



The Role of Green Culture Organizations in realizing Green Innovation, Green Performance and the Micro, Small and Medium Enterprises Sustainable Competitive Advantage

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Abstract

Environmental issues are increasingly important to the manufacturing industry as decision makers face increased public sensitivity, stricter environmental regulations and increased shareholder pressure to preserve the natural environment. From the supply side, global warming, carbon capping, soil erosion and electricity shortages are now critical issues for the manufacturing industry. On the demand side, customers are increasingly shifting their preferences to more environmentally friendly products and services, which are less harmful or even beneficial to the natural environment. Government monitoring and control of the ecological impact of production activities is carried out to minimize environmental damage. Environmental concerns thus have an impact on the innovation of manufacturing companies. The purpose of this research is to examine the effect of Organizational Green Culture on Green Innovation, Green Performance and MSME Sustainable Competitive Advantage. This research is classified as explanatory research with a quantitative approach. The sample used is as many as 150 MSME managers in Sumenep with purposive sampling technique. The type of data used is primary data, namely data collection using a questionnaire. The data analysis used is Multiple Linear Regression Analysis with SPSS tool. The results of this study indicate that organizational green culture has a positive and significant effect on green performance, organizational green culture has a positive and significant effect on MSME Sustainable Competitive Advantage, organizational green culture has a positive and significant effect on green innovation, green innovation has a positive and significant impact on green performance, and innovation green has a positive and significant effect on MSME Sustainable Competitive Advantage.

Keywords: *Organizational Green Culture; Green Innovation; Green Performance; MSME Sustainable Competitive Advantage*

Introduction

Environmental issues are increasingly becoming important for the manufacturing industry as decision makers face increased public sensitivity, stricter environmental regulations and increased

shareholder pressure to preserve the natural environment (Yu et al., 2017). From the supply side, global warming, carbon restriction, soil erosion and electricity shortages are now critical issues for the manufacturing industry (Delmas and Toffel, 2008). On the demand side, customers are increasingly shifting their preferences to more environmentally friendly products and services (Kotler, 2011), which are less harmful or even beneficial to the natural environment (Zhu et al., 2008). Government monitoring and control of the ecological impact of production activities is carried out to minimize environmental damage. Environmental concerns thus have an impact on the innovation of manufacturing companies.

Green innovation has responded to this awareness by focusing on environmentally friendly strategies that enable manufacturing companies to achieve their corporate goals of protecting the natural environment (Robinson and Stubberud, 2013). However, according to Andersen (2008), green innovation research is still in its early stages which lacks substantial achievements. The current literature has several empirical researchers working with innovation and environmental issues. Research on green innovation and performance has also yielded mixed results. On the one hand, encouraging manufacturing firms to adopt a green innovation strategy, although it may not increase profits, may lead to the adoption of such a strategy (Rao and Holt, 2005). However, other studies have found that such integration can result in poor performance due to increased development time and development costs (Das et al., 2006). These mixed results have increased interest among researchers to better understand the relationship between corporate green innovation and green performance (McLean, 2005). Therefore, this paper explores this contradiction to determine whether green innovation actually delivers green performance for organizations.

One of the variables that have a major influence on green innovation is organizational green culture. As Hart (1995) points out, organizational resources have an important role in developing a successful environmental strategy, and one of the can support competitive advantage and green performance is organizational green culture (Banerjee, 2002). Culture here refers to the shared system of beliefs, values, ideas, and attitudes that shape organizational behavior. Organizational culture can be developed by a managerial team to spread a set of values to guide corporate goals (Gao, 2017). We therefore consider an organizational green culture whose values have been internalized by the company throughout the organization and which are usually codified in mission statements for all employees and managers (Stone et al., 2004). green organization can thus lead encourage employees to accept green innovation as a fundamental value of the organization and feel more involved in environmental issues.

Research Purposes

1. To find out the effect of the organization's green culture on green performance
2. To determine the effect of the organization's green culture on MSME Sustainable Competitive Advantage.
3. To determine the effect of the organization's green culture on green innovation.
4. To determine the effect of green innovation on green performance.
5. To determine the effect of green innovation on MSME Sustainable Competitive Advantage.

Theoretical Review and Hypotheses

Green Organizational Culture and Green Performance

Green performance provides key information about environmental impact, regulatory compliance and organizational systems (Chinander, 2001), which represents the effectiveness and efficiency of a company's environmental actions (Neely et al., 1995). Green performance refers to the measurement of the interaction between business and the environment (Olsthoorn et al., 2001). Previous research has

shown that organizational green culture can change the way people think in organizations and that organizational members are important change agents in this process (Rao and Holt, 2005). Fergusson and Langford (2006) suggest that firms are more likely to adopt a green culture strategy if their managers place a high value on and show concern for environmental protection (Yung et al., 2011). A formal organizational green culture based on environmental values can facilitate and integrate operations related to various environmentally friendly products within a company (Banerjee et al., 2003). An organization's green culture can thus be an important asset that helps companies translate their proactive environmental strategies into green performance (Schlegelmilch et al., 1996). When manufacturing companies face environmental pressures, the managerial challenge lies in balancing two opposing goals: choosing the optimal level of green performance even though it can reduce profits and obtaining the lowest possible level of green performance to maximize profits (Russo and Fouts, 1997).). While organizations without a green culture may have to have limited resources to invest in their green strategies, top management can assign those resources to more basic organizational priorities, rather than environmental regulations. However, these resources are needed to support environmental action. This leads manufacturing companies to support the second goal. On the other hand, when companies with an organizational green culture face pressure from environmental protection to develop and report on green performance, the organizational green culture can be a key driver of green performance. The first goal for the optimal level of green performance can be the best alternative. Previous studies provide extensive, though not general, evidence on how an organization's green culture enhances green performance (Karna et al., 2016). Companies can view environmental investment as an unfavorable cost of doing business or as a source of competitive advantage, and these different perspectives emerge in the relationship between an organization's green culture and competitive advantage and green performance. For example, Zhu et al. (2007) show that organizational green culture improves performance and competitive advantage. However, Triebswetter and Hitchens (2005) found no evidence of a significant impact of environmental support on competitive advantage. Therefore, a possible explanation for the inconclusive results is that competitive advantage and green performance may stem from the mediating role of green innovation in the relationship between organizational green culture and competitive advantage and green performance, respectively. Based on this explanation, the first hypothesis is:

H1: organizational green culture has a positive and significant effect on green performance

Organizational Green Culture and MSME Sustainable Competitive Advantage

Competitive advantage refers to a superior position in the market that allows a company to outperform its competitors (Porter, 1985). To achieve competitive advantage, companies must create positive value that equals or exceeds the value of competitors. The theoretical perspective of the natural resource-based view (NRBV) of firms, first proposed by Hart (1995), is used as a basis for understanding the impact of organizational green culture on the achievement of a firm's competitive advantage. These resources must be valuable, rare, limited mobility and cannot be imitated. According to Ma (2000), competitive advantage is the difference between firms along comparable dimensions that allow one firm to compete better than its competitors. Companies must be able to respond to changing environmental issues by developing new resources (Menguc and Ozanne, 2005). Thus, the green culture of the organization can be a source of competitive advantage because the green culture of the organization must have different characteristics from the cultures of its competitors and, as an invisible asset, must be difficult for competitors to imitate. Organizational green culture can stimulate competitive advantage among organizational members because it can lead them to accept environmental issues as the basic values of the organization (Bansal, 2003). In other words, a strong organizational green culture helps employees to understand the company's environmental strategy. Thus, employees can find out whether the organization's green culture is part of the company's core values. Through activities and policies, companies can generate environmental conservation values, where competitive advantage will subsequently be achieved (Qi et al., 2012). Such an organizational green culture strategy can help to distinguish a company's competitive advantage from significant green values in the minds of consumers

(Aragón-Correa and Sharma, 2003). In addition, increasing the green orientation of organizational culture can help companies build a more distinctive image in the eyes of the public (Leonidou et al., 2015). Consequently, if competitive advantage depends on employee behavior and appropriate business values, then a supportive organizational green culture can be beneficial for the company.. Based on this explanation, the second hypothesis is:

H2: organizational green culture has a positive and significant effect on MSME Sustainable Competitive Advantage

Green Organizational Culture and Green Innovation

There is ambiguity about the terminology for green innovation. In the literature, researchers interchangeably use the terms eco-innovation (Hojnik and Ruzzier, 2016), green innovation (Roper and Tapinos, 2016) and environmental innovation (De Marchi, 2012). In addition, there are many definitions for the idea of green innovation. One of the first, Fussler and James (1996) defined green innovation as “new products and processes that provide customer and business value but significantly reduce environmental impact. Therefore, we define green innovation as product, process, and managerial innovation that leads to a marked reduction in environmental burdens (de Medeiros et al., 2018). O'Regan and Ghobadian (2005) proposed that innovation is driven by corporate culture, leadership and strategic planning. They also found that high levels of innovation in firms resulted from a better defined culture is compared to firms that have less innovation. Thus, a well-defined culture and environmental policy can facilitate green innovation in an organization (Porter and Van der Linde, 1995). An organization's green culture can encourage technological innovation environment (Greeno and Robinson, 1992). Green vasi comes from the organization's green culture, which consists of corporate behavior and norms for environmental support. Organizational green culture influences managers' attitudes toward green innovation (Özsomer et al., 1997). Managers in organizations whose culture is aligned with environmental preservation are more likely to implement environmental protection policies, increasing the organization's green innovation. Thus, companies differentiate their green innovation capabilities from their competitors by aligning their organizational culture to support environmental quality standards. Based on this explanation, the third hypothesis is:

H3: organizational green culture has a positive and significant effect on green innovation

Green Innovation and Green Performance

Companies that support green innovation can get green performance that helps improve their corporate image and even create new markets. Companies with a well-designed organizational green culture can actively improve their green innovation, which can not only minimize production waste and environmental pollution, but also strengthen the company's overall green image and reputation. This can improve the green performance of the company due to the popularity of the environment among consumers and strict regulations for environmental protection (Chen et al., 2006). An organization's green culture's dedication to a shared vision is the key to generating the internal environmental pressures necessary for change and innovation (Miles et al., 2000). From a resource-based point of view, a shared vision is a scarce (company-specific) resource, and few companies are able to build or maintain a widely shared sense of mission. Firms are more likely to adopt an eco-innovation strategy if their managers share high values and care about the environment and its protection. Thus, an organization's green culture can trigger green innovation and improve a company's green performance (Weller, 2006). Obviously, the green culture of the organization affects the green performance of the company, but only indirectly, by stimulating the company to adopt a green innovation strategy. Thus, organizational green culture has only a unique and direct effect on green innovation; and the latter, in turn, mediates the effect of organizational green culture on corporate green performance. Based on this explanation, the fourth hypothesis is:

H4: green innovation has a positive and significant impact on green performance

Green Innovation and MSME Sustainable Competitive Advantage

Organizational green culture not only makes it clear that the company has a source of competitive advantage such as green innovation that attracts customers with green values, but OCG also enhances organizational value (Jamrog et al., 2006). In other words, organizational green culture seeks to increase the competitive advantage of the company, and the realization of superior green innovation is seen by company managers as a distinct advantage that supports active managerial actions to minimize environmental pollution and waste (Banerjee, 2001). Studies show that adopting a green innovation strategy increases a firm's competitive advantage (Kushwaha and Sharma, 2016). Green innovation is considered to require employees to develop environmental protection knowledge and share it within the organization. In this sense, green innovation involves the transformation of existing knowledge. As Leonard-Barton (1995) points out, innovation occurs when employees share their insights about the production process, and it results in an increase in the firm's competitive advantage. We argue that for an organization's green culture to be considered a competitive resource, it must not only be committed to environmental issues, but staff must be trained for green innovation. Thus, competitive advantage is the result of an organization's green culture, which encourages green innovation and is shared across the company.. Based on this explanation, the fifth hypothesis is:

H5: innovation green has a positive and significant effect on MSME Sustainable Competitive Advantage

Research Methods

Based on the goals that have been set, namely to get answers to the problems that have been raised, this type of research is explanatory research. According to Creswell (2016), explanatory research is to test hypotheses between hypothesized variables that will be tested for truth. The hypothesis itself describes the relationship between variables, to find out whether a variable is associated or not with other variables, or whether the variables are caused and influenced or not by other variables. In the implementation of explanatory research using survey research methods. Survey research method is a type of research using a questionnaire or questionnaire as the main data source. In survey research, respondents are asked to provide short answers that have been written in a questionnaire or questionnaire and then the answers from all respondents are processed using certain analytical techniques (Sugiyono, (2015). This study uses a survey method, where the sample is selected from a large population. The unit of analysis of this research is the MSME Manager in Sumenep. The population of this study is the MSME Manager in Sumenep. A limited probability sampling technique is given to select the research sample. In this study the data will be processed using multiple regression analysis with the help of SPSS version 17.0 program Explanatory research in this study intends to provide an explanation of the causal relationship between the independent variables and the dependent variable through hypothesis testing.

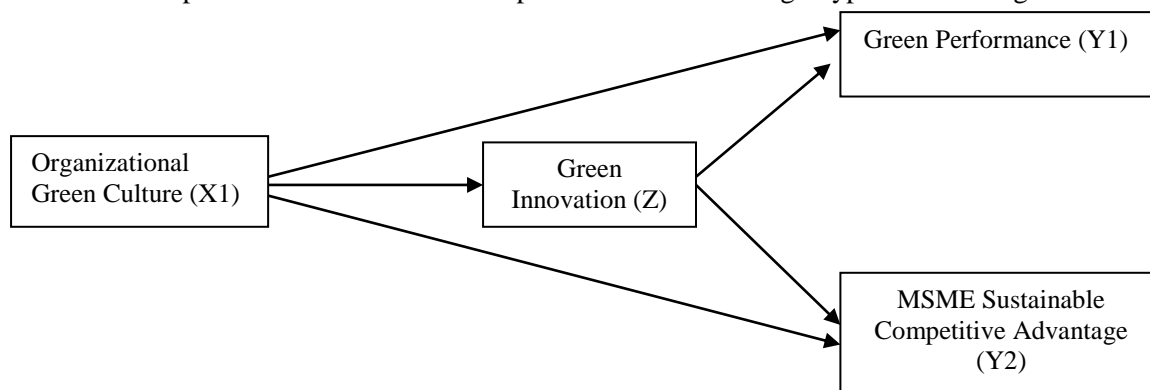


Figure 1. Conceptual Model

Result and Discussion

Result

Hypothesis Testing

Effect of Organizational Green Culture Variable (X) on Green Performance (Y1).

Table 1. Results of Regression Analysis of Organizational Green Culture Variables (X) on Green Performance (Y1)

Model	Standardized Coefficients Beta	t-test	Sig.	Information
X	0.625	82.791	0,000	<i>Significant</i>
Std.error	0,001			

Dependent Variable :Y1

Source: Processed data (2022)

Based on table 1, the organizational green culture variable has a significance value of 0.000 which means it is below 0.05 and has a positive coefficient value of 0.625 on green performance. It can be concluded that the organizational green culture variable has a positive and significant effect on green performance. This study confirms a significant positive relationship between organizational green culture and green performance. A stronger organizational green culture can improve green performance. The level of an organization's green culture can affect the level of green performance. This shows that a good organizational green culture among MSME managers will improve green performance. MSME managers are advised to increase the implementation of the organization's green culture to improve green performance.

Effect of Organizational Green Culture Variable (X) on MSME Sustainable Competitive Advantage (Y2)

Table 2. Results of Regression Analysis of Organizational Green Culture Variables (X) on MSME Sustainable Competitive Advantage (Y2)

Model	Standardized Coefficients Beta	t-test	Sig.	Information
X	0.578	91.863	0,001	Significant
Std.error	0.002			

Dependent Variable :Y2

Source: Processed data (2022)

Based on table 2, the organizational green culture variable has a significance value of 0.001 which means below 0.05 and has a positive coefficient value of 0.578 for MSME Sustainable Competitive Advantage. It can be concluded that the organizational green culture variable has a positive and significant effect on MSME Sustainable Competitive Advantage. This study confirms a significant positive relationship between organizational green culture and MSME Sustainable Competitive Advantage. A stronger organizational green culture can increase MSME Sustainable Competitive Advantage. The level of an organization's green culture can affect the level of MSME Sustainable Competitive Advantage. This shows that a good organizational green culture among MSME managers will increase MSME Sustainable Competitive Advantage. MSME managers are advised to increase the application of organizational green culture to increase MSME Sustainable Competitive Advantage.

The Effect of Organizational Green Culture Variable (X) on green innovation (Z).

Table 3. Results of Regression Analysis of Organizational Green Culture Variables (X) on Green Innovation (Z)

Model	Standardized Coefficients Beta	t-test	Sig.	Information
X	0.635	86.672	0,002	Significant
Std.error	0.004			
Dependent Variable				:Z

Source: Processed data (2022)

Based on table 3, the organizational green culture variable has a significance value of 0.002 which means below 0.05 and has a positive coefficient value of 0.635 for green innovation. It can be concluded that the organizational green culture variable has a positive and significant effect on green innovation.

This study confirms a significant positive relationship between organizational green culture and green innovation. A stronger organizational green culture can increase green innovation. The level of an organization's green culture can affect the level of green innovation. This shows that a good organizational green culture among MSME managers will increase green innovation. MSME managers are advised to increase the implementation of the organization's green culture to increase green innovation.

Effect of Green Innovation Variable (Z) on Green Performance (Y1).

Table 4. Results of Regression Analysis of Green Innovation Variables (Z) on Green Performance (Y1)

Model	Standardized Coefficients Beta	t-test	Sig.	Information
Z	0.581	79.951	0,001	Significant
Std.error	0,002			
Dependent Variable				:Y1

Source: Processed data (2022)

Based on table 4, the green innovation variable has a significance value of 0.001 which means below 0.05 and has a positive coefficient value of 0.581 on green performance. It can be concluded that the green innovation variable has a positive and significant effect on green performance. This study confirms a significant positive relationship between green innovation and green performance. Stronger green innovations can improve green performance. The level of green innovation can affect the level of green performance. This shows that good green innovation among MSME managers will improve green performance. MSME managers are advised to increase the application of green innovation to improve green performance.

Effect of Green Innovation Variable (Z) on MSME Sustainable Competitive Advantage (Y2).

Table 5. Results of Regression Analysis of Green Innovation Variables (Z) on MSME Sustainable Competitive Advantage (Y2)

Model	Standardized Coefficients Beta	t-test	Sig.	Information
Z	0.893	83.782	0,003	Significant
Std.error	0.001			
Dependent Variable				:Y2

Source: Processed data (2022)

Based on table 5, the green innovation variable has a significance value of 0.003 which means below 0.05 and has a positive coefficient value of 0.893 for MSME Sustainable Competitive Advantage. It can be concluded that the green innovation variable has a positive and significant effect on MSME Sustainable Competitive Advantage. This study confirms a significant positive relationship between green innovation and MSME Sustainable Competitive Advantage. Stronger green innovations can increase MSME Sustainable Competitive Advantage. The level of green innovation can affect the level of MSME Sustainable Competitive Advantage. This shows that good green innovation among MSME Managers will increase MSME Sustainable Competitive Advantage. MSME managers are advised to increase the application of green innovation to increase MSME Sustainable Competitive Advantage.

Discussion

Organizational Green Culture Has a Positive and Significant Effect on Green Performance (*H1 Accepted*).

The influence of organizational green culture on green performance has a significance value of 0.000 which means below 0.05 and has a positive coefficient value of 0.625. It can be concluded that the organization's green culture has a positive and significant effect on green performance. The results of this study show how important the organization's green culture is for green performance. This is evidenced by the results of research data which proves that organizational green culture has a positive and significant effect on green performance. There is a clear positive influence of organizational green culture on green performance. An organization's green culture that supports eco-friendly values leads managers to be aware of the resources used, the waste generated and the energy consumed, thereby increasing the company's green performance. While recognizing that existing green environmental regulations and rapidly changing technological environments may pose serious challenges, our results encourage managers to adopt the characteristics of an organization's green culture. For a company to make green culture a priority, it must hire managers who support environmental issues who represent the shared values of green culture that the company wants to embrace. Under today's strict environmental regulations and environmental attitudes, managers must practice environmentally friendly behavior to create new market opportunities for their companies and thereby improve the green performance of companies.

Organizational Green Culture Has a Positive and Significant Effect on MSME Sustainable Competitive Advantage (*H2 Accepted*).

The influence of organizational green culture on MSME Sustainable Competitive Advantage has a significance value of 0.001 which means below 0.05 and has a positive coefficient value of 0.578. It can be concluded that the organization's green culture has a positive and significant impact on MSME Sustainable Competitive Advantage. The results of this study show how important the organization's green culture is for MSME Sustainable Competitive Advantage. This is evidenced by the results of research data that proves that organizational green culture has a positive and significant effect on MSME Sustainable Competitive Advantage. These findings indicate that an organization's green culture can increase competitive advantage. From a practical point of view, managers must develop a culture that supports environmental values because an organization's green culture can differentiate a company from its competitors. Managers can grow the shared value of environmentally friendly production processes to reduce negative environmental impacts through organizational culture to maintain competitive advantage. While existing environmental protection pressures may not be easy to manipulate, we suggest that these managers are fully aware of their organizations environmental strategies when environmental concerns arise to make informed decisions. Their decisions regarding competitive advantage clearly depend on their organization's intention to engage in green culture activities.

Organizational Green Culture Has a Positive and Significant Effect on Green Innovation (H3 Accepted).

The influence of organizational green culture on green innovation has a significance value of 0.002 which means below 0.05 and has a positive coefficient value of 0.635. It can be concluded that the organization's green culture has a positive and significant effect on green innovation. The results of this study show how important the organization's green culture is for green innovation. This is evidenced by the results of research data which proves that organizational green culture has a positive and significant effect on green innovation. If the influence of organizational green culture on green innovation does represent a causal relationship between the two, then our findings have important managerial implications. The findings of this study show how an organization's green culture offers an opportunity for managers to enhance green innovation in manufacturing firms. In particular, managers must support and shape a green culture to mobilize and direct the energy of employees to achieve green innovation. It involves sharing the values of green culture within an organization. For example, managers should cultivate eco-friendly values to disseminate knowledge among organizational members by realizing the importance of green culture to enhance green innovation. Managers may consider developing a supportive green culture in an environmentally oriented work environment. Such an organizational culture facilitates the innovation of a manufacturing company's green strategy with employee-supportive behavior. Employees in organizations that have an organizational green culture are more likely to participate in environmental protection, enhancing the organization's green innovation capabilities.

Green Innovation Has a Positive and Significant Impact on Green Performance (H4 Accepted).

The effect of green innovation on green performance has a significance value of 0.001 which means below 0.05 and has a positive coefficient value of 0.581. It can be concluded that green innovation has a positive and significant effect on green performance. The results of this study show how important green innovation is for green performance. This is evidenced by the results of research data that proves that green innovation has a positive and significant effect on green performance. Traditionally, innovation has focused on superior competencies and market pioneers, such as technology or service innovation, to enhance innovation advantage. Our results suggest that managers can influence innovation by promoting environmental harm reduction values that are used to create strong green innovations. Of course, such an effect would require managers to lead in the green. In order to successfully innovate and adapt to environmental advances, managers must meet certain requirements in terms of their shared values. These green innovations can be incorporated into the organization's green culture which managers often have to implement.

Innovation Green Has a Positive and Significant Effect on MSME Sustainable Competitive Advantage (H5 Accepted).

The effect of green innovation on MSME Sustainable Competitive Advantage has a significance value of 0.003 which means below 0.05 and has a positive coefficient value of 0.893. It can be concluded that green innovation has a positive and significant effect on MSME Sustainable Competitive Advantage. The results of this study show how important green innovation is for MSME Sustainable Competitive Advantage. This is evidenced by the results of research data that proves that green innovation has a positive and significant effect on MSME Sustainable Competitive Advantage. Green innovation should be emphasized in the green culture of the organization because the green culture of the organization is proactive towards green innovation often leads to competitive advantage. Therefore, managers should work towards an internal organizational climate that supports green innovation. To achieve competitive advantage, managers must create a positive organizational green culture that can differentiate the company from competitors. When incorporated into an organization's green culture, green innovation enables managers to create new opportunities for a firm's competitive advantage. The concept suggests that competitive advantage can be obtained by offering a superior green value culture that not only

supports the organization's green culture but also uses green innovation to create further new market opportunities for the company. Thus, the organization's green culture enables companies to efficiently manage natural resources by embedding green innovation, which in turn leads to a sustainable competitive advantage.

Conclusions

The results show that organizational green culture has a positive and significant effect on green performance, organizational green culture has a positive and significant effect on MSME Sustainable Competitive Advantage, organizational green culture has a positive and significant effect on green innovation, green innovation has a positive and significant impact on green performance, and innovation green has a positive and significant effect on MSME Sustainable Competitive Advantage.

Suggestions

This research can be expanded in several directions for further research. There are suggestions based on this research. First, this research is focused on the MSME sector in Sumenep Regency. Suggestions for further research can expand the results by analyzing different districts. Second, the analysis method of this research is cross-sectional analysis with the aim of knowing the effect of organizational green culture on green performance, the influence of organizational green culture on competitive advantage, the effect of organizational green culture on green innovation, the effect of green innovation on green performance and the effect of green innovation on green innovation. competitive advantage. However, the role of some variables may change from time to time thereby making the results change. Therefore, this study suggests that further researchers can develop a theoretical model into a more complete construct..

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