



## Business Ethics in Mediating the Influence of Green Accounting on Competitive Advantage in Batik Kediri MSMEs

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### ABSTRAK

This research aims to determine the effect of green accounting on competitive advantage with business ethics as a mediating variable. The variables used are Green Accounting (X), Competitive Advantage (Y), and Business Ethics (Z). The data collection method was through a questionnaire distributed to the material and financial procurement section of Batik Kediri MSMEs. The samples taken were 40 respondents using a saturated sampling technique. The analytical tool used in this research is SmartPLS. The research results show that Green Accounting does not have a direct positive and significant effect on Competitive Advantage in Batik Kediri MSMEs, Green Accounting has a positive and significant direct effect on Business Ethics in Batik Kediri MSMEs. Business Ethics does not have a direct positive and significant effect on the competitive advantage of Batik Kediri MSMEs. Business Ethics is able to mediate green accounting well against competitive advantage.

## **INTRODUCTION**

In today's global competition, there are many challenges that must be faced. Each country must compete by highlighting the advantages of its respective resources. A country that is superior in its resources will be able to win the competition. A country that has a competitive advantage is a country that can truly empower its economic and human resources. Economic resources can be utilized if humans are able to face complex challenges and competition. Challenges in global competition, population growth, unemployment, social responsibility, employment diversity, ethics, advances in technology and science, and lifestyles and their trends are interrelated challenges. Rapid world population growth accompanied by high competition will give rise to various competitive workforces and unemployment for human resources who do not have strong advantages and competitiveness. Facing these various challenges requires quality resources in order to create various advantages, both competitive advantages, including through processes and innovative entrepreneurship. To be able to compete in the global market, highly competitive goods and services are needed, namely goods and services that have certain advantages.

The role of the Indonesian government, one of its functions, is as the main facilitator driving economic activity. With wisdom if appropriate, the government will be able to encourage the ability of business actors to implement appropriate strategies to deal with environmental changes, one way is to increase the competitiveness of business actors. The reality shows that the abilities of business actors vary. These abilities are determined by the level of entrepreneurial orientation and the scale of business being run, from Micro, Small and Medium Enterprises to Large Enterprises, and are also influenced by many other factors such as educational background, experience, age, ethnicity and family.

The existence of MSMEs is still the government's mainstay, because MSMEs play a major role in economic growth, both in providing management of productive business activities, management of credit distribution and in terms of employment, thereby reducing the number of unemployed. Realizing the huge role of MSMEs, the government cannot just remain silent, but must provide various assistance so that MSMEs can develop their businesses quickly. Some of the assistance provided by the government for MSMEs is in various forms of regulation, including taxation, then licensing, wide market access, and funding with low interest as stated in Government Regulation Number 7 of 2021.

The increasing development of MSMEs seems to have a negative impact on the surrounding environment. The phenomenon that occurs in the field is that MSMEs pay less attention to handling production waste from their business. This happens because MSMEs are more concerned with profits and turnover from their business activities, so MSMEs are more concerned about maintaining the quality of the products they produce so that environmental costs are often ignored. If this is allowed to continue, the environmental impact left behind will continue to increase. This is in accordance with economic

principles, namely minimizing costs and maximizing expected profits. This is in line with research from Pentiana (2019) that MSMEs only focus on business profits, there is no awareness of environmental impacts that will affect business sustainability, low knowledge of environmental costs because business actors are not yet able to identify environmental cost components. MSMEs' concern for the environment is still very low because there is no awareness of their environmental impact. Jahamani (2003) said that they are aware of environmental protection problems, but their commitment to environmental protection is still low.

Some MSMEs cause environmental damage due to careless waste disposal, such as some batik producing MSMEs. It cannot be denied that batik producers' MSME production activities can have a negative impact on the environment if not handled properly and correctly, which can result in a decline in the quality of the surrounding environment, such as pollution of land, water and air. The government hopes that the increase in the number of Batik MSMEs in Kediri Regency will also be accompanied by an increase in the awareness of batik producers regarding their understanding and concern for protecting the environment from pollution and damage as a consequence of their production activities. All MSME actors should have awareness of social responsibility, however, most MSME actors object to carrying out social responsibility because they think carrying out social responsibility requires large amounts of funds. Apart from social responsibility, MSMEs can use strategies to protect the environment through accounting knowledge. Accounting also has a role through financial reports by including environmental costs.

Green Accounting is a development of accounting science that plays a role through voluntary disclosure in related financial reports with environmental costs. Green accounting specifically contains the identification, calculation and allocation of environmental costs, combining environmental costs in business and recording environmental obligations (Pentiana, 2019). A green accounting strategy that can be carried out by MSMEs is to include separate costs from processing waste resulting from business operational activities which are usually called green costs or environmental costs. Green costs or environmental costs come from impacts arising from the financial and non-financial side which must be met as a result of an activity (business) carried out related to the environment. Environmental costs that occur in a business are one of the factory overhead costs that are difficult to calculate directly, because these costs are hidden in the cost center, and there is no very clear evidence of recording or reporting related to environmental costs (Puspita, Diana & Rokhimah, 2018).

According to Monsnja and Grzinic (2019), green accounting is considered an important tool for understanding aspects of the natural environment that influence the economy and at the same time as a sustainable agent. The aim of green accounting is to inform about the company's operational performance based on environmental protection and concern so that companies cannot arbitrarily process resources without paying attention to the impact on society.

There are currently no regulations regarding the implementation of green accounting for MSMEs, especially batik producers in Indonesia, however the implementation of green accounting for private companies has been regulated in Government Regulation Number 47 of 2012 which is a follow-up to the Limited Liability Company Law Number 40 of 2007 According to Lindrianasari (2007), every company has social and environmental responsibilities that carry out its business in fields related to natural resources.

Implementing green accounting in companies can improve business environmental performance which ends in improved financial performance with environmental benefits that can be managed and preserved properly in accordance with government regulations. Currently, development is directed towards sustainable development, namely development that balances environmental, economic and social aspects. The role of environmental accounting in improving business performance refers to one of the roles of accounting, namely as a provider of information for decision making. If MSMEs can implement green accounting well, this will indirectly increase the ethical value of the MSME business. The relationship between this can be seen when MSMEs add environmental costs for handling operational waste or costs for protecting the environment to reduce the negative impact of business activities, then the local community will judge that MSMEs have good ethics in terms of environmental ethics. On the other hand, this increased assessment will indirectly increase the company value or income of MSMEs.

Based on the explanation above, it can be concluded that the increasing presence of MSMEs in Indonesia will directly increase the country's economic growth. On the other hand, an increase in the number of MSMEs will also increase the negative impact of business activities on the environment around MSMEs. MSMEs can use a green accounting system, namely by including environmental costs in the accounting system used. The existence of a green accounting system used by MSMEs can increase business ethical values. This is in accordance with the concept of business ethics, namely that a business has good relationships with business actors, society and the environment.

## **LITERATURE REVIEW**

### **Green Accounting**

According to Cohen and Robbins (2011) green accounting is defined as follows: "A style of accounting that includes indirect costs and benefits from economic activities, such as environmental impacts and health consequences of business decisions and plans."

Green accounting is a concept where a company in its production process prioritizes efficiency and effectiveness in using resources sustainably, so that it is able to align the company's development with environmental functions and can provide benefits to society. In this case, the application of green accounting pays full attention to the concept of savings is based on the ecosystem concept, namely saving land, saving materials or materials, and saving energy. The aim of implementing green accounting is to increase the efficiency of environmental management by assessing environmental activities from the perspective of costs (environmental costs) and benefits or impacts (economic benefits), as well as

producing environmental protection impacts. So it can be concluded that the application of green accounting can provide information on the extent to which an organization or company makes a positive or negative contribution to the quality of human life and the environment.

Green accounting measures and recognizes environmental costs, other social costs, and presents the information in financial reports. In the last two decades, environmentally friendly accountants have approached one aspect of material cost accounting (Jasch, 2003; Nakajiman et.al., 2015). Therefore, environmental costs include environmental protection costs and material flow costs (costs of purchasing raw materials, but the formation of non- products). This research will focus on green accounting from a company perspective.

### **Green Accounting with Competitive Advantage**

Green accounting can provide competitive advantages through operational efficiency, long-term cost savings, access to new and growing markets, and improved corporate reputation. This can improve the company's competitive position in the market.

H1: Green Accounting has a significant effect on Competitive Advantage

### **Green Accounting with Business Ethics**

Green accounting can directly influence a company's business ethics. By adopting strong environmental accounting practices, companies demonstrate a commitment to sustainability and environmental responsibility. This can increase awareness of business ethics and social responsibility.

H2: Green Accounting has a significant effect on Business Ethics

### **Business Ethics**

Ethics comes from the Latin *ethica*. *Ethos* in Greek means norms, values, rules, standards for good behavior (Simorangkir, 2003). Ethics aims to help humans act freely and responsibly because every action is always born of a free personal decision by always being willing to be responsible for their actions because there are reasons and considerations in every action (Keraf, 1991). Business ethics is a way to carry out business activities that covers all aspects related to individuals, companies and society. Business ethics in a company can shape the values, norms and behavior of employees and leaders in building fair and healthy relationships with customers/work partners, shareholders and the community. There is motivation ethics that direct business behavior related to the desire to do the right thing, without pressure from external parties and government demands. Good business is not only about profits, but also has a mission to improve the welfare of society and make human life better by fulfilling adequate needs. Besides that, good business is not only about profit, but also good morals. The application and implementation of ethics in daily business activities must be carried out routinely and consistently by entrepreneurs so that violations of business ethics decrease.

From the explanation above, it can be concluded that green accounting is a form of business ethics that can be implemented by MSME owners. The

application of business ethics in MSMEs can take the form of responsibility for carrying out business activities that provide benefits to the business and the surrounding community. However, if MSMEs implement green accounting then this can be used as a responsibility strategy for a business that is concerned about the environment around its business. From this green accounting activity, MSME players can gain social sympathy because the existence of MSMEs provides good benefits, not only for society but also the environment. Green accounting can be chosen by MSME players as a form of accountability that is more economical when compared to implementing social responsibility. Even though they almost have similarities, the application of green accounting is considered to be on a more efficient scale than social responsibility and this strategy can also add positive value in terms of business ethics.

### **Business Ethics with Competitive Advantage**

Strong business ethics can directly influence competitive advantage. Companies that implement good business ethics can build a positive reputation, retain and attract more customers, and minimize legal and reputational risks.

H3: Business Ethics has a significant effect on Competitive Advantage

Business ethics acts as a mediating variable that connects green accounting with competitive advantage. This means that the effect of green accounting on competitive advantage is partly mediated through business ethics. Strong business ethics can strengthen the link between green accounting and competitive advantage by strengthening a company's reputation and providing additional benefits to society and the environment.

H4: Business Ethics mediates Green Accounting on Competitive Advantage

### **Competitive Advantage**

According to Dalimunthe (2017), competitive advantage is the ability of a company to form an advantage to compete with its competitors. In Arbawa & Wardoyo (2018), Porter's strategic research shows that competitive advantage is the core of a company's performance in facing competition. Competitive advantage is strategies benefit from companies working together to develop more effective competitive advantages in their markets.

Competitive advantage can provide long-term benefits for companies, both in terms of reputation, sustainability and added value, access to new markets, operational efficiency, access to sustainable funding, regulatory compliance, innovation advantages, lower risk. By integrating these aspects in their business strategy, companies can capitalize on these benefits while making

a positive contribution to the environment and society.  
The framework for thinking in this research can be seen in Figure 1.

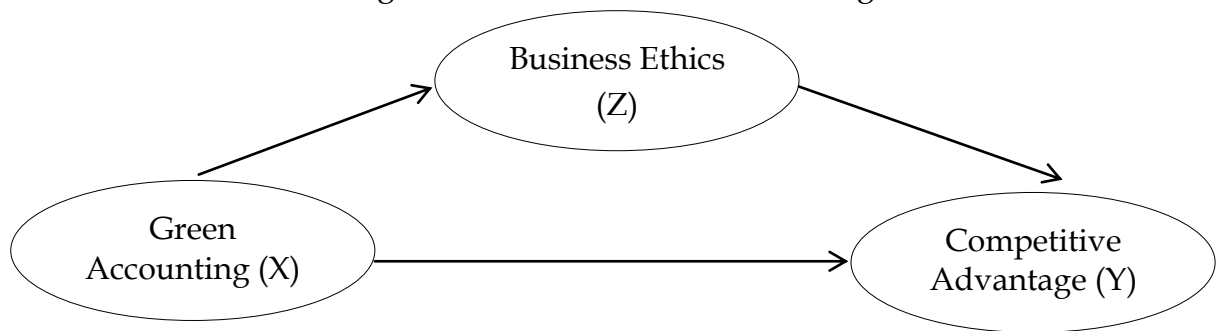


Figure 1. Framework for Thinking in Research

## METHODOLOGY

The type of research used in this research is quantitative. Quantitative research is the study of data that is analyzed through the use of statistical methods and presented with numbers as symbols of events or happenings (Creswell, 2017). The population taken in this research was the material and financial procurement section. The sampling technique used in this research was a saturated sampling technique/total population of 40 respondents. The data analysis technique used in this research is SMART PLS Analysis. This technique is used to determine the influence between independent variables and dependent variables and to test the role of a mediating variable.

## RESEARCH RESULTS AND DISCUSSION

Before carrying out structural relationship analysis, validity tests and reliability tests must be checked to ensure that all question items are proven valid and all variables have a high level of reliability. This can be proven by looking at the table below:

Table 1. The Result of Measurement Model

Construct	Loading	Cronbach Alpha	Dijkstra-Henseler Rho ( $\rho_A$ )	Composite Reliability	Average Variance Extracted
X1.1	0,827	0,738	0,805	0,845	0,647
X1.2	0,701				
X1.3	0,876				
Z1.1	0,773	0,789	0,849	0,869	0,689
Z1.2	0,874				
Z1.3	0,840				
Y1.1	0,929	0,919	0,924	0,949	0,861
Y1.2	0,941				
Y1.3	0,913				

Source: Data Processing Results from SmartPLS, 2023

In evaluating the measurement model, the reliability of the loading scale must be greater than 0.708 (Hair, 2019). If the Loading scale value is

greater than 0.708, it can be ensured that all question items from each variable are proven to be valid. Based on the result of measurement model table above, it shows that each question item on the variables Green Accounting (X), Competitive Advantage (Y), and Business Ethics (Z) produces a Cross Loading value  $> 0.708$ . This shows that all question items in each variable were proven to be valid.

In measuring reliability tests, relying on the Cronbach Alpha value with reflective measurement involves examining the loading indicators with the condition that the value is  $> 0.708$  (Hair, 2019). These assigned values indicate that the construct explains more than 50% of the indicator variance, thus providing acceptable item reliability. Based on the result of measurement model table above, the indicator value obtained for each Green Accounting variable is  $0.845 > 0.708$ , Business Ethics  $0.869 > 0.708$ , and Competitive Advantage is  $0.949 > 0.708$ . This shows that all variables have met the Cronbach Alpha value requirements so it can be concluded that all variables have a high level of reliability.

Average Variance Extracted (AVE) must be greater than 0.50. This shows that the construct explaining 50 percent or more of the item variance can establish good validity (Hair, 2019). Based on the table presented above, it is known that the AVE value of the Green Accounting variable is  $0.647 > 0.5$ , the AVE value of the Business Ethics variable is  $0.689 > 0.5$ , and the AVE value of the Competitive Advantage variable is  $0.861 > 0.5$ . This shows that all variables have discriminant validity which meets the requirements for an AVE value above 0.5 and this shows that their discriminant validity is good. To strengthen the discriminant validity value, see table 2 below:

Tabel 2. Discriminant Validity

		<b>Business Ethics</b>	<b>Competitive Advantage</b>	<b>Green Accounting</b>
<b>Fornell-Larcker criterion</b>	<b>Business Ethics</b>	0,830		
	<b>Competitive Advantage</b>	0,357	0,928	
	<b>Green Accounting</b>	0,745	0,339	0,805
<b>Heterotrait-monotrait (HTMT) ratio</b>	<b>Business Ethics</b>			
	<b>Competitive Advantage</b>	0,381		
	<b>Green Accounting</b>	0,889	0,429	

Source: Data Processing Results from SmartPLS, 2023

In measuring discriminant validity you can also use the Fornell-Lacker criteria. This criterion is not capable of performing well, especially when the indicator loadings on the construct are only slightly different from the

correlations between latent variables, for example, all indicator loadings are between 0.65 and 0.85 (Henseler et al, 2015). Based on the discriminant validity table above, the values for each variable appear to be spread beyond 0.65 and 0.85, except for the Green Accounting variable on Business Ethics. This shows that the discriminant validity value of this research data performs well.

The discriminant validity value is also measured by looking at the performance of the Heterotrait-monotrait (HTMT) ratio. In such a setting, it is not expected that the HTMT value is above 0.90. But when the constructs are conceptually different, lower, more conservative, threshold values are recommended, such as 0.85 (Henseler et al., 2015). Based on the table presented above, the value of each variable does not contain a number above 0.90. This is in accordance with HTMT's expectations so that the value is not above 0.90.

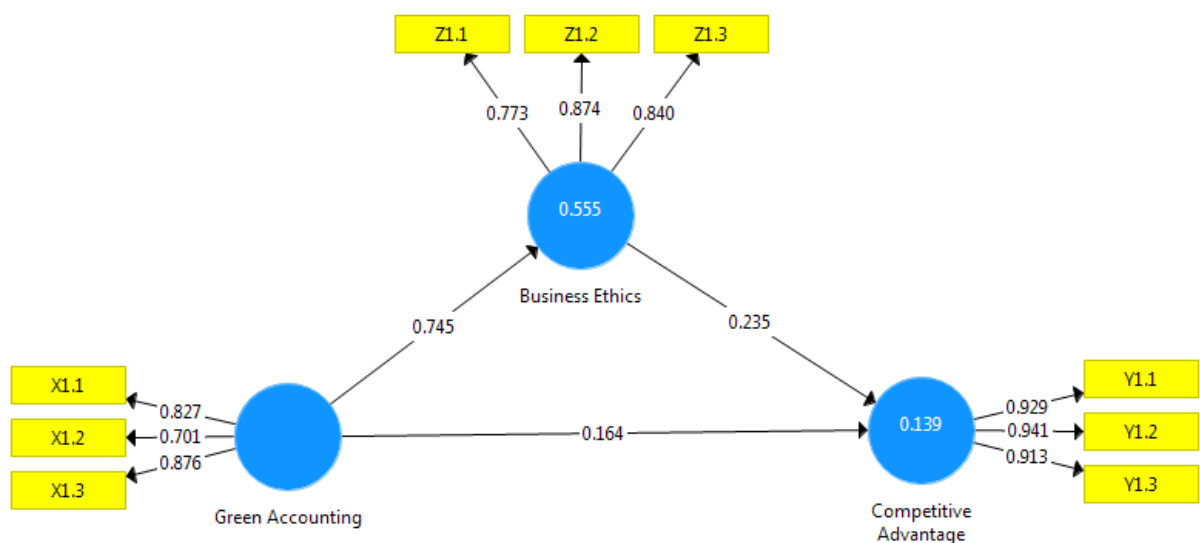


Figure 2. Heterotrait-monotrait (HTMT) Ratio

Based on the picture above, the researcher identified the convergent validity value of each variable. Convergent validity testing aims to measure the validity of each variable against indicators in latent variables which can ensure that the indicators used in this research can really be understood well by respondents so that respondents do not experience misunderstandings about the indicators used. Based on standard criteria, a variable is said to be valid if each indicator has a loading factor value  $\geq 0.70$ .

Researchers identify the discriminant validity value of each variable. Testing discriminant validity by comparing the square root of Average Variance Extracted (AVE) value for each construct with the correlation between other constructs in the model. If the construct's AVE value is greater than the correlation with all other constructs, it is said to have good discriminant validity. Based on standard criteria, a variable is said to be valid if each indicator has a factor loading value  $\geq 0.50$ .

Table 3. Results of Hypotheses Testing

HIPOTESIS	B	T Value	Confidence Interval (97,5%)	P-Values	Supported
H1 = GREEN ACCOUNTING › COMPETITIVE ADVANTAGE	0,164	0,526	[-0,389; 0,810]	0,599	No
H2 = GREEN ACCOUNTING › BUSINESS ETHICS	0,745	11,750	[0,621; 0,848]	0,000	Yes
H3 = BUSINESS ETHICS › COMPETITIVE ADVANTAGE	0,235	0,887	[-0,280; 0,772]	0,376	No

Source: Data Processing Results from SmartPLS, 2023

Based on the table above, it can be concluded that Green Accounting does not have a direct positive and significant effect on Competitive Advantage in Batik Kediri MSMEs. This statement can be proven by the positive Beta value of 0.164 and P Values 0.599 > 0.05. This illustrates that Green Accounting cannot encourage the Competitive Advantage of Batik MSMEs in Kediri to include separate costs from processing waste resulting from business operational activities to achieve a good competitive advantage. Green accounting will influence competitive advantage if green accounting is able to encourage batik MSMEs to include separate costs for processing waste resulting from business operational activities. The application of green accounting to MSMEs can improve business environmental performance which ends in improved financial performance with environmental benefits that can be managed and preserved properly in accordance with government regulations. Besides that, Green Accounting can also influence Corporate Social Responsibility Disclosure, this is in accordance with research by Ulu Azmi, Rezha, Kurniawan, and Fikri N (2020) which states that green accounting has a positive and significant effect on Corporate Social Responsibility Disclosure.

Green Accounting has a direct, positive and significant effect on Business Ethics in Batik Kediri MSMEs. This statement is proven by the positive Beta value of 0.745 and P Values of 0.000 < 0.05. This also illustrates that Green Accounting can positively encourage Batik MSMEs to improve their performance. The application of business ethics in MSMEs can take the form of responsibility for carrying out business activities that provide benefits to the business and the surrounding community. However, if MSMEs implement green accounting then this can be used as a responsibility strategy for a business that is concerned about the environment around its business. From this green accounting activity, MSME players can gain social sympathy because the existence of MSMEs provides good benefits, not only for society but also the environment. Green accounting can be chosen by MSME players as a form of

accountability that is more economical when compared to implementing social responsibility. Even though they almost have similarities, the application of green accounting is considered to be on a more efficient scale than social responsibility and this strategy can also add positive value in terms of business ethics.

It is described that Business Ethics does not have a direct, positive and significant effect on the competitive advantage of Batik Kediri MSMEs. This statement is proven by the negative Beta value of 0.235 and P Values  $0.376 > 0.05$ . This illustrates that the business ethics carried out cannot negatively encourage MSMEs to achieve good competitive advantage. Strong business ethics can directly influence competitive advantage. Companies that implement good business ethics can build a positive reputation, retain and attract more customers, and minimize legal and reputational risks. There has also been research on business ethics as moderation conducted by Budi Cahyono and Abdul Hakim (2019) with research results that business ethics is able to moderate the relationship between Green Intellectual Capital and Competitive Advantage. It can be concluded that business ethics is able to moderate and mediate competitive advantage.

## **CONCLUSION**

Based on the results of the research and discussion above, the conclusion is that:

1. Green Accounting does not have a direct positive and significant effect on Competitive Advantage in Kediri Batik MSMEs
2. Green Accounting has a direct, positive and significant effect on Business Ethics in Batik Kediri MSMEs.
3. Business Ethics does not have a direct positive and significant effect on the competitive advantage of Batik Kediri MSMEs.
4. Business Ethics is able to mediate green accounting well against competitive advantage.

## **ADVANCED RESEARCH**

For future researchers who want to take the same topic as the researcher, it is hoped that they can use other independent variables outside the research, for example Environmental Management Accounting, Green Cloud, Environmental Sustainability and others. This is useful for increasing theoretical knowledge about finance, competitive advantage, and business ethics and for expanding research results.

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