



Awakening the Giant Within: Turning SME's Survival Strategy into Improved Performance

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Abstract

Purpose – This study examines the positive impact of strategies on the viability of small and medium enterprises (SMEs) in times of crisis. Resource utilization is a survival strategy performed by SMEs; subsequently, this study investigates its effect on innovation practices and SMEs' performance. It further assesses the potential impact of government aid on the relationship between resource utilization and innovation.

Design/methodology/approach – This study employed a mixed method that integrates phenomenology and quantitative research. This phenomenological study uses in-depth interviews with 23 SME owners. Grounded on the qualitative findings, the quantitative study employs a survey of 352 SMEs. Structural equation modeling was used for hypothesis testing.

Findings – Resource utilization as a survival strategy has a positive effect on increasing organizational innovation practices and ultimately impacts business performance. The presence of government support and partnership engagement plays a significant role in enhancing the relationship between resource utilization and innovation.

Practical implications – The COVID-19 pandemic has brought a crisis for businesses but has provided many positive transformations. SME entrepreneurs should sustain their survival strategies and seize external support to enhance their potential. Various efforts due to the pandemic have created innovations, honing business resiliency and increased competitiveness.

Originality/value – SMEs struggled with the crisis and responded by utilizing many retrenchment strategies. This emergency response was for survival; nevertheless, some actions continued and had a long-term fruitful impact. The findings can be generalized to represent the behavior of SMEs, especially in emerging countries.

Keywords Survival strategy, Resource utilization, Innovation, Government Support, partnership, Indonesian Batik

Paper type Research paper

1. Introduction

The COVID-19 pandemic, which has occurred for more than two years, has caused disasters to the global economy, disrupted national stability, and changed the business landscape worldwide. Small and medium enterprises (SMEs) are among the sectors most affected by the pandemic (Caballero-Morales, 2021; Qehaja, 2021). Especially in developing countries, SMEs are vital to a country's economy (Rahman *et al.*, 2021; Huynh, 2022).

Indonesia, as an emerging country with a high economic growth rate (World Bank, 2019, 2022) and as one of the newly industrialized countries or NICs (Boddin, 2016), has experienced a significant decline in economic activity, decreased public purchasing power, and increased unemployment (World Bank, 2022). Prior to the pandemic, SMEs in Indonesia accounted for 99.99% of businesses in Indonesia, contributing to more than 96.9% of employment and approximately 61.1% of GDP in 2019 (OECD, 2022). These statistics are similar to those of other developing countries (Cepel *et al.*, 2020). The decline in people's purchasing power has resulted in a decrease in the sales of SME products, while limited capital has resulted in many SMEs in Indonesia going bankrupt. A survey conducted by the Indonesian Central Bank in September 2020 showed that approximately 24.8% of SMEs experienced a decreased income during the COVID-19 pandemic.

In addition, many SMEs in Indonesia need help in managing debt and maintaining their businesses. The Indonesian Ministry of Cooperatives and SMEs reported in early 2021 that approximately 6,878 SMEs were registered as beneficiaries of the credit restructuring program issued by the government. The available reports show that this pandemic has significantly impacted SMEs in Indonesia and created many difficulties for them to survive.

However, some SMEs have extraordinary capabilities that emerged during the crisis. Previous studies have shown various strategies for micro, small, and medium enterprises to survive the pandemic (e.g., El Chaarani *et al.*, 2021; Katare *et al.*, 2021; Rahman *et al.*, 2021;

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3 Arslan *et al.*, 2022). Generally, the first survival strategy is 'retrenchment' (efficiency), which
4 involves reducing or laying off employees and reducing material quality (Yunus *et al.*, 2023).
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6 Although these initiatives are not always effective (Klyver & Nielsen, 2021), they allow
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8 businesses to stay afloat in the short term. As an illustration, small and medium business
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10 owners strive for employees to achieve maximum productivity and utilize distribution
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12 networks (e.g., resellers/distributors/retailers) to market products or services that can generate
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14 short-term income. Other internal resources are also maximized, such as production facilities,
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16 business premises, and online promotional media.
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22 Awaken by the pandemic, SMEs have discerned and begun to evaluate their business
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24 processes and resources to survive. The initial maneuvers align with Resource-Based Theory
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26 (RBT), where internal resources are the main factor in determining market advantage
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28 (Barney, 1991; Barney *et al.*, 2011). According to RBT, the competitive advantage of
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30 organizations depends on their ability to utilize and develop these internal resources
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32 effectively and efficiently. Several previous studies have examined the effect of unique,
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34 valuable, inimitable, and non-substitutable resources on the competitive advantage of SMEs
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36 (Rahman *et al.*, 2021; Estensoro *et al.*, 2022). Studies show that internal resources not only
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38 increase the advantage over competitors but also determine firm survival (e.g., Chatzoudes *et*
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40 *al.*, 2022).
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46 Furthermore, allied with the absorptive capacity (ACAP) theory, SMEs that assimilate and
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48 apply new knowledge and external information would utilize internal resources, develop new
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50 products (Zahra & George, 2002), and quickly adapt to the crisis (Miroshnychenko *et al.*,
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52 2021). SMEs could apply the resource-based view perspective and absorptive capacity theory
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54 in times of crisis for a competitive advantage in the long run. Both theories are pertinent in
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56 explaining the SMEs' survival behaviors and enriching the existing literature. This study took
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58 the first step by revealing SMEs' responses to the pandemic crisis, clustered them into
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3 themes, and verified the findings through a larger-scale survey. The following two research
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5 questions were explored.

- 6
7 1. What are endeavors signifying SMEs' responses to the COVID-19 pandemic crisis?
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9 2. Will this set of endeavors significantly result in better performance?

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12 There have been many studies on post-pandemic survival strategies for COVID-19, but
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14 the current study departed in several aspects. Firstly, this study employed an integrative
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16 qualitative and quantitative approach in which in-depth interviews are used to explore the
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18 experiences of business actors during the crisis. The quantitative study verifies most SMEs'
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20 experiences in Indonesia. We expect the results to be an initial map of the SMEs' struggle
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22 through crises in other developing countries.
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26 Secondly, this study linked two well-established strategic management theories: Resource-
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28 Based Theory (Barney, 1991; Barney et al., 2011) and Absorptive Capacity (Cohen and
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30 Levinthal, 1990; Zahra & George, 2002). Instead of assuming that the two theories are at
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32 odds, this study considers both essential in fully explaining SMEs' maneuvers when the
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34 phenomenon occurred.
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38 Thirdly, this study examines small and medium enterprises, where in developing
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40 countries, this type of business generally dominates the country and contributes to the
41
42 national economy. Reflections on the impact of the pandemic on SMEs have also started to
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44 bloom, and interestingly, a recent study by Islam and Fatema (2023) revealed that the
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46 probability of SMEs surviving was higher than that of larger firms. The current study might
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48 shed light on how SMEs, specifically in an emerging economy, reacted to the crisis, stretched
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50 beyond the business-as-usual mindset, and reaped extraordinary advantages.
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54 Finally, as governments of developing countries design and implement assistance
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56 programs to improve their economies, the Indonesian government has special programs to
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58 help SMEs, such as the National Economy Recovery Program launched in 2020 (OECD,
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2022). This study assesses whether the assistance received by SMEs is right on target in increasing their survival capabilities during the pandemic, as well as whether collaboration with external partners improves SMEs' resiliency during the crisis.

The remainder of the paper is structured as follows. The next part of the paper, Section 2, discusses the concepts used in this study, namely, survival strategies, the Resource-Based Theory, and absorptive capacity, and used in building hypotheses about resource utilization, innovation, and performance. Section 3 discusses in detail the methodology for qualitative and quantitative studies. Section 4 describes the results of the two approaches and further explains the study findings in Section 5. Finally, this paper ends with conclusions and study limitations, which serve as a caution towards better further research.

2. Theoretical background and hypotheses development

2.1 Survival strategies during crisis

The concept of organizational survival strategy is a growing stream of research (Rahman *et al.*, 2021; Islam *et al.*, 2021). However, with the unprecedented COVID-19 pandemic, more research has been directed towards organizational behaviors during and after the crisis. This pandemic began with a virus outbreak that forced governments worldwide to close national borders and stop all economic activities. Even though policies, strategies, and patterns vary between countries, the consequences are similar, impacting the global community's public health, economic conditions, education, and social life. Hence, previous studies categorize organizational strategies for surviving during a pandemic as considerably more intensive than when dealing with previous crises (Sharma *et al.*, 2020), there is a call for more research (Chatzoudes *et al.*, 2022).

The pandemic, which has created uncertainties in the business environment, has forced companies to shift their focus towards maximizing internal utilization (Chatzoudes *et al.*,

2022). Studies argue that the basis of organizational success is more internal resources and capabilities than products (Lukovszki *et al.*, 2021). Aligns with Resource-Based Theory, a company's competitive advantage is obtained from resources and capabilities that are unique, valuable, difficult to imitate, or be replaced (Barney *et al.*, 2011). These resources, including physical, financial, human, and intellectual capital and capabilities, such as employees' skills and talents, can be maximally utilized during uncertain times of crisis to maintain the company's cash flow (Bettiol *et al.*, 2022).

According to Wenzel *et al.* (2020), there are at least four survival strategies during a crisis: retrenchment or efficiency; persevering or maintaining as-is conditions with persistence; innovation; and exit. In a study of SMEs in Indonesia, Yunus *et al.* (2023) mapped the four strategies implemented in the short and long term. Another study on SMES struggles showed that SMEs engaged in more innovation practices during a crisis (El Chaarani *et al.*, 2021; Caballero-Morales, 2021) while seeking government support (Arslan *et al.*, 2021; Chatzoudes *et al.*, 2022), or seeking assistance from the external environment during the crisis, such as from families and even competitors (Safari & Saleh, 2020; Arthur *et al.*, 2022; Yunus *et al.*, 2023). RBT is insightful in shedding light on the behavior of SMEs to sustain their business.

Along the same line, previous studies have also linked SMEs' actions, which can be sporadic, in offering new products or existing products with new value propositions, with their ability to survive during crises (Cottrell & Nault, 2004; Rahman *et al.*, 2021). In this case, the keyword is SMEs' ability of SMEs to continuously develop innovation (i.e., innovation capability). Previous studies have shown that a company's ability to develop innovation increases during crises, especially for SMEs (Lukovszki *et al.*, 2021; Rahman *et al.*, 2021). Miroshnychenko *et al.* (2021) further proved that the ability to absorb and utilize external information can increase company innovation and ultimately affect organizational performance.

2.2 Resource utilization, innovation, and performance

Drawing from the qualitative findings, this study revealed two pertinent themes as SMEs' survival responses during the pandemic: resource utilization and innovation. The process of extracting themes is detailed in the methodology section. Resource utilization emerged as an intuitive strategy in the early days when SMEs sensed the urgency to save their businesses. Some efforts have been made to develop innovative practices.

During a crisis in which the external situation of the organization becomes increasingly turbulent and uncertain, the company will try its best to survive with whatever it takes. (Rahman *et al.*, 2021). Although companies have qualified internal resources and capabilities, only those that can utilize them consistently and persistently can maneuver to produce new products that consumers primarily need during emergencies (Valaei *et al.*, 2021; Huynh, 2022).

This phenomenon is even more pronounced in SMEs with few resources and limited external assistance (Adam & Alarifi, 2021; Qehaja, 2021). Drawing from the RBT, this study argues that SMEs that utilize production, technology, distribution facilities, as well as the skills and talents of employees, to survive during a crisis will transform into new creations that are commercially viable (Runyan *et al.*, 2007; Huynh, 2022). Therefore,

H1: Resource utilization has a positive effect on SMEs' innovation in times of crisis.

Previous studies have consistently provided empirical evidence regarding the impact of innovation capabilities and practices on company performance in both large-scale and small- and medium-sized companies (Saunila *et al.*, 2014; Saunila, 2016). The ability to innovate does not necessarily improve performance; however, if followed by sustained practices, companies will produce products/services that are superior to competitors. Under crisis

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3 conditions, innovation capabilities and practices become more critical (Chesbrough, 2020)
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5 because companies face situations in which buyers have lower purchasing power and
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7 companies compete for smaller markets. This study projects the same for SMEs in
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9 developing countries.
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12 *H2: Innovation has a positive effect on company performance in times of crisis*
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15 16 17 *2.3 The influence of external support and partnerships* 18

19 Small and medium enterprises will be the first to be affected by economic crises due to
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21 limited working capital (Adam & Alarifi, 2021), and so they turn to the government as one
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23 such source of assistance (Safari & Saleh, 2020; Arslan *et al.*, 2022; Huynh, 2022). Studies
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25 have confirmed the impact of government support in improving SMEs' resiliency (e.g., Trieu
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27 *et al.*, 2023). It would be valuable if academic research also validated the benefits of
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29 government assistance in increasing SMEs' fighting power to survive a crisis. The findings
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31 obtained will offer important lessons for policymakers. In this case, there will be a difference
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33 between SMEs receiving assistance and those not. Therefore, this study hypothesizes the
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35 following.
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40 *H3: There is a significant difference between SMEs that receive/do not receive*
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42 *government assistance in the relationship between resource utilization and innovation,*
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44 *such that, SMEs that receive assistance will be more able to increase innovation*
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46 *through resource utilization than those that do not.*
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51 Previous studies have shown that SMEs try to maximize the use of their resources for
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53 business continuity; however, during a prolonged crisis, SMEs need external assistance and
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55 use their networks to survive (Lukovszki *et al.*, 2021). SMEs will collaborate with their
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3 supply chain partners and competitors to jointly create new creations that are more needed by
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5 the market.
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8 *H4*: There is a significant difference between SMEs that partner with external parties in
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10 the relationship between resource utilization and innovation, such that, SMEs that
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12 engage in partnerships will be more able to increase innovation through resource
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14 utilization than those who do not.
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19 **3. Methodology**

20 *3.1 Unit analysis and sample*

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22 This study uses two successive approaches, qualitative and quantitative, to capture the crisis
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24 experienced by SMEs in Indonesia. Phenomenological research is the most appropriate
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26 because the impact of the COVID-19 pandemic is unexplored and unexpected, and
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28 phenomenology will be able to investigate the "lived experience" (Pietkiewicz & Smith,
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30 2014) when SME owners try to save their businesses. This study uses the phenomenological
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32 approach with a quantitative study to verify the generalizability of the qualitative findings.
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34 We did not conduct a literature synthesis or formulate hypotheses prior to a field study
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36 because phenomenology requires researchers to be free from theories and concepts to prevent
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38 bias.
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45 SMEs in Indonesia are very diverse, with thousands of different types of businesses, such
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47 as the food and beverage industry, crafts, fashion, information technology, and professional
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49 services. According to data from the Indonesian Ministry of Cooperatives and SMEs, in
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51 2020, there were approximately 64.2 million businesses, but this number includes non-SMEs.
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53 Up-to-date data on the exact number of SMEs in Indonesia are needed. As business types
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55 might potentially affect the results, we choose one homogenous type that contributes
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57 significantly to the country's economic growth.
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3 This study chose the batik business. Batik is the Indonesian nation's work, a blend of art
4 and technology by Indonesian ancestors (Indonesian Ministry of Industry, 2020a). The
5 various patterns of batik fabrics are full of the meaning and philosophy explored by
6 numerous customs and cultures in Indonesia. A hallmark of batik is the use of liquid wax to
7 block color (Elliott, 2013). In addition, batik has strong characteristics of subtle and intricate
8 decorative motifs on fabrics. The batik SME sector has contributed significant export value,
9 has become a leader in the world batik market, and has absorbed more than 200 thousand
10 workers in Indonesia (Indonesian Ministry of Industry, 2020b, 2021). As part of the creative
11 industry, batik is always innovative (Arthur *et al.*, 2022). However, when the economy is
12 hampered by the pandemic, the batik industry needs to go beyond mainstream creativity and
13 learn from each other's successes.
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28 Based on data from the Indonesian Ministry of Industry, batik is dominated by producers
29 in Java, the largest island in Indonesia, which accounts for approximately 75% of the
30 business, and the rest are outside Java. Therefore, Batik SMEs on Java Island in Indonesia are
31 the unit of analysis.
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38 The phenomenological literature suggests exploring experiences from certain situations
39 from at least to 6-8 sources (Pietkiewicz & Smith, 2014) or as many sources as possible until
40 no new insights are obtained in addressing research questions (Mack *et al.*, 2005). This study
41 uses a time-limit guide to interview batik small and medium-sized businesses in Java. From
42 the time allotted for three months of data collection, this study obtained 23 informants, each
43 representing one Batik SME business.
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51 For quantitative research, this study determined the sample size by considering the 95%
52 confidence interval level, with the number of Batik SMEs in Indonesia being 4900
53 businesses. With 75% of them on Java, the minimum number of samples was 298. After
54 approximately four months of data collection, this study obtained 352 SMEs.
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3.2 Qualitative study: phenomenology

Phenomenology is a methodology for investigating phenomena from the perspective of subjects experiencing certain situations. Phenomenology can help "uncover 'lived' experiences " and is used to explore management concepts and phenomena (Annosike *et al.*, 2012, p. 5). This qualitative study is carried out directly on the phenomena that occur and aims to reveal the experiences that occur, not to use conceptualization or theory (van Manen & van Manen, 2021). Spiegelberg (1975, p. xiv) in van Manen and & Manen's (2021) study suggests "doing phenomenology on the phenomenon itself". Considering that the COVID-19 pandemic has been a distinct situation over the last decade, phenomenology is an appropriate study to reveal and uncover the various experiences of business actors during a crisis.

The characteristics of a phenomenological study are descriptive, which includes direct exploration, analysis, and description of the phenomena free from assumptions (Annosike *et al.*, 2012). One of the keywords in the operationalization of phenomenology is phenomenological reduction, regardless of the theoretical bias regarding the situation being investigated. The researcher directly explored the informants' experiences and analyzed and described them as a picture of the reality experienced by the participants (Goulding, 2005; van Manen & van Manen, 2021).

The study of the impact of COVID-19 on business using the phenomenological method is critical because "engagement with a phenomenological research approach would provide an opportunity for managers to articulate their experiences and therefore *become more aware of themselves and their management actions* – more importantly, how their actions constitute the bases for empirical knowledge and for shaping organisational policies." (Annosike *et al.*, 2012, p. 14, italic added). Thus, through a phenomenological study in which business actors reveal their remarkable experiences in pulling through the pandemic period, they become

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3 more mindful of what they have been through and aware of their strategies, either deliberate
4 or unintentional. In doing so, other stakeholders (i.e., government and society) will also
5 benefit from phenomenological studies.
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10 This study employed Goulding's (2005) steps in performing phenomenology, namely: (1)
11 collecting data and thoroughly reading all transcripts of interviews, (2) identifying keywords
12 that emerge from the informants' narratives, (3) formulating meanings, (4) conduct steps 1-3
13 with other informants, and in-depth interviews with previous informants; (5) integrating
14 meanings into themes and producing rich statements; and (6) reducing matching themes and
15 compiling explanations. Goulding (2005) recommended validating themes by cross-checking
16 with interviewees; however, due to several constraints, four researchers mainly performed a
17 cross-check to verify the theme extraction and did not involve interviewees in this last step.
18 Appendix A presents a list of interview questions.
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33 *3.3 Quantitative study: Instrument development*

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35 This study developed instruments based on themes that have emerged from
36 phenomenological studies. Instrument development began with a literature review concerning
37 two themes and one outcome (which will be discussed further in the Results section). These
38 qualitative themes have become variables in quantitative studies. One theme represented one
39 variable, and the researchers used previous literature as a reference to develop the survey
40 instrument.
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49 Desk research and interviews revealed several main variables: Resource Utilization,
50 Innovation, and Performance. Four researchers developed the instrument and applied face
51 validity through confirmation with SME entrepreneurs. The scale used was a 5-pt Likert
52 scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Resource Utilization
53 consisted of five question items, innovation with seven items, and performance with six
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3 items. One more question was added based on input from one entrepreneur, namely the
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5 assistance of the government. For questions regarding Government Support (Did you get a
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7 government assistance program for your MSMEs during the pandemic?), the answer choices
8
9 were Yes/No, and the respondent wrote down the form of the assistance program received (if
10
11 any). Meanwhile, for Partnerships (collaboration in innovation activities with other parties),
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13 respondents determined their answers using a 5-pt Likert scale.
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17 Before starting the full-scale survey, the researchers conducted an instrument pre-test with
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19 30 batik business owners to ensure the ease and consistency of the narratives. The pre-test
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21 results indicated that the instrument was valid and reliable; therefore, we proceeded with the
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23 entire survey.
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26 27 28 29 *3.4 Survey data collection and analysis*

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31 Data collection took approximately four months in the mid of 2022. The researchers gathered
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33 data directly by visiting batik centers in Java and requested the SMEs' owners to fill in a
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35 printed questionnaire. A total of 352 SME data points were obtained, with the most extensive
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37 distribution occurring in the West Java and Central Java regions.
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41 This study performed several analyses: Exploratory Factor Analysis for Harman's single-
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43 factor test (Podsakoff *et al.*, 2003), Confirmatory Factor Analysis for instrument testing, and
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45 Structural Equation Modeling (SEM) for hypothesis testing. The last two steps were the two-
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47 step testing approach suggested by Anderson and Gerbing (1988). All data were checked for
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49 completeness and processed using JASP ver. 0.16.4, based on R Lavaan.
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4. Results

4.1 Results of phenomenology

Four researchers interviewed 23 SME owners from several batik centers in Java. The profile is detailed in Appendix B. Most owners are female and usually build their business as a subsidiary of their parents. Some are mainly continuing the family business (i.e., businesses dating back to the 1980s or the 1990s).

During the interviews, the informants expressed their struggles in dealing with the early stages of the pandemic. In early March 2020, like almost all countries worldwide, the Indonesian government enforced a massive lockdown. Not all nonessential businesses are allowed to operate. When the government lifted the lockdown, and businesses were allowed to operate in mid-2022, the researchers visited batik centers in Java, which are usually busy with buyers, including foreign tourists. Only one batik shop was operating in a craft center that accommodates dozens of SMEs. The batik SMEs experienced an average 70-80% decrease in sales; many could no longer support themselves and went bankrupt.

The informants mentioned that the period from mid-2021 to mid-2022 was the most challenging. Most have laid off employees, while still paying modest wages. SMEs can survive using all types of methods to continue utilizing internal resources to obtain cash flow. The quotes below represent the sentiments of most business owners:

"The early pandemic, ma'am, we cannot work, the fishing business (next-door) was closed, we were closed, almost everything was closed. At the time, I had no guests (buyers). If this continued, would I have to lay off employees, right? I didn't want to. I have a team of cuttings and tailors. Therefore, jobs were switched at the back of the store. Personal protective equipment (PPE). PPE was what the hospital needed and in huge demand at that time."

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3 “During the pandemic, employees worked from home to lengthen the breath (meaning:
4 cashflow). Because there were no batik orders, we made prayer mats during that time. We
5 then created various things, including the creation of Middle Eastern rice. It is simply rice
6 with spice. During the pandemic, we need cash flow, too, right. So, employees must be
7 willing to sell.”
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12 The informants, as business actors, maintain their establishment as firmly as possible. Here is
13 one quote describing their wholeheartedness.
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17 “My employees were sent home, but as much as possible, I still give them (salary). Yes, as
18 much as I can, using my savings. Later, I ended up making masks after my savings ran
19 out. Whatever it takes (to save the business and employees).”
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26 Following Goulding’s (2005) guidance, this study extracted two themes from SMEs’
27 responses to the pandemic. Each theme represents a cluster of actions and aspirations for
28 SMEs. To validate the findings, four researchers thoroughly studied the narratives and listed
29 the efforts and changes experienced by SMEs. After coding separately, researchers discussed
30 the results and suggested a meaningful theme for each coding group. Table 1 provides the
31 details of these results.
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42 *Resources Utilization* consists of SMEs’ strategies to exploit existing resources to survive the
43 pandemic crisis. The interviews found that the owner's efforts during the crisis in saving and
44 utilizing excess or idle resources had resulted in innovation. *Innovations*, consequently, are
45 activities carried out as a survival strategy that produce novelty in products, processes, and
46 marketing.
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53 Finally, two variables were added to the survey: performance and government support.
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55 *Performance* is the level of the achievements from various efforts. Appendix C presents the
56 measurement of each construct.
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4.2 Results of survey

The survey revealed that the oldest SME was established in 1923 (note: one SME owner did not remember the establishment year since it had been passed down for generations). Most SMEs was established in 2017. Table 2 displays the detailed profiles of the 352 Batik SMEs who participated in the survey.

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Before progressing to the hypothesis, we tested the data to ensure that they were free from assumption violations and tested the instrument to ensure good psychometric properties. The normality test was checked by observing the Q-Q plot of standardized residuals and each variable's skewness and kurtosis values (Kline, 2016). The results indicated that the data were normally distributed. Levene's test further showed that the data met the assumption of variance homogeneity. The multicollinearity test produced Tolerance and VIF values below the threshold (Hair *et al.*, 2019), namely, tolerance values of 0.783 and VIF of 1.277. Finally, the linearity test using the residuals and predicted values revealed no curve pattern, confirming that the data met the linearity criteria (Hair *et al.*, 2019).

The study of social behavior is prone to "common method variance" (CMV), namely, the existence of variance in the measurement method of research, not the construct being measured (Podsakoff *et al.*, 2003). Podsakoff *et al.* (2003) listed four primary sources of bias from CMV (see Table 2 in their paper, p. 882). This study avoided common method bias by separating the prediction and criterion variables. It was not always possible to assign different sources to measure predictor variables and criteria, and for SMEs in general, the business owner usually plays a full role and controls all aspects of the business. Therefore, the owner represented a resource person for the phenomenological study and was a respondent during the survey. This study allowed respondents to be anonymous and voluntary when collecting

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3 survey data because there were no right or wrong answers; hence, they refrained from
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5 common method issues.
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8 We also performed statistical diagnostics to detect common method bias using Harman's
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10 one-factor test (Podsakoff *et al.*, 2003). We loaded all variables in the exploratory factor
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12 analysis (EFA), and the results showed that the data spread into three underlying factors. The
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14 first factor was not the dominant factor (26.44%), and the three factors could explain 65.79%
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16 of the variance in the data. The EFA also shows that each item is incorporated into the
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18 relevant factors (i.e., resource utilization, innovation, and performance). Only one item did
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20 not meet the loading requirements above 0.5 (Performance Item-5). Considering that no
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22 single factor appears or that one factor dominates the entire measurement, this study
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24 concludes that common method variance is not an issue. Appendix D presents the results.
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29 The study continued with Confirmatory Factor Analysis (CFA), where the CFA results
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31 confirmed the level of unidimensionality and convergent validity of the measurement. The
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33 CFA results showed that the measurement used met unidimensionality, with a goodness-of-fit
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35 value above the threshold (Gerbing & Anderson, 1988; Hair *et al.*, 2019), namely $\chi^2/df =$
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37 2.912, CFI = 0.9577, TLI = 0.9477, NFI = 0.9373, IFI = 0.9579, GFI = 0.9900, RMSEA =
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39 0.0737. CFA also confirmed the EFA results that one item should be removed due to low
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41 loading, as suggested by Anderson and Gerbing (1988). Meanwhile, each variable's reliability
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43 level was measured using Cronbach's alpha, and all three showed a good internal consistency
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45 level above 0.80 (Hair *et al.*, 2019). Appendix C also shows the loading factor and
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47 Cronbach's alpha values.
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54 *4.3 Hypothesis Testing*

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56 After confirming that we had an excellent distribution of data and measurements, we
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58 proceeded with hypothesis testing using covariance-based Structural Equation Modeling from
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JASP ver. 0.16.4. There are four hypotheses to be tested: a positive direct relationship between Resources Utilization and Innovation and between Innovation and Performance. Furthermore, two moderating effects will be tested, Government Support and Partnership; each variable is expected to strengthen the influence of Resources Utilization on Innovation.

The model met the good goodness-of-fit parameters ($\chi^2/df = 2.68$; CFI = 0.9606; TLI = 0.9499; NFI = 0.9389; IFI = 0.9608; GFI = 0.9909; RMSEA = 0.0691) so that it could be continued for analysis path using SEM. The first test was the direct relationship between Resource Utilization and Innovation. SEM results showed a significant positive relationship (t -value = 7.31, $p < 0.001$). These results support H1. The next test was the direct relationship between Innovation and Performance, in which a higher level of innovation would impact higher business performance. The results of this test were significant (t -value = 8.68, $p < 0.001$), thus supporting H2.

----- INSERT TABLE 3 ABOUT HERE -----

The final stage tested the moderating effect on the relationship between Resource Utilization and Innovation. The results were also significant for Government Support (t -value = 13.64, $p < 0.001$) and for Partnership (t -value = 13.63, $p < 0.001$), providing supports for H3 and H4. The overall results are in Table 3 and mapped in Figure 1.

----- INSERT FIGURE 1 ABOUT HERE -----

5. Discussion

This study evaluates the impact of various initiatives conducted by SMEs in Indonesia to survive the 2020-2022 pandemic. This study uses two approaches for comprehensiveness, starting with a phenomenological study using in-depth interviews with 23 batik SMEs, followed by a survey to verify and test initiatives carried out by batik SMEs in Indonesia. The results show that SMEs in Indonesia make various efforts to maximize their internal

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3 resources and capabilities. These efforts increase innovation in products, processes, and
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5 organizations, and further improve the performance of SMEs. The motivation to utilize
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7 existing resources (personnel, production facilities, and distribution networks) is not to
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9 innovate initially. However, the interviews revealed that their ability to innovate has
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11 increased. This relationship was validated through a survey of 352 SMEs in Indonesia.
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15 These findings are similar to those of previous studies (Wenzel *et al.*, 2020; Rahman *et al.*,
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17 2021; Chatzoudes *et al.*, 2022), where SMEs initiated various rescue initiatives during a
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19 crisis, both short- and long-term. In general, SMEs economize in multiple aspects, which
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21 progress into innovation capabilities that are beneficial to business (Lukovszki *et al.*, 2021;
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23 Ttrieu *et al.*, 2023). Bettiol *et al.* (2022) argued that the pandemic has increased the urgency
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25 to innovate to survive these challenging situations.
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29 The results of this study also show that SMEs that take advantage of networks and partner
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31 with various parties, such as suppliers and competitors, can leverage efforts to utilize
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33 resources to increase their ability to innovate. This result aligns with Lukovszki *et al.* (2021).
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35 Likewise, the government's assistance will increase SMEs' ability to develop innovation
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37 through the utilization of resources, as previously argued by Zhang and Xu (2019), Safari and
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39 Saleh (2020), and Chatzoudes *et al.* (2022). The whole effort will ultimately improve the
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41 performance of SMEs, not only in terms of turnover and sales but also productivity and
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43 profit. The implications of the study will be discussed next.
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49 *5.1 Implications for literature*

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51 The COVID-19 pandemic is an unpredictable and immensely challenging phenomenon for
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53 SMEs that are vulnerable, even more so for the non-essential sector, which experienced
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55 substantial restrictions on business activities during the pandemic. Phenomenological studies
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57 are needed to investigate the experiences of SME business actors, their maneuvers, and the
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3 fundamental changes they experience. This research collects data in the mid of 2022 and
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5 draws lessons from the surviving SMEs. A qualitative study, followed by a survey, provided
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7 more comprehensive findings.
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10 From the results of these two approaches, this study found that SMEs in Indonesia try to
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12 exploit their capabilities and the resources they have to obtain cash flow that allows them to
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14 continue to pay for their employees. This finding aligns with several previous studies that
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16 argue that internal capabilities would significantly affect defensive actions during a crisis
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18 (Huynh, 2022). Resource exploitation gives birth to SMEs' ability to innovate, not just within
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20 the mainstream, but beyond the current mindset, such as by adding new businesses. In line
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22 with this, Christensen *et al.* (1998) argued that companies that venture into new markets
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24 through innovation are more successful than those that merely depend on their existing
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26 markets. Batik SMEs that expand their target segments will survive better during the
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28 pandemic, such as entering the youth market or career women working from home through
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30 their newest creations. Several SMEs sold food or produced PPE (personal protective
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32 equipment) during the pandemic to maximize the utilization of their facilities and employees,
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34 and then acquired new profitable and sustainable businesses.
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40 Resource-based theory emphasizes the unique, valuable, and irreplaceable resources and
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42 capabilities to win long-term competition (Barney, 1991; Barney *et al.*, 2011). However, in
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44 times of crisis, SMEs do not face competition because the existing business is at a halt
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46 (consumers do not need it). Nevertheless, RBT helps explain how SMEs that identify,
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48 analyze, and exploit their existing capabilities and resources become more innovative and
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50 ultimately survive.
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54 This study empirically shows that there are fundamental differences between SMEs who
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56 also exploit the networks they have and receive government aid. Both (partnership and
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58 assistance) do not directly improve innovation but increase the capacity of SMEs to utilize
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resources in creating new products/services. In this case, the ability of SMEs to gain external knowledge and assimilate it into the company is essential.

Finally, several SMEs convey the importance of technology and digitalization during crises. Studies have confirmed the need for SMEs to adopt digital technologies to accelerate innovation (Bettioli *et al.*, 2022) and survival strategies (Adam & Alarifi, 2021; Zutshi *et al.*, 2021). However, since technology adoption might require new skills and further investments, SMEs must be observant in choosing technology that can facilitate their operations but not incur additional costs, for example, using open-source software for business processes or interactive social media for sales and promotions.

5.2 Managerial implications

The COVID-19 pandemic has only recently recovered, and many countries have started to liberate social and business activities so that their economies can return to normal. Many lessons could be drawn from the efforts of SMEs to survive the crisis, especially efforts that have produced extraordinary results beyond expectations. As the essence of a phenomenological study, by disclosing all the initiatives and drives of SME business actors during the research process, they become more aware of their actions during the pandemic and ultimately provide valuable knowledge to themselves and their stakeholders.

This study suggests that SMEs make the most internal resources to survive a crisis. This means that entrepreneurs can utilize existing production facilities and raw materials to create or intensify the use of social media and their distribution networks. Although initially only for short-term survival, these efforts have been proven to increase innovation capabilities so that they can provide better added value compared to competitors. When the business climate recovers, the ability to innovate will remain and become one of the sustainable strengths of SMEs.

5.3 Study limitations and suggestions for future research

This study uses two research approaches, namely qualitative and quantitative, to obtain ample evidence. However, this study still needs strengthening in several ways. First, this study only examines one business sector affected by the pandemic, non-essential business. The study's results still need to be compared with other types of businesses to obtain a more accurate survival strategy map.

Second, this study accommodates curiosity regarding the effectiveness of government assistance. The results show that government assistance increases the effect of resource utilization on the ability to innovate. However, there is only one question regarding government assistance with various subsidies that SMEs may receive. So, bias can occur. Therefore, further research can explore aspects of assistance and partnerships in greater depth.

6. Conclusion

Indonesian Batik SMEs are chosen as central since they reflect the philosophical meanings and symbols of the heritage of Indonesian culture, as well as local wisdom that must be preserved. These SMEs struggled and responded by utilizing many retrenchment strategies, such as considerable resource utilization initiatives. SME entrepreneurs should sustain their survival strategies and seize external support and partnerships to bring out their potential. Various efforts due to the pandemic create innovations, increasing the organization's competitiveness and honing business understanding and resiliency.

This study uses a particular SME sector as the research setting; nevertheless, the findings provide insights into small- and medium-sized companies in various emerging countries

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exploit their internal resources and capabilities while seeking external support. Therefore, we hope this study can be generalized to a broad industrial context in global countries.

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International Journal of Innovation Science

Table 1. Results of Phenomenology

SMEs' Initiatives	Informants	Emerging Theme	Operational Definition
The use of production facilities to operate as fully as possible	A, E, G, Q,	Resource Utilization	The motivation or drive to use existing facilities and resources*
Employees achieve the maximum productivity possible	F, M, N, Q,		
The use of place of business (e.g., shop/kiosk/home) as much as possible	F, I, K,		
More frequent use of online promotional media (e.g., IG/FB/Website/Line/WA Group) to market any products or services that can generate income	A, F, I, J, K, N, O, P,		
The use of distribution network (e.g., reseller/distributor/retailer) to market any products or services that can generate income	C, D, E, G, H, N, O, V		
<i>*Note: One SME might perform more than one method of resource utilization strategy</i>			
Creating a new type of batik product	A, B, C, F, G, I, J, K, L, M, N, O, P, R, T, U, V,	Innovation	Renewal efforts (products, processes, marketing, and organization) carried out by MSMEs in the batik industry
Using a new method in the process batik production	E, G, L, M, N, O, Q, U, V, W,		
Implementing a new distribution method in the delivery of batik products	C, E, N, O, Q, V,		
Expanding business in the batik business	D, F, I, K, Q, R, S, U,		
Using new media or techniques in promoting the product	E, F, G, H, I, J, K, L, N, O, P, Q, R, S, T, U, V, W		

Table 2. Profiles of Batik MSMEs ($n = 352$)

Description	Frequency	%
Year of establishment		
Before 1980	8	2,3%
1980 - before 1990	10	2,8%
1990 - before 2000	25	7,1%
2000 - before 2010	97	27,6%
2010 - before 2020	205	58,2%
Missing/unsure	7	2,0%
Employees		
Full time and/or part time	349	99,1%
No employees (help by family members if needed)	3	0,9%
Net assets		
USD 3200 or less	173	49,1%
More than USD 3200	178	50,6%
Missing	1	0,3%
Turnover/revenues		
USD 19,200 or less	273	77,6%
More than USD 19,200	79	22,4%
Market coverage		
National	247	70,2%
Asia	55	15,6%
Global	22	6,3%
Government Support		
Yes	57	16.2%
No	295	83.81%

Table 3. Results of Structural Equation Modeling

Path (from-to)	Standardized parameter estimates (<i>t</i> -value)	Conclusion
1. Resource Utilization – Innovation	0.3676 (7.3130) **	H1 supported
2. Innovation – Performance	0.4883 (8.6824) **	H2 supported
3. Resource Utilization x Govt Support – Innovation	0.5853 (13.637) **	H3 supported
4. Resource Utilization x Partnership – Innovation	0.5781 (13.633) **	H4 supported

$\chi^2/df = 2.68$; CFI = 0.9606; TLI = 0.9499; NFI = 0.9389; IFI = 0.9608; GFI = 0.9909; RMSEA = 0.0691

* $p < 0.05$; ** $p < 0.001$

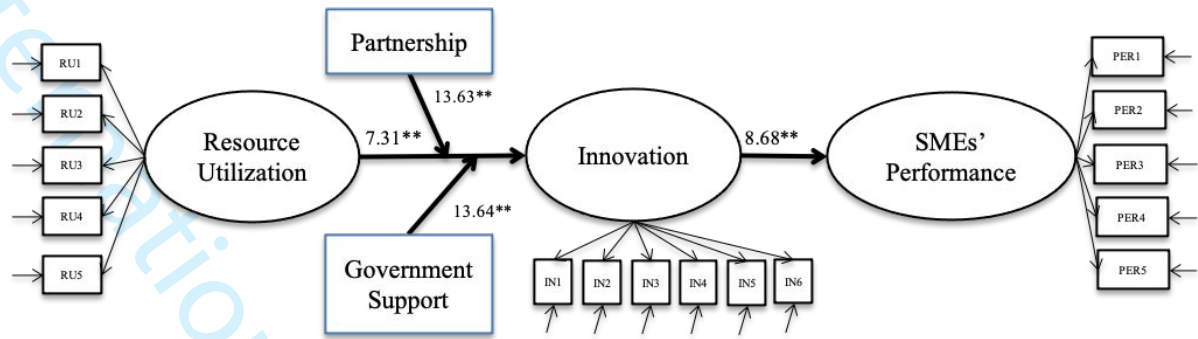


Figure 1. Results of Structural Equation Modeling

Note: t -values are reported; ** $p < 0.001$

Appendix A. List of interview questions

1. How long has this batik business been established (year founded)?
2. What is the history of its establishment (the origin of this batik business)?
3. How many employees and how is the division of jobs?
4. What business-related changes have you experienced during the pandemic?
5. What are your survival endeavors?
6. What are the obstacles?
7. What lessons did you learn from this experience?

Appendix B. Profile of SMEs in Phenomenology Study

Informant ID	Year of establishment	Gender of owner	Product mix
A	2005	Female	Batik fabrics, clothes, prayer gown
B	2014	Female	Batik fabrics, clothes
C	1992	Female	Batik fabrics, clothes, ladies dress
D	1992	Female	Batik fabrics, clothes, ladies dress
E	2007	Female	Batik fabrics, clothes, ladies dress, batik souvenirs
F	2011	Female	Clothes, tote bags, prayer mats, masks, hats
G	1993	Female	Batik fabrics, batik souvenirs
H	2007	Female	Batik fabrics, clothes (limited)
I	2010	Female	Batik fabrics, clothes
J	2014	Male	Batik fabrics, clothes
K	2010	Female	Batik fabrics, clothes, tote bags, prayer mats, masks
L	2008	Female	Batik fabrics, clothes, batik souvenirs
M	1987	Female	Batik fabrics, clothes, prayer gown, batik souvenirs, bags, masks
N	2005	Female	Batik fabrics
O	2014	Male	Clothes, non-batik (tie dye) clothes
P	2004	Male	Clothes, shirts, batik fabrics, ladies dress, praying gown, masks
Q	2007	Female	Clothes, batik fabrics (for individual or group sales)
R	2015	Female	Batik fabrics, striated clothes, blouse, shirts
S	2015	Male	Batik fabrics
T	2007	Male	Batik fabrics, striated clothes, blouse, shirts, bags
U	2009	Female	Clothes, shirts, nightgown, bags, batik souvenirs, batik fabrics, ethnic necklace, masks, hats, sandals
V	2004	Female	Batik fabrics, clothes, shirts, nightgown, masks, praying gown
W	2013	Female	Batik fabrics, striated fabrics, shirts, bags, pencil pouch, customized batik souvenirs

Appendix C. Measurement Items, Results of Confirmatory Factor Analysis, and Reliability Analysis

Items and loading	Cronbach's alpha
Resources Utilization	0.8728
1. I try to keep my production facilities operating as fully as possible (loading: 0.6176)	
2. I try to make my employees achieve the maximum productivity possible (0.7308)	
3. I try to make the most of my place of business (e.g., shop/kiosk/home) as much as possible (0.6713)	
4. I try to make the most of online promotional media (e.g., IG/FB/Website/Line/WA Group) that I have as much as possible to market any products or services that can generate income (0.8786)	
5. I try to make the most of my distribution network (e.g., reseller/distributor/retailer) to market any products or services that can generate income (0.8323)	
Innovation	0.9233
1. Creating a new type of batik product (0.7599)	
2. Using a new method in the process batik production (0.8349)	
3. Implementing a new distribution method in the delivery of batik products (0.8565)	
4. Changing the packaging of batik products (0.8339)	
5. Expanding business in the batik business (0.8704)	
6. Using new media or techniques in promoting the product (0.7337)	
MSMEs' Performance	0.9550
1. Experiencing sales growth (0.8560)	
2. Experiencing market growth (0.9365)	
3. Experiencing turnover growth (0.9278)	
4. Experiencing an increase in profit (0.8944)	
5. Experiencing a decrease in operational costs (< 0.05, deleted)	
6. Experiencing increased business productivity (0.8869)	

$\chi^2/df = 2.912$; CFI = 0.9577; TLI = 0.9477; NFI = 0.9373; IFI = 0.9579; GFI = 0.9900; RMSEA = 0.0737

Appendix D. Results of Exploratory Factor Analysis

Factor Loading	Factor 1	Factor 2	Factor 3
RU1	0.7743		
RU2	0.7656		
RU3	0.8327		
RU4	0.6835		
RU5	0.6989		
IN1		0.7168	
IN2		0.8588	
IN3		0.8856	
IN4		0.8395	
IN5		0.7890	
IN6		0.9321	
IN7		0.6614	
PER1			0.8631
PER2			0.9365
PER3			0.9614
PER4			0.9169
PER5			<i>-deleted-</i>
PER6			0.8831

Overall MSA = 0.9116; Bartlett's test $\chi^2 = 5102.1125$ ($p < 0.001$)

Legend: RU=Resource Utilization; IN=Innovation; PER=Performance