesis can be answered as follows:

a) Organizational Capabilities for Sustainable Competitive Advantage

Based on Table 8, the original sample estimate the variable of organizational ability to the variable of sustainable competitive advantage is positive, which is 0.103. Then, it can be seen that t statistics of 1.797 < 1.96 (J. Hair et al., 2014) So it can be said that it has a not significant effect. Thus, the H1 hypothesis in this study was rejected. In conclusion, organizational ability has a positive but not significant effect on sustainable competitive advantage

b) Green Absorption Capacity to Sustainable Competitive Advantage

Based on Table 8, the original sample estimate the variable of green absorption capacity to the sustainable competitive advantage variable is positive, which is 0.102. Then, it can be seen that t statistics of 1.631 < 1.96 (J. Hair et al., 2014) So it can be said that it has a not significant effect. Thus, the H2 hypothesis in this study was rejected. In conclusion, green absorption capacity has a positive but not significant effect on sustainable competitive advantage.

c) Strategic Environmental Orientation towards Sustainable Competitive Advantage

Based on Table 8, the original sample estimate the strategic environmental orientation variable to the sustainable competitive advantage variable was positive, which was 0.124. Then, it can be seen that the statistics of 1.119 < 1.96 (J. Hair et al., 2014) So it can be said that it has a not significant effect. Thus, the H3 hypothesis in this study was rejected. In conclusion, the orientation of the strategic environment has a positive but not significant effect on sustainable competitive advantage.

d) Organizational Capabilities towards Green Innovation

Based on Table 8, the original sample estimate the variable of organizational ability to the green innovation variable is positive, which is 0.573. Then, it can be seen that t statistics of 10.614 > 1.96 (J. Hair et al., 2014)So it can be said to have a significant effect. Thus, the H4 hypothesis in this study was declared accepted. In conclusion, organizational ability has a positive and significant effect on green innovation.

e) Green Absorption Capacity for Green Innovation

Based on Table 8, the original sample estimate the variable of green absorption capacity to the green innovation variable is positive, which is 0.172. Then, it can be seen that the statistics are 2.092 > 1.96 (J. Hair et al., 2014) So it can be said to have a significant effect. Thus, the H5 hypothesis in this study was declared accepted. In conclusion, green absorption capacity has a positive and significant effect on green innovation.

f) Strategic Environmental Orientation towards Green Innovation

Based on Table 8, the original sample estimate the strategic environmental orientation variable to the green innovation variable is positive, which is 0.223. Then, it can be seen that t statistics of 3.683 > 1.96 (J. Hair et al., 2014) So it can be said to have a significant effect. Thus, the H5 hypothesis in this study was declared accepted. In conclusion, strategic environmental orientation has a positive and significant effect on green innovation.

g) Green Innovation for Sustainable Competitive Advantage

Based on Table 8, the original sample estimate The Green Innovation variable to the Sustainable Competitive Advantage variable is positive, which is 0.246. Then, it can be seen that t statistics of 2.086 > 1.96 (J. Hair et al., 2014) So it can be said to have a significant effect. Thus, the H7 hypothesis in this study was declared accepted. In conclusion, green innovation has a positive and significant effect on sustainable competitive advantage.

h) Green Innovation towards Sustainable Competitive Advantage moderated by Corporate Reputation

Based on Table 8, the original sample estimate The Green Innovation variable to the Sustainable Competitive Advantage variable moderated by the Company Reputation variable was positive, which was 0.216. Then, it is seen that t statistics of 2.062 > 1.96 (J. Hair et al., 2014) So it can be said to have a significant effect. Thus, the H11 hypothesis in this study was declared accepted. In conclusion, green innovation has a positive and significant effect on sustainable competitive advantage, moderated by the company's reputation.

Table 9 Test of Indirect Influence Hypothesis

	Original sample (O)	**T statistics (|O/STDEV|)**	**P values**
Green Innovation Organizational Capabilities → → Sustainable Competitive Advantage	0,226	2,086	0,038
Green Absorption Capacity → Green Innovation → Sustainable Competitive Advantage	0,203	2,067	0,045
Strategic Environmental Orientation → , Green Innovation → , Sustainable Competitive Advantage	0,210	2,079	0,042

Source: data output processed from Smart PLS 4.0, page attachment

Based on Table 9, the Research Hypothesis can be answered as follows:

a) Organizational Capabilities for Sustainable Competitive Advantage through Green Innovation

Based on Table 9, the original sample estimate the variable of organizational ability to the variable of sustainable competitive advantage through the self-efficacy variable is positive, which is 0.226. Then, it can be seen that t statistics of 2.086 > 1.96 (J. Hair et al., 2014) So it can be said to have a significant effect. Thus, the H8 hypothesis in this study was declared accepted. In conclusion, organizational ability has a positive and significant effect on sustainable competitive advantage through green innovation.

b) Green Absorption Capacity for Sustainable Competitive Advantage through Green Innovation

Based on Table 9, the original sample estimate the variable of organizational ability to the variable of sustainable competitive advantage through the self-efficacy variable is positive, which is 0.203. Then, it can be seen that the statistics of 2.067 > 1.96 (J. Hair et al., 2014) So it can be said to have a significant effect. Thus, the H9 hypothesis in this study was declared accepted. In conclusion, green absorption capacity has a positive and significant effect on sustainable competitive advantage through green innovation.

c) Strategic Environmental Orientation towards Sustainable Competitive Advantage through Green Innovation

Based on Table 9, the original sample estimate the variable of strategic environmental orientation to the variable of sustainable competitive advantage through the variable of green innovation is positive, which is 0.210. Then, it can be seen that the statistics are 2.079 > 1.96 (J. Hair et al., 2014) So it can be said to have a significant effect. Thus, the H10 hypothesis in this study was declared accepted. In conclusion, strategic environmental orientation has a positive and significant effect on sustainable competitive advantage through green innovation.

The Influence of Organizational Ability with Sustainable Competitive Advantage

This study shows that organizational ability has a positive and insignificant effect on sustainable competitive advantages in natural dye batik SMEs in the Special Region of Yogyakarta. This proves that organizational ability has a correlation with sustainable competitive advantage in Batik SMEs in the Special Region of Yogyakarta, but this relationship is not significant enough which means that organizational ability alone is not strong enough to encourage the achievement of sustainable competitive advantage in Batik SMEs in the Special Region of Yogyakarta. This discovery is not in line with the discovery of Mishra & Yadav (2021) and Khan et al. (2019) which concludes that Companies with large investments in starting and developing their environmental capabilities can improve their competitiveness. However, the results of this study are in line with the findings by Mady et al. (2023) which states that the Company's organizational ability has no direct influence on sustainable competitive advantage.

This discovery is also not in line with the NRBV theory which assumes that the Company's resources and capabilities can provide the foundation for achieving sustainable competitive advantage (Hart & Dowell, 2011). However, in his research, Galliano dkk. (2019), said that NRBV also emphasizes the fact that the achievement of sustainable competitive advantage does not depend solely on environmental capabilities. Instead, it relies on creativity and the unique way companies use and combine these capabilities to capitalize on opportunities.

Organizational skills are investment efforts made to improve the ability of environmental management practices in order to create a sustainable competitive advantage (Mady et al., 2023). This investment is not only limited to the financial aspect, but also includes efforts to increase the capacity of human resources and technology. By adopting better environmental management practices, the company not only contributes to environmental conservation, but also opens opportunities to achieve sustainable competitive advantage. Investing in environmentally friendly production technologies, training employees on environmental issues, and selecting sustainable raw materials are concrete steps that can be taken to achieve these goals.

Batik SMEs in achieving sustainable competitive advantage also need to consider factors beyond the Company's internal capabilities. One of them is rapid technological changes and increasingly competitive market competition. Currently, there are more and more new competitors who are more innovative by utilizing better technology by digitalization. This is an obstacle to batik SMEs in the Special Region of Yogyakarta. Many of the batik SMEs in the Special Region of Yogyakarta do not digitize and only rely on online sales. offline without introducing the product through Online due to limited human resources. In fact, the use of digital batik allows the

batik industry to improve production efficiency and expand their market reach (Sharmistha & Sinambela, 2023). Therefore, batik SMEs in the Special Region of Yogyakarta need to adapt related to this digitalization to improve their organizational skills in order to support the achievement of sustainable competitive advantages of SMEs.

The Effect of Green Absorption Capacity with Sustainable Competitive Advantages

The results of this study have shown that green absorption capacity has a positive and insignificant influence on sustainable competitive advantage in natural dye batik SMEs in the Special Region of Yogyakarta. The results of this study are in line with the research conducted by Mady et al (2023) which found that green absorption capacity has no positive influence on a company's sustainable competitive advantage. However, these results are not in line with the findings by Lin et al. (2020) which states that the utilization of environment-related knowledge through green absorption capacity can have a positive impact on the Company's sustainable competitive advantage.

The ability of SMEs to identify, combine and utilize environmental or external environmental knowledge, which is essential for integrating or reinforcing existing knowledge (Mady et al., 2023). Therefore, SMEs must have the ability to identify, combine, and utilize environmental or external environmental knowledge to encourage SMEs to implement environmentally friendly operations and routines, as well as encourage environmental awareness as a competitive advantage.

Based on the results of research on batik SMEs in the Special Region of Yogyakarta, it can be concluded that SMEs can identify, combine, and utilize environmental or external environmental knowledge. However, it is not enough to encourage sustainable competitive advantage in SMEs. This can be caused by changing consumer trends so that SMEs must continue to innovate to create environmentally friendly products and seek more external knowledge to be able to continue to develop their products. As already mentioned by Galliano dkk. (2019) that environmental capabilities alone are not able to achieve sustainable competitive advantage but there must be innovation from the Company to achieve that goal.

The Influence of Strategic Environmental Orientation with Sustainable Competitive Advantages

The results of the study show that strategic environmental orientation has a positive and insignificant influence on sustainable competitive advantages in natural dye batik SMEs in the Special Region of Yogyakarta. These results are in line with the findings Mady et al (2023) which found that the orientation of the strategic environment does not have a positive influence on the sustainable competitive advantage of a company. However, these results are not in line with the findings by Zameer dkk. (2020) which states that strategic environmental orientation has a significant influence on corporate sustainability and economic performance, including sustainable competitive advantage.

Strategic environmental orientation is a proactive and innovative approach to the environment that focuses on the internal values, mission, and commitments of SMEs as well as their awareness and external responsibilities to stakeholders (Mady et al., 2023). SMEs need to have clear values, missions and commitments that are oriented and proactive towards the environment.

The findings of this study show that batik SMEs have values, missions and a proactive commitment to the environment. However, due to the lack of use of digital platforms that can explain the values owned by SMEs to the wider community, it will be difficult for the public to find out more about the values that SMEs already have. Although these values are reflected in the products they produce, SMEs must and need to educate about the products and processes they adopt in their SMEs that are proactive towards the environment to attract a wider range of consumers.

The Influence of Organizational Skills with Green Innovation

The results of this study show that organizational ability has a positive influence on green innovation in natural dye batik SMEs in the Special Region of Yogyakarta. This discovery is different from the discovery by Mady et al. in 2022 and 2023. However, in line with the research that was found by Chen and Huang (2009), Salim et al. (2019) and Triguero (2013) that green innovation practices are driven by organizational abilities in line with research.

If batik SMEs in Yogyakarta make investment efforts such as using environmentally friendly technology that can be used in production, conducting training for employees related to the environment and also selecting environmentally friendly raw materials used in production, this can encourage green innovation in SMEs. Green

innovation consists of innovations in products, processes and environmentally friendly organizations. This investment in technology and employees makes it possible for an SME to create unique, innovative and creative new ideas that are environmentally oriented. So, to increase green innovation of an SME, organizational skills are needed.

The Effect of Green Absorption Capacity with Green Innovation

The results of this study show that green absorption capacity has a positive influence on green innovation in natural dye batik SMEs in the Special Region of Yogyakarta. This is in line with previous research conducted by Mady et al. (2023), Albort-morant et al. (2018) and Galliano & Nadel (2015) which states that green absorption capacity can facilitate the transformation and diversification of environmental knowledge leading to transformative green innovation.

This absorption capacity can catalyze the development of environmental innovation to address environmental challenges (Mady, Abdul Halim, & Omar, 2022). The absorption of this external knowledge can help enrich the knowledge possessed by batik SMEs, opening opportunities to adopt more sophisticated green innovation practices. For example, batik SMEs can learn natural dyeing techniques using local plants that have more durable and environmentally friendly dye properties from research institutes or organic farming communities. By doing so, they can reduce the use of harmful chemicals and create more sustainable batik products. In addition, SMEs can also collaborate with young designers to create batik motifs inspired by natural plant growth patterns, so that their batik products are not only beautiful, but also have educational value about the importance of maintaining biodiversity. Therefore, SMEs need to encourage their environmental capabilities, namely their green absorption capacity, to encourage their green innovation practices.

The Influence of Strategic Environmental Orientation with Green Innovation

The results of this study show that strategic environmental orientation has a positive influence on green innovation in natural dye batik SMEs in the Special Region of Yogyakarta. The results of this study are in line with the findings of Zameer (2020), Mady et al. in 2022 and 2023 which show that strategic environmental orientation has a significant influence on green innovation, which means that this environmental ability can encourage the adoption of green innovation practices.

A proactive approach to the environment by focusing on the values, mission, and commitment of natural dye batik SMEs can trigger awareness and responsibility of SMEs towards stakeholders such as consumers, communities, and the environment. In fulfilling the wishes of these stakeholders, SMEs need to make innovative decisions that are able to answer the environmental problems demanded by them. For example, SMEs can initiate educational programs about the importance of natural dyes and the negative impact of synthetic dyes on the surrounding community. In addition, SMEs can collaborate with local farmers to grow natural dye crops organically, thereby supporting the local economy and reducing the use of harmful pesticides. SMEs that integrate environmental orientation as a strategic priority into their policies and strategies, will be more likely to promote and develop green innovation practices, such as creating batik products with organic certification or fair trade, which are increasingly in demand by environmentally conscious consumers.

The Impact of Green Innovation with Sustainable Competitive Advantages

The results of this study show that green innovation has a positive influence on sustainable competitive advantages in natural dye batik SMEs in the Special Region of Yogyakarta. These results are in line with the findings by Ardian Dick. (2017), So & Woo (2020) and Mady in 2022 and 2023 who stated that green innovation has a significant impact on sustainable competitive excellence.

Green innovation can maintain a competitive advantage by aligning with increasing customer demand for eco-friendly products (Tu & Wu, 2020). Mady et al. (2022) stated that there are two main aspects that can explain how green innovation can affect sustainable competitive advantage. The first aspect is the establishment of an eco-friendly image for SMEs and differentiating them from their competitors by offering eco-friendly products and services. The second aspect relates to the substantial cost reduction benefits that green innovation can provide, including improved resource efficiency and waste recycling.

Natural dye batik SMEs in the Special Region of Yogyakarta by innovating in creating environmentally friendly products and services, such as the development of natural batik motifs and natural dyeing with the use of local plants, these SMEs can offer unique added value and attract consumers who care about the environment. In

addition, by improving efficiency in the production process, such as the use of environmentally friendly technology and good waste management, batik SMEs can reduce production costs and increase profitability.

The Effect of Organizational Ability on Sustainable Competitive Advantage with Green Innovation as a Mediation Variable

The results of the study show that green innovation is able to mediate the relationship between organizational ability and sustainable competitive advantage in natural dye batik SMEs in the Special Region of Yogyakarta. It can be said that organizational skills can increase the sustainable competitive advantage of SMEs through green innovation. The results of this study are not in line with the findings by Mady et al. (2023) which proves that green innovation does not mediate the relationship between organizational ability and sustainable competitive advantage in SMEs. However, this research is in line with the findings by Wang et al. (2020) which asserts that green innovation mediates the relationship between organizational ability and competitive advantage in the hospitality industry in China.

Organizational practices and capabilities contribute to the development of innovative strategies to enhance the Company's sustainable competitive advantage (Lopez-Gamero & Claver-corte, 2009). The strategy is called green innovation which has the potential to influence how company practices are connected to environmental competitiveness (Grekova et al., 2013). Based on the above research, it can be interpreted that a green innovation strategy can enable companies to leverage their organizational capabilities (including; use of environmentally friendly technologies, efficient machinery, environmentally friendly materials, renewable energy sources, conducting environmental program training and others) to develop environmentally friendly innovative products and processes that are in line with customer demands resulting in a competitive advantage Sustainable.

The organizational ability of Yogyakarta batik UKM is an investment effort by SMEs to improve the ability of environmental management practices. This investment effort is able to create the ability of SMEs to be able to create environmentally friendly products and services and increase resource efficiency that can increase sustainable competitive advantage.

The Effect of Green Absorption Capacity on Sustainable Competitive Advantage with Green Innovation as a Mediation Variable

The results of the study show that green innovation is able to mediate the relationship between green absorption ability and sustainable competitive advantage in natural dye batik SMEs in the Special Region of Yogyakarta. The results of the study are in line with the findings by Mady et al. (2023) and Albort-Morant dkk. (2018) who said that the relationship of absorption capacity to sustainable competitive advantage is mediated by green innovation. This research can show that the company's internal environmental capabilities, such as; absorption capacity, is not enough to gain a sustainable competitive advantage. However, it must be accompanied by green innovation practices.

Green absorption capacity according to research by De Marchi (2012), Cainelli dkk. (2015) and Ghisetti dkk. (2015) shows that the success of green innovation is highly dependent on the ability of companies to access and utilize complementary knowledge possessed by outsiders. The ability of companies to acquire knowledge from external partners and combine it in new ways with the existing knowledge base is a key competency to ensure the effective introduction of new environmentally friendly products in the market (Gluch et al., 2009; Hashim et al., 2015). Green innovation practices are necessary to meet requirements by external stakeholders, improve a company's image or reputation, or differentiate itself from competitors (Albort-Morant et al., 2018).

Therefore, to be more competitive in the market, batik SMEs in the Special Region of Yogyakarta need to proactively seek and absorb new knowledge from various sources, either from academic research, best industry practices or even creative communities. By combining this new knowledge with local wisdom and traditional dyeing techniques, SMEs can create innovative products that are not only environmentally friendly, but also have high aesthetic value and are able to differentiate themselves from competitors. In addition, seeking information from external partners can ensure the introduction of new environmentally friendly products that are effective in the market.

The Effect of Strategic Environmental Orientation on Sustainable Competitive Advantage with Green Innovation as a Mediation Variable

The results of the study show that green innovation is able to mediate the relationship between strategic environmental orientation and sustainable competitive advantage in natural dye batik SMEs in the Special Region of Yogyakarta. The results of this study are in line with the findings of the Mady et al. (2023) and Eiadat dkk. (2008) which states that the relationship between strategic environmental orientation and sustainable competitive advantage in batik SMEs in the Special Region of Yogyakarta is mediated by green innovation practices. This study shows that the success of companies in maintaining their competitive advantage depends on their strategic environmental orientation and their application in green innovation activities.

Salim dkk. (2019) stated that the company's success in maintaining its competitive advantage depends on the strategic direction of its environment and its application in ecological innovation activities. In addition, research by Sanchez-Medina dkk. (2015) shows that environmental compliance related to environmental performance mediates green innovation based on a survey of 186 small businesses in Mexico. Furthermore, Eiadat dkk. (2008) In its research, it said that environmental regulations reflect the concerns of various stakeholders, such as employees, customers, and local communities, companies are increasingly faced with increasingly stringent government environmental regulations. In this case, by adopting an environmental innovation strategy, companies can anticipate stricter government regulations. This sustainable competitive advantage can be obtained from product differentiation on environmental performance. If companies can state that they have developed an environmental innovation strategy in response to stakeholder demands, they will be able to sell their products at a higher price.

To be able to survive and thrive in the long term, Yogyakarta batik SMEs need to proactively respond to the increasing demands of stakeholders for environmentally friendly products. By adopting a green innovation strategy, batik SMEs can create products that not only meet market needs, but also contribute to sustainable development. Through continuous innovation, batik SMEs can build a sustainable competitive advantage and strengthen their position in the global and local markets.

The Effect of Green Innovation on Sustainable Competitive Advantage with Corporate Reputation as a Moderation Variable

The results of the study show that the company's reputation can moderate the relationship between green innovation and sustainable competitive advantage in natural dye batik SMEs in the Special Region of Yogyakarta. The results of this discovery are in line with the findings by Olaleye (2023) which proves that the company's reputation is able to moderate the relationship between green innovation products and a company's sustainable competitive advantage.

The reputation of a company is an intangible quality that is based on the trust of employees and shareholders of the company (Agarwal et al., 2015). A company's reputation is the key to a company's success. If a company has a bad reputation, it will affect the growth and development of the company (Gazzola, 2014). The direct relationship between green innovation and the company's sustainable competitive advantage then the Company must also receive a certain reputation (Olaleye, 2023). The existence of this reputation is also able to invite investors to increase the company's revenue, talented workers to be able to enrich the company's internal assets, development to be able to win the competition and customers with high environmental awareness (Afum et al., 2020; Singh et al., 2020) can increase the company's competitive advantage (Morales-Raya et al., 2019). In his research Mady dkk. (2022) stated that there are several important elements in green innovation to be able to increase sustainable competitive advantages, one of which is by creating an environmentally friendly image by producing environmentally friendly products. Therefore, the better a company's reputation, especially in terms of environmental sustainability, the more attractive the company will be to investors and talent. Investors will see companies with a green reputation as safe and profitable investments in the long run. Meanwhile, young talents who care about the environment will be interested in joining companies that align with their values. With the influx of investment and new talents, companies can allocate greater resources to research and development of innovative products that are environmentally friendly. These innovations will in turn strengthen the company's sustainable competitive advantage in a market that increasingly demands environmentally friendly products.

Stakeholder trust is an invaluable asset for Yogyakarta batik SMEs. By maintaining the trust of employees, customers, business partners, and the public, SMEs can build a solid reputation. This good reputation will attract investors who want to invest in sustainable businesses and talents who want to contribute to SMEs that share the same values. These qualified investors and talents will then become the main capital for SMEs to adopt green innovations and create more environmentally friendly products.

CONCLUSION

Based on the results of the study on the influence of internal environmental capabilities on sustainable competitive advantage, with green innovation as a mediating variable and corporate reputation as a moderation variable in SMEs, it can be concluded that organizational ability, green absorption capacity, and strategic environmental orientation do not have a positive effect on sustainable competitive advantage. However, all three have a positive effect on the adoption of green innovation, which in turn has a positive effect on sustainable competitive advantage. Green innovation also mediates the relationship between organizational capabilities, green absorption capacity, as well as strategic environmental orientation and sustainable competitive advantage. The company's reputation has proven to reinforce the influence of green innovation on sustainable competitive advantage. Based on these findings, it is recommended to note that although the capabilities of the internal environment do not show a significant influence on sustainable competitive advantage, the adoption of green innovation can be an important pathway that affects the achievement of such competitive advantage in the future.

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