

# Green Dynamic Capability Analysis: Study on SME Sustainable Fashion in Semarang

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## ABSTRACT

The purpose of this study is to describe the green dynamic capability of SMEs in sustainable fashion in Semarang. Green dynamic capability is part of the dynamic capability that applied to the environment. The Resource Based View (RBV) approach shows that dynamic capabilities need to be owned by companies and can create a competitive advantage to be able to compete with other companies. Currently the fashion industry has a tremendous impact on environmental pollution so that Sustainable fashion is a new perspective. Green dynamic capability in this study is viewed from 3 dimensions, namely resource integration capability, resource reconfiguration capability and environmental insight capability. The research sample is 10 SMEs Sustainable Fashion. Methods of data collection with structured interviews and analyzed descriptively. The results of the study indicate that the dimension of resource integration capability, respondents have internal and external resources that are able to support their business. Dimensions of resource reconfiguration capability, respondents educate employees and families and try to find the uniqueness of the products produced. In the environmental insight capability dimension, respondents gain insight independently and also learn from communities and associations

**Keywords:** green dynamic capability; sustainable fashion

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## 1. Introduction

Environmental problems in the industrial world require companies to adapt quickly. This requires business awareness to pay more attention to environmental aspects in managing their business. On the other hand, there are environmental problems, there is a change in consumer behavior that tends to buy environmentally friendly products even though environmentally friendly products are much more expensive, but consumer awareness is starting to emerge (Chang, 2011). As a consequence, the company must review the processes and products produced so that they are in accordance with the wishes of consumers, the government or even company partners who also pay attention to environmental aspects in developing more eco-friendly processes and products. (Sezen and Cankaya, 2013).

Environmentally friendly practices are related to company changes in achieving better environmental performance. This change requires innovation, therefore, companies need the

ability to change their business processes to include environmental aspects. One of the capabilities that enable companies to change their business processes is dynamic capabilities. This capability helps the company to improve its performance (Widen et al., 2013; Pezeshkan et al., 2016; Lin and Wu, 2014) or achieve competitive advantage (Breznik and Lahovnik, 2016). Furthermore, this capability supports the company during the process of synchronizing capacity development with the company's strategy leading to superior performance (Wang and Ahmed, 2007).

Megumi (2019) states that behind the promising fashion developments, there are many environmental problems that not many people know about. The textile industry as an industry that produces basic materials from the fashion industry is the largest emitter of greenhouse gases (GHG) and is also a contributor to microplastics in the sea. Seeing these problems, the world's fashion industry activists began to create sustainable business models. As one of the largest global industries, the fashion industry has a very real power in attracting consumer participation and attention to start an eco-friendly lifestyle.

Sustainable fashion is a practice in fashion that puts forward the values of the various parties involved in it, especially the environment and humanity. How to make fashion, whatever its form, from personal lifestyle to the business realm, should prosper and leave losses to a minimum. The goal of sustainable fashion is to unite various groups in the fashion industry, namely fashion designers, producers, distributors, to consumers (buyers) should work together to change the way fashion is produced and consumed in a better direction (Kulsum, 2020)

The concept of dynamic capabilities is a critical capability to make an organization grow and be competitive. The concept of dynamic capabilities emphasizes the competencies possessed by an organization or company to be able to change in line with environmental demands. The concept of dynamic capability was first proposed by Teece and Pisano (1994), who believe that dynamic capability is the ability of an organization to integrate, build, and reconfigure internal and external resources to cope with a rapidly changing environment. In a competitive, unstable, and complex business environment, dynamic capability offers an effective approach to increase company competitiveness (Wohlgemuth & Wenzel, 2016). Dynamic capability can be considered as the company's ability to change resources and adopt new workflows, discard old resources, acquire new resources, develop new processes, and integrate them to generate competitive advantages to cope with a volatile business environment (Zhou et al., 2018). Green dynamic capability can be said to be part of the dynamic capabilities applied to the field of management environment (Qiu et al., 2019)

Several studies have explored green dynamic capability, and several studies have integrated the green concept into dynamic capability. Qiu et al., (2019) emphasized that not many studies have determined its dimensions, so there is still room to conduct research on green dynamic capability, especially in sustainable fashion.

## **2. Literature Review**

The Resource Based View (RBV) approach argues that valuable, rare, and inimitable resources and capabilities are the basis of a sustainable competitive advantage (Barney 1991). RBV has two different points of view, (1) focusing on the steady state i.e. the company's ability to gain and sustaining competitive advantage and (2) focusing on the company's ability to adapt and take advantage of a dynamic environment. One of the key implications of the dynamics of the capability concept is that firms not only compete on their ability to exploit existing resources

and organizations, but also compete on their ability to renew and develop organizational capabilities to adapt to an uncertain environment (Teece and Pisano 1994; Teece et al. 1997). Capabilities enable a company to react to market changes by developing and renewing its resources and achieving a sustainable competitive advantage.

Green dynamic capability is part of dynamic capability, which refers to the company's ability to achieve sustainable development and a green concept in a constantly changing environment. Green dynamic capability emphasizes the integration, construction, and reconfiguration of internal and external resources related to environmental protection. Green dynamic capability is the company's capability to collect, identify, and estimate external information such as changes in green technology (green technology), green demand (green demand), and various policies related to the development of green companies (green companies) (Lin & Chen, 2017). Specifically, green dynamic capabilities include resource integration capabilities, resource reconfiguration capabilities, and environmental capabilities. Resource integration capabilities include the integration of internal and external resources. This includes the exchange and integration of knowledge and capabilities, emphasizing the value of collaboration between environmental units and other departments as well as the ability to integrate sustainability knowledge and the ability to incorporate green concepts into company operations (Dangelico et al., 2017). The next emphasis of green dynamic capability is the company's ability to absorb knowledge from external sources (Verona, 1999), including the ability to communicate, collaborate, and transfer knowledge among various external stakeholders (such as customers, suppliers, shareholders, interest groups, research institutions), local governments, and non-governmental organizations involved in environmental protection). The integration of external resources includes the ability to effectively recruit people with environmental skills and expertise (Dangelico, 2016).

Resource Integration Capability, Teece et al., (2007) show that the way a company efficiently integrates internal and external resources is very important to achieve a competitive market. If the ability to integrate internal resources is stronger, the internal environment can better realize cooperation between different departments and integrate knowledge and skills on an ongoing basis. Resource integration capabilities contribute to the design and development of specific new products through coordination and cooperation between different departments within the company and combining the different skills and backgrounds of each team (Protogerou et al., 2012). In addition, the strong external resource integration capability helps enterprises get scarce resources to achieve internal innovation, enhance mutual trust through deep interaction between organizations, and ensure the realization of collaborative innovation activities between enterprises. In summary, the company can restructure the existing strategy. Companies that have resource integration capabilities can also integrate knowledge from various fields and apply it to innovation activities, transforming potential opportunities into corporate profits. Resource Integration also helps shape processes to increase efficiency, reduce time and money costs, improve product quality, and produce new products that meet sustainability requirements. (Qiu et al., 2019).

Resource reconfiguration capability refers to the resources owned by the company. Companies need to respond to opportunities and threats in a constantly changing environment, resource reconfiguration capabilities can be in the form of creating new value for customers, improving company performance, and gaining competitive advantage. Wang and Ahmed (2007) show that reconfiguration of resources creates an open or flexible organizational structure so that the system of roles and relationship patterns can be flexible, and it is easier to combine resources continuously. The reconfiguration process allows companies to develop new products to gain

a competitive advantage. Many empirical studies show that resource reconfiguration capability plays an important role in competitive advantage. Protogerou et al. (2012) found that effective resource allocation can increase company flexibility but also maximize the efficiency of organizational resource utilization. Human resources between departments, and teams can more effectively carry out appropriate tasks through flexible coordination and integration

Lin and Wu (2014) emphasize that the ability to reconstruct resources can help companies grow their core competitive advantage and improve their market position. Therefore resource reconfiguration capability is sustainable, dynamic. With resource reconfiguration, companies can better address environmental sustainability challenges (Dangelico et al., 2017). Companies with strong resource reconfiguration capabilities can strengthen the allocation of existing resources and further, when companies pay more attention to resource and environmental sustainability, they can quickly respond to the market and reduce the impact of products on the environment. Thus, it is relatively easy to gain and maintain a competitive advantage.

Environmental insight capabilities reflect the process of gathering and using market environmental information. It can effectively identify opportunities and threats. besides that it also represents the company's sensitivity to environmental changes. If the company's environmental insight capability is strong, then the company can understand and adhere to green development policies, changes in green technology in the industry. Therefore, by developing and analyzing the above market information, companies can more quickly identify new opportunities posed by environmental changes, reallocate resources, adapt to market changes more quickly, and thereby implement effective response measures to gain competitive advantage.

### **3. Research Methodology**

The total population of sustainable fashion SMEs in Semarang is not known with certainty. To find out that SMEs sustainable fashion, it begins by looking at the products produced and using natural materials or the production process does not use chemicals and does not produce waste that is harmful to the surrounding environment. Because the population is unknown, the sampling technique used is the snowball sampling technique with a sample of 20 respondents. Snowball sampling is done by contacting and interviewing respondents and then asking SMEs that have sustainable fashion businesses. Based on the planned number of 20 respondents, this study found 10 respondents who were willing to be interviewed, 10 respondents who were not willing to be interviewed because 4 respondents were no longer producing during the covid 19 pandemic since last year, 6 other respondents were not willing to be interviewed for other reasons.

The data collection method uses structured interviews to record related to resource integration capability, resource reconfiguration capability and environmental insight capability to sustainable fashion SME business actors. The validity test of the interview data was carried out by triangulation, which is a technique to check data from various sources in various ways and at various times. With this triangulation technique, it is possible to obtain the completed information as possible. Triangulation is done by checking data obtained from several sources. When conducting an interview with one sustainable fashion SME, they were also asked about other sustainable fashion SME to check whether the answers given by the previous one.

Data analysis uses quantitative descriptive analysis, which describes characteristic of a person or event or situation. Descriptive analysis was carried out by describing the green dynamic capability of sustainable fashion SMEs in Semarang.

## 4. Results

### 4.1 Responden Overview

Table 1. Respondent Overview

Descriptive	Freq	%
Sex		
Female	7	70
Male	3	30
Last Education		
Associate's Degree (D3)	2	20
Undergraduate	8	80
Age		
31-40	3	30
41-50	5	50
51-60	2	20
Type of business		
Bag	1	10
Ecoprint, shibori and batik clothes	9	90

The majority of respondents are women (70%), the last respondent's position is 80% bachelor degree from various study programs including Chemical Engineering, Management Economics, Agriculture, Social and Political Sciences. Judging from the age of the majority of respondents or 50% aged 41 -50 years. Their type of business is 90% they produce both cloth and apparel made using ecoprint, shibori and batik and 10% of respondents produce bags from Kalimantan rattan and purun.

The production produced by respondents is sustainable fashion, namely fashion that considers environmental aspects such as minimizing waste, all respondents live close to neighbors so that aspects of production waste are very concerned.

### 4.2 Green Dynamic Capability

Green dynamic capabilities of sustainable fashion SME need to achieve competitive advantage. In this study, three dimensions were measured, namely resource integration capability, resource reconfiguration capability and environmental insight capability (Qiu et al., 2019).

#### 4.2.1 Resource Integration Capability

Regarding the question of internal resources owned by respondents, 100% of respondents stated that they have internal resources by loving the surrounding environment, participating in preserving the environment. While the external resources they have are friends who share the same vision of conserving nature, 100% of respondents follow communities and associations related to sustainable fashion products, all respondents also plant trees that they can use as raw materials such as *jarak wulung*, *jarak kepyar* etc.

The market for products produced by respondents is also not limited to consumers of sustainable fashion but anyone who is interested in their products. According to a respondent, sometimes consumers who come at exhibitions or at home see natural color products, the colors

are not bright or "mbladus" in Javanese, then look for products with bright colors, when the consumers buy the product the respondent introduces products with natural colors or sustainable fashion in the hope that consumers will also understand and even buy them.

Regarding the raw materials for cloth, the respondents obtained were obtained from various suppliers in the cities of Yogyakarta, Surakarta and Pekalongan. According to respondents, suppliers do not pay attention sustainable fashion, suppliers provide material made from natural or synthetic, that are needed by respondents, so that respondents do not find raw material difficulty. Regarding the dyes, they buy from the market and herbalists, according to the respondents, currently many of their colleagues sell natural dyes, so they just use them.

The sales that respondents do do not use resellers, they open businesses at home and take part in exhibitions held by the Cooperative Service or the Industry Service or by foundations engaged in sustainable fashion such as the EMPU foundation which facilitates respondents to sell their products. Efforts made by respondents to improve their capabilities by participating in various trainings, sharing knowledge held by their communities. During the current pandemic, there are indeed fewer meetings in the community, but what their respondents did was test the colors and variations of leaves and flowers.

#### *4.2.1. Resource Reconfiguration Capability*

In conducting a sustainable fashion business, respondents do not consult with environmental experts because their waste does not pollute the environment due to raw materials made from the natural surroundings, even solid waste such as small pieces of wood are used for fertilizer. On average, respondents only have 1-3 employees, and respondents provide sustainable fashion business training not only for employees but also for family members, even their children who sometimes help educate about sustainable fashion.

Respondents feel that there are still opportunities for sustainable fashion business, all respondents stated that there are not many competitors and the products produced cannot be exactly the same as one another, especially in color. While the challenge faced is that consumer interest is still low, respondents stated that their challenge is that consumers are looking for sustainable fashion products and they are looking for the uniqueness of the products.

#### *4.2.1. Environmental Insight Capability*

Regarding the efforts made by respondents in responding to opportunities and threats in the sustainable fashion business, various answers emerged, 40% stated that they studied with more experts in their community, 10% looked for models that were trending so that products sold well in the market, 20% passed on to the next generation of children. they and the younger generation in general to love sustainable fashion products, 10% educate the public, 20% try to mix various colors to produce unique products

## **5. Discussion**

Green dynamic capability oriented to the environment as seen from resource integration capability, resource reconfiguration capability and environmental insight capability in sustainable fashion SME in the city of Semarang. The analysis shows that they have an environmental orientation and always want to develop his business and on the other hand have a desire to educate the public on sustainable fashion even though this is not easy.

The resource integration capability of SMEs in sustainable fashion shows that they have strong internal resources and this can be a capital for further development, while external resources related to raw materials and associations and communities make it easier for them to do business, this can support company's competitive advantage, this research is also supported by Chen and Chang (2012), Dangelico, et al., (2016), Lin and Chen (2016), and Qiu et al., (2019) in analyzing the effect of resource integration capability on the competitive advantage of the company. company competitive.

Resource reconfiguration capability for SMEs in sustainable fashion also shows that SME do not consult with environmental experts or it can be said that they do not conduct environmental impact analysis tests such as those carried out by medium and large scale companies, but they are aware that waste, both solid and search does not support the environment. Associated with business opportunities, they stated that the opportunity is still quite large because there are not many SMEs who are trying in the field of sustainable fashion, this is in line with what was conveyed by Arwani and Proyono (2021). Resource reconfiguration capability has also been shown to affect the company's competitive advantage and performance (Chen and Chang, 2012; Dangelico, et al., 2016; Lin and Chen (2016); and Qiu et al., 2019)

Regarding environmental insight capability, it can be said that sustainable fashion SMEs have environmental insight, so they are aware that environmental aspects are very important in today's life. This dimension is measured based on the research of Qiu et al., (2019) which shows the results that environmental insight capability is needed for entrepreneurs and affects organizational performance and is not measured by other studies.

The limitation of this research is that it is only carried out on small numbers of SMEs sustainable fashion, it is hoped that future research can be carried out with a larger number, in terms of a more comprehensive analysis by adding the creativity variable of business actors which in the end is expected to become a competitive advantage and positively affect performance. company.

## **6. Conclusion**

From resource integration capability, it is known that respondents have internal and external resources and have a desire to develop. Internal resources owned are willingness and interest while external resources are surrounding raw materials such as leaves and roots as well as friends in the batik and eco print community.

From resource reconfiguration capability, respondents have educated employees and families and even want to educate the public. Respondents also look for the uniqueness of their products so that they can compete with others. The capability possessed in resource reconfiguration capability is the willingness of sustainable fashion SME to provide education during the production process while telling stories about the importance of environmental sustainability.

From environmental insight capability, efforts made by sustainable fashion SME are to learn from communities and associations and develop themselves individually. Sustainable fashion SME take part in events conducted by Communities and Foundations operating in the environment to further broaden their horizons

The SME Sustainable fashion need for the involvement of third parties such as the Government and Foundations whose environment supports SMEs in sustainable fashion so that they get facilities to better develop their products, with training and exhibition facilities.

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