



INVESTIGATING THE COMPLEX RELATIONSHIP BETWEEN ENVIRONMENTAL AND FINANCIAL PERFORMANCES*

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Abstract

There is no consensus on whether better environmental performance can lead to better financial performance. In this study, an attempt has been made to investigate the complex relationship between environmental performance and financial performance by relying on dynamic capabilities and contingency theory. In this regard, the effect of the company and industry characteristics on the relationship between environmental performance and performance has been investigated. The company's specific characteristics, selected based on the dynamic capabilities framework, include firm size, research and development costs, advertising costs, and capital expenditures. Industry-specific characteristics based on contingency theory include industry-level focus. A qualitative method is used to meet the aim of the study. To evaluate the explained relationships, data of 107 companies from 7 industries active in the stock market during the years 2018 to 2020 were collected, and hypotheses were tested using the combined data approach. The study results showed that the size of the company and the cost of research and development and concentration in the industry have a positive and significant effect, and the cost of advertising has a negative and significant impact on the relationship between environmental performance and financial performance. However, capital expenditures did not show a substantial effect on this relationship. Finally, the two-way relationship between ecological and financial performance was tested using the Granger causality test. It was found that the causal relationship between financial performance to environmental performance is the same among all companies and industries. However, the causal relationship Between ecological performance to financial performance may not be present in a set of companies.

Keywords: environmental performance, financial performance, dynamic capabilities, development costs, companies

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1. Introduction

Batik has a long tradition in Java Indonesia that contains meaningful symbols, some of which have meaning for the Javanese people. Batik is a cultural product (Tian et al., 2019) and a livelihood for millions of Indonesians (Handayani et al., 2018). The batik industry is spread in almost all parts of Indonesia (Sakinahmohdshukri and Jaharadak, 2020; Nurhaida et al., 2020) such as Cirebon, Pekalongan, Banyumas, Yogyakarta (Prahmana and D'Ambrosio, 2020). Although Solo, Mojokerto, and Jepara are not the main regional batik centres in Java, batik skills already exist in various places in Java (Maziyah and Alamsyah, 2020). The large number of batik industries spread across the archipelago can support the sustainability of the batik industry (Pambreni et al., 2019; Maya et al., 2018). Indonesian traditional batik is recognized as a masterpiece (Johar et al., 2020; Martuti et al., 2020) in the form of intangible cultural heritage by UNESCO (Jalil et al., 2020; Rahmadyanti and Febriyanti, 2020). The uniqueness of this form of cultural heritage can be seen from the variety of ornaments and motifs depicting nature, the diversity of fauna and flora, folktales, and weapon motifs. Several years ago, the global cloth market was dominated by Indonesian batik (Aliafari et al., 2019). Finally, the Indonesian batik industry has progressed very rapidly and has never been experienced before in the history of Indonesian batik until 2018.

The COVID-19 pandemic has impacted the global economy (Carreño et al., 2020), such as a decline in export demand (Vasiljeva et al., 2020; Wang et al., 2021). This will negatively impact the GDP growth rate, namely, export growth and import growth rates (Rasoolizad and Rasoolizadeh, 2019). In addition, panic buying (PB) is erratic human behaviour in at least 93 countries worldwide during the COVID-19 pandemic (Arafat et al., 2021). Governments worldwide have implemented trade-related measures in the face of the COVID-19 pandemic, some trade restrictions; however, many countries have also called for the abolition of export controls and restrictions on essential goods (Seo et al., 2020). This impact also affects Indonesian batik exports in several destination countries. Furthermore, along with the recent global COVID-19 pandemic, online webcast channels have become a more important speculation channel for marketing value goods products than ever (Feng et al., 2020).

During the Covid-19 pandemic, the Indonesian batik industry experienced a tremendous downturn until September 2020. In general, in the current new regular, small, and medium group (SME), batik business products also grow Indonesia's gross domestic product. It only needs good management in SMEs, the need for a planning division, an implementation division, and the need to evaluate strategies that must be implemented to achieve company goals (Mustafa et al., 2019). The Minister of Industry said the batik industry has great leverage in creating added value, trade, investment, the impact on other industries, and the speed of market penetration (Szalka and Tamándl, 2019). This study aimed to determine the acceleration of Indonesian batik exports through online marketing in the new normal era. Right now, it is the most suitable moment to seize the export market to the Americas, Europe, and Asia again, where during the COVID-19 pandemic, exports experienced a significant decline (Meyer et al., 2021).

2. Research method

This research method is qualitative research. In the qualitative method, meaning is built in the society in which we grow up. Social values are the development of historical and cultural ideas that serve as data sources (Krisnawati et al., 2019). Therefore, the researcher tried to understand the context and collect information/data in three stages (Polianova and Yunusov,

2019). First, observations were made in batik exporting companies and artisans who are members of the SME community in the Cirebon Regency. Second, interviews with 30 batik artisans and batik entrepreneurs in the Trusmi batik village environment. Third, document analysis in export data from the Ministry of Trade and the Indonesian Bureau of Statistics in 2010-2015 before the pandemic and 2018-2020 during the Covid-19 pandemic. The research data was analyzed using an interactive analysis model continuously until it was completed (Komariah et al., 2020). This study's data analysis activities were carried out through the stages of data collection, data reduction, data display, and conclusion drawing. Then, an exploration of the dynamics of the indicators for the acceleration of Indonesian batik exports was carried out from the data.

3. Results and discussion

3.1. Indonesian batik export flow

The batik industry in Indonesia is growing rapidly after UNESCO declared batik as one of the world's cultural heritages in 2009 (Shabrina and Kuswanto, 2018). This positively impacts the increasing demand for the written batik market, both from domestic and foreign consumers. The market demand comes from several countries such as America, Japan, and European countries. Consequently, Indonesian batik export activities to foreign countries are quite influential on the country's foreign exchange. The global market's transaction culture in the batik marketing flow scheme is determined by several factors, including the production pattern of artisans, marketing strategies, and buying and selling transactions in the worldwide market (Fig. 1).

Figure 1 shows that generally, the destination countries for batik exports are developed countries that prioritize product quality. However, exports of Indonesian batik products continued to decline in the 2015-2020 period (Fig. 2). Indonesian batik export activities to foreign countries are quite influential on the country's foreign exchange. In the period from January to July 2014, Indonesia's batik exports to the United States increased significantly to reach US\$ 85.5 million (an increase of 24.13%) compared to the same period in 2013, which only reached US\$ 68.8 million. The sales value of Indonesian batik to Germany increased to US\$ 4.52 million. Meanwhile, South Korea is in third place, achieving an export value of up to US\$ 3.94 million (data up to the end of March 2013, in the same period). However, in 2015 the export value reached US\$ 185 million, declining to US\$ 156 million in 2016. The demand for batik in 2017 experienced a decline again to reach US\$ 73.8 million in which the main destinations were Japan, the United States, and European countries (Maya et al., 2018). In the last year of 2018, batik sales to foreign markets were recorded at US\$ 52.33 million. In the first semester of 2019, batik exports to foreign countries increased significantly, reaching US\$ 54.39 million. However, the global COVID-19 pandemic has had an impact on the global economy. During January-July 2020, in the new normal era, Indonesian batik exports reached US\$ 21.5 million in the second quarter (Saimin et al., 2020).

3.2. The role of SMEs and batik entrepreneurs on exports

Small and Medium Enterprises (SMEs) in economic development and growth are very important in developing countries and developed countries. SMEs in Indonesia has an important role in social and economic growth (Kristiningrum et al., 2021). SMEs of Cirebon batik has grown rapidly over the last ten years or so. The development of the Trusmi batik industry in the Cirebon Regency cannot be separated from the increasing number of Trusmi Batik SMEs. This can be seen from the growing number of batik business units in the Cirebon district and other regions in Indonesia. Based on data from the Department of Industry and

Trade of Cirebon Regency, in 2014, there were 570 business units with a total workforce of 4,510 people. Table 1 shows the number of Indonesian batik artisans and entrepreneurs in 2020.

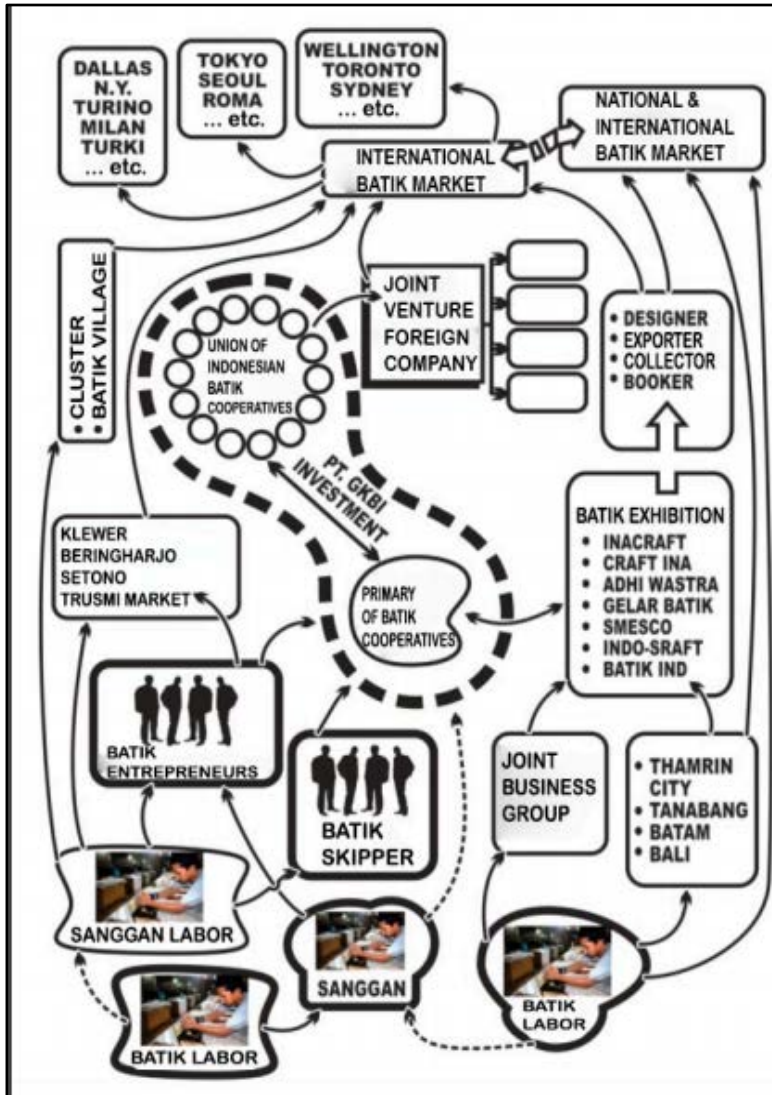


Fig. 1. Production and marketing flow of Indonesian batik towards the Global market

During the Covid-19 pandemic, there was a decline in the number of crafters by 75% (118,670 crafters) who could not work. The number of batik artisans to date is 32,895. This has an impact on the declining number of Indonesian batik production. Table 2 shows the productivity of Indonesian batik artisans and entrepreneurs. In Table 2, the association of Indonesian Batik craftsmen and entrepreneurs noted that Indonesian batik production before the pandemic-19 period reached 1,532,392 pieces with an estimated value of 3.7 trillion rupiahs. However, since the Covid-19 pandemic, Indonesian batik production has only been 383,098 pieces with an estimated selling value of 915 billion rupiahs.

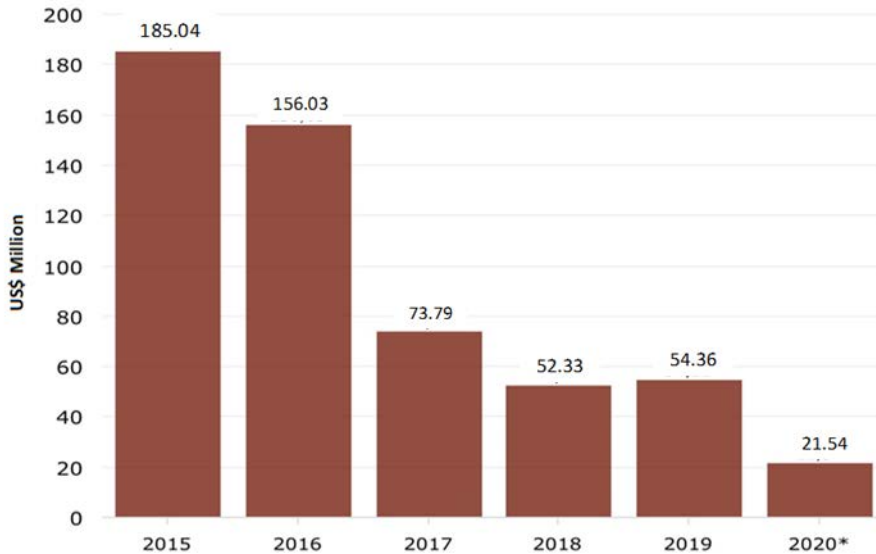


Fig. 2. Exports of Indonesian Batik Products in the 2015-2020 Period

Table 1. Number of Indonesian Batik Craftsmen and Entrepreneurs

<i>No</i>	<i>Class</i>	<i>Number of Entrepreneurs</i>
1	Big Batik Entrepreneur	502
2	Medium Batik Entrepreneur	1279
3	Small Batik Entrepreneur	2812
4	Batik Crafts	151,656

Table 2. Productivity of Indonesian Batik Craftsmen and Entrepreneurs

<i>No</i>	<i>Year</i>	<i>Production/Month</i>	<i>Value (IDR)</i>
1	2018 (Before the Covid-19 pandemic)	1,532,392 pieces	3,700,000,000,000
2	2020-2021 (After the Covid-19 pandemic)	383,098 pieces	915,000,000,000
3	Production Decrease	1,149,294 pieces	2,700,085,000,000

The Government of Indonesia has implemented various policies in response to this COVID-19 pandemic (Yasmin et al., 2020). In early March 2020, one of the policies was the large-scale social restrictions (PSBB) for the people of Indonesia (Hadiwardoyo, 2020). Policies impact economic losses, disruption of supply chains, and disruption of the production of goods and services because most industries are prohibited from operating (Sumadi et al., 2020). The coronavirus pandemic is putting global supply chains into the focus of a wider public (Yamaguchi and Kusakawa, 2018). This also impacts the batik industry, where most batik artisans can only become labourers for capital owners from local batik entrepreneurs and entrepreneurs from outside. Batik workers can choose to work at home if ready with the equipment used to make their batik (Mn and Nuringsih, 2020). Finally, not all craftsmen can

meet global market demands (Gilardi et al., 2018). In addition to batik motif innovation, limitations in finance, knowledge, technology, resources, and business support are obstacles for batik SME entrepreneurs in marketing their products through online businesses (Novianti, 2020; Sihotang et al., 2020). To increase social value in batik clusters, entrepreneurs must often conduct continuous training with more complex equipment, innovate products, optimize product promotion through exhibitions and the internet, and the need for continuous training programs held in collaboration with government authorities.

In the first semester of 2021, it was noted that the demand for batik began to grow after the National Crafts Council (Dekranas) and the Association of Indonesian Batik Craftsmen and Entrepreneurs (APPBI) held regular batik webinars once a week and virtual sales and virtual handicraft and batik exhibitions at Jakarta Design Center (JDC). As a result, batik exports have been carried out again by large and medium-sized entrepreneurs by dismantling their savings. Meanwhile, batik artisans have not yet restarted their batik activities because they cannot sell their products online as batik galleries do in their area. Therefore, the acceleration of batik exports contributes to paving the way for batik craftsmen to participate in the global market while taking advantage of its benefits (Wahyuni et al., 2019). Furthermore, accelerating growth can have enormous quantitative implications for poverty alleviation and, more broadly, for societal well-being (Peruzzi and Terzi, 2021).

4. Conclusions

This study concludes that Indonesian batik production has decreased from 2015 to the Covid-19 pandemic in the first semester of 2019. This decline occurred in line with the government's decision to enforce large-scale lockdown and social restrictions.

Therefore, an online marketing model is needed during this Covid-19 pandemic so that the acceleration of Indonesian batik exports can be carried out immediately. For this reason, the government and state-owned companies need to provide digital marketing training to artisans so that they are excited to return to producing batik and can sell directly. Thus, as Indonesian batik production increases, it can encourage exports again in the current new normal era.

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