



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. **Specifically, it investigates the initial survival strategy's influence** on innovation practices and SMEs' performance. It further assesses the potential impact of government aid **and partnerships** on the relationship between resource utilization and innovation.

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

Findings – Resource utilization as an initial survival strategy has a positive effect on increasing organizational innovation practices and ultimately **affects** business performance. **Furthermore, government support and external partnerships significantly enhance** the relationship between resource utilization and innovation.

Practical implications – The COVID-19 pandemic 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, **honed business resiliency, and increased competitiveness.**

Originality/value – SMEs struggled with the crisis and responded by utilizing many retrenchment strategies. **This study is among the first to provide empirical evidence of the emergency response that resulted in fruitful impacts.** The findings can be generalized to represent the behavior of SMEs, especially in emerging countries.

Keywords COVID-19, Survival strategy, Resource utilization, Innovation, Government Support, Partnerships, Productivity, Indonesian Batik

Paper type Research paper

1. Introduction

The COVID-19 pandemic, which occurred for more than two years, has caused disasters to the global economy, disrupted national stability, and changed the **global** business landscape. Small and medium enterprises (SMEs) are among the sectors most affected by the pandemic (Caballero-Morales, 2021; Qehaja, 2021). **This situation is vital since SMEs significantly contribute** to a country's economy, **especially in developing countries** (Rahman *et al.*, 2022; 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, a decrease in public purchasing power and increase in unemployment (World Bank, 2022). **Before** the pandemic, SMEs in Indonesia accounted for 99.99% of **their** businesses, contributing to more than 96.9% of employment and approximately 61.1% of GDP in 2019 (OECD, 2022). These figures 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, **whereas** 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 decreased income during the COVID-19 pandemic.

In addition, many SMEs in Indonesia need help **to** manage debt and maintain their businesses. **In early 2021**, the Indonesian Ministry of Cooperatives and SMEs reported that approximately 6,878 SMEs were registered as beneficiaries of the credit restructuring program issued by the government. 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 Charani *et al.*, 2021; Katare *et al.*, 2021; Rahman *et al.*, 2022; Arslan *et al.*, 2022). Generally, the first survival strategy is 'retrenchment' (efficiency), which involves laying off employees and **reducing** material quality (Yunus *et al.*, 2023). Although these initiatives are not always effective (Klyver and Nielsen, 2021), they allow businesses to **remain** afloat in the short term. As an illustration, small and medium-sized business owners strive for employees to achieve maximum productivity and utilize distribution networks (e.g., resellers/distributors/retailers) to market products or services that can generate short-term income. **Internal resources such as production facilities, business premises, and online promotional media are also maximized.**

Awaken by the pandemic, SMEs have discerned and begun to evaluate their business processes and resources **to** survive. **Their** initial maneuvers align with Resource-Based Theory (RBT), where internal resources are the main factor determining market advantage (Barney, 1991; Barney *et al.*, 2011). According to RBT, the competitive advantage of organizations depends on their ability to utilize and develop these internal resources effectively and efficiently. Several previous studies have examined the effect of unique, valuable, inimitable, and non-substitutable resources on the competitive advantage of SMEs (Rahman *et al.*, 2022; Estensoro *et al.*, 2022). Studies show that internal resources **increase the advantage over competitors and** determine firm survival (e.g., Chatzoudes *et al.*, 2022).

Furthermore, **according to** the absorptive capacity (ACAP) theory, SMEs that assimilate and apply new knowledge and external information would utilize internal resources, develop new products (Zahra and George, 2002), and quickly adapt to the crisis (Miroshnychenko *et al.*, 2021). SMEs **can** apply the resource-based view perspective and absorptive capacity theory in times of crisis **to gain** a competitive advantage in the long run. Both theories are pertinent in explaining the SMEs' survival behaviors and **in** enriching the existing literature. This study took the first step by revealing SMEs' responses to the pandemic crisis, **clustering**

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3 them into themes, and verifying the findings through a larger-scale survey. The following two
4 research questions were explored.

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

7
8 **Many studies have been conducted** on post-pandemic survival strategies for COVID-19,
9 but the current study **has departed from prior studies in** several aspects. Firstly, this study
10 employed an integrative qualitative and quantitative approach in which in-depth interviews
11 **were conducted** to explore the experiences of business actors during the crisis. The
12 quantitative study verified **the experiences of more** SMEs in Indonesia. We expect the results
13 to be an initial map of the SMEs' struggles **during** crises in other developing countries.

14
15 Secondly, this study examines small and medium enterprises, where in developing
16 countries, this type of business generally dominates the country and contributes to the
17 national economy. Reflections on the impact of the pandemic on SMEs have also started to
18 bloom, and interestingly, a recent study by Islam and Fatema (2023) revealed that the
19 probability of SMEs surviving was higher than that of larger firms. The current study might
20 shed light on how SMEs, specifically in an emerging economy, reacted to the crisis, stretched
21 beyond the business-as-usual mindset, and reaped extraordinary advantages.

22
23 Finally, as governments of developing countries design and implement assistance
24 programs to improve their economies, the Indonesian government has **developed** special
25 programs to help SMEs, such as the National Economy Recovery Program launched in 2020
26 (OECD, 2022). This study assesses whether the assistance received by SMEs is right on
27 target in increasing their survival capabilities during the pandemic **and** whether collaboration
28 with external partners improves SMEs' resiliency during the crisis.

29
30 **Therefore, this study will contribute by examining the impact of strategies beyond the**
31 **crisis on innovation and business performance. The findings from this study will also provide**
32 **empirical evidence about the role of government assistance and partnerships with other**
33 **parties, such as suppliers, distributors, or competitors, in increasing the competitiveness of**
34 **SMEs in implementing strategies and producing innovation.**

35
36 The remainder of this paper is organized as follows. The next part of the paper, Section 2,
37 discusses the research design to address two research questions. Section 3 describes the first
38 study stage (i.e., the quantitative study) regarding the methodology employed and the results.
39 Section 4 describes the second stage (i.e., quantitative study) regarding hypotheses
40 development, methods, and results. The last section, Section 5, discusses the findings and
41 their application to theory and practice. Finally, this paper ends with conclusions and study
42 limitations, which serve as opportunities for further research.

43 44 45 **2. Research Design**

46 This study uses two successive qualitative and quantitative **approaches** to capture the crises
47 experienced by SMEs in Indonesia. **Mixed-method research is advisable in social sciences**
48 **since the problem or phenomenon is often complex (Creswell, 2009). At the same time, either**
49 **one of the approaches is adequate to capture the whole picture (Benitez et al., 2022).**
50 **Combining qualitative and quantitative also provide richer insights that could expand the**
51 **literature related to the phenomenon under study (Creswell, 2009).**

52
53 Phenomenological research is the most appropriate because the impact of the COVID-19
54 pandemic is unexplored and unexpected, and phenomenology **can** investigate the "lived
55 experience" (Pietkiewicz & Smith, 2014) when SME owners try to save their businesses.
56 This study used **a phenomenological approach (i.e., qualitative study) followed by a**
57 **quantitative study to verify the generalizability of the qualitative findings. We did not**
58 **conduct a literature synthesis or formulate hypotheses before the** field study because
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phenomenology requires researchers to be free from theories and concepts to prevent bias.

Figure 1 depicts the overall research design, as Creswell (2009) suggested.

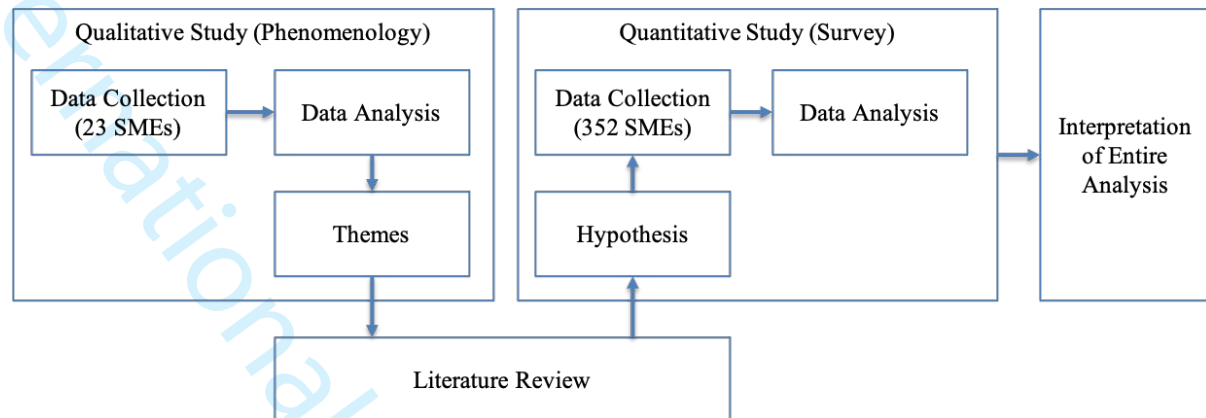


Figure 1. Research Design of this Study: Sequential Mixed-Method Approaches

SMEs in Indonesia are very diverse, with thousands of different types of businesses, such as the food and beverage industry, crafts, fashion, information technology, and professional services. According to data from the Indonesian Ministry of Cooperatives and SMEs, there were approximately 64.2 million businesses in 2020, including non-SMEs. Up-to-date data on the exact number of SMEs in Indonesia are not accessible. As business types might affect the results, we choose one homogenous type that contributes significantly to the country's economic growth.

In this study, we selected a non-essential SME sector that had to stay closed during the strict lockdown. During a lockdown, the Indonesian government only allowed essential sectors, such as food and beverage, pharmaceutical, health care, and logistics. The non-essential business experienced a brutal hit; how they struggled and survived would enhance our knowledge. We then chose a batik business as batik is the Indonesian nation's work, a blend of art and technology by Indonesian ancestors (Indonesian Ministry of Industry, 2020a). Statistically, the batik creative industry has an economic output value of up to IDR 1,100 trillion or 7.4 percent of Indonesia's GDP in 2020; moreover, this industry is also the second largest sector after the culinary sector (which is an essential sector during the pandemic) in Indonesia, contributing to 18.2 percent of the total net value of the industry in Indonesia (Widjaja, 2023).

In addition, the batik SME sector has contributed significant export value, has become a leader in the world batik market, and has absorbed more than 200 thousand workers in Indonesia (Indonesian Ministry of Industry, 2020b, 2021). As part of the creative industry, batik is always innovative (Arthur *et al.*, 2022). However, when the pandemic hampered the economy, the batik industry must go beyond mainstream creativity and learn from each other's successes.

According to data from the Indonesian Ministry of Industry, batik is dominated by producers in Java, the largest island in Indonesia, which accounts for approximately 75% of the business, and the rest are outside Java. Therefore, the Batik SMEs on Java Island in Indonesia are the unit of analysis.

3. Stage 1: Qualitative Study

3.1 Qualitative study: Phenomenology

Phenomenology is a methodology for investigating phenomena from the perspective of subjects who experience certain situations. Phenomenology can help "uncover 'lived'

experiences" and is used to explore management concepts and phenomena (Anosike *et al.*, 2012, p. 5). This qualitative study is carried out directly on the occurring phenomena and aims to reveal the experiences, not to use conceptualization or theory (van Manen and van Manen, 2021). Spiegelberg (1975, p. xiv) in van Manen and van 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 for revealing and uncovering the various experiences of business actors during a crisis.

The characteristics of a phenomenological study are descriptive and include direct exploration, analysis, and description of phenomena free from assumptions (Anosike *et al.*, 2012). One of the keywords in the operationalization of phenomenology is phenomenological reduction, that is, suspension of 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 of 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." (Anosike *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, they become more mindful of what they have been through and aware of both deliberate and unintentional strategies. In doing so, other stakeholders (i.e., the government and society) will also benefit from the findings.

This study employed Goulding's (2005) steps in performing phenomenology: (1) collecting data and thoroughly reading all transcripts of interviews, (2) identifying keywords that emerge from the informants' narratives, (3) formulating meanings, (4) conducting steps (1) to (3) with other informants and in-depth interviews with previous informants; (5) integrating meanings into themes and producing rich statements; and (6) reducing matching themes and compiling explanations. Goulding (2005) recommended validating themes by cross-checking with interviewees; however, due to several constraints, four researchers mainly performed a cross-check to verify the theme extraction and did not involve interviewees in this last step. Appendix A presents the list of interview questions.

The phenomenological literature suggests exploring experiences from certain situations from at least 6-8 sources (Pietkiewicz & Smith, 2014) or as many sources as possible until no new insights are obtained in addressing research questions (Mack *et al.*, 2005). This study used a semi-structured guide to interview batik small and medium-sized business owners in Java. Since most batik business was closed, the researchers contacted owners whose shop managed to operationalize post-lockdown. From the time allotted for three months of data collection, this study obtained 23 informants, each representing one Batik SME business.

3.2 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 businesses as subsidiaries 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 March 2020, like most countries worldwide, the Indonesian government enforced a massive lockdown. All non-essential businesses are not allowed to open. When the government lifted the lockdown and allowed businesses 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 **stayed open in a craft center that previously accommodated** dozens of SMEs. The batik SMEs experienced an average 70-80% decrease in sales; many could no longer support themselves and went bankrupt. **This situation was typical in other batik centers.**

The informants mentioned that mid-2021 to mid-2022 was the most challenging period. Most have laid off employees while still paying modest wages. SMEs survived **by utilizing all** internal resources to obtain cash flow. The quotes below represent the sentiments of most business owners:

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

"During the pandemic, employees worked from home to lengthen **our** breath (cashflow). **There were no batik orders, so** employees made prayer mats during that time. We then **created various things**, including the creation of Middle Eastern rice. It is simply rice with spices. **We also** need cash flow **during the pandemic**, right? So, **employees must be willing to sell [the Middle Eastern rice].**" (bold added.)

"It is more efficient if **we work to utilize the available materials.** For example, negligee, let's focus on the nightgown first. We could start doing the usual things, like shirts and uniforms, when it's normal. We'll create a lot more." (bold added.)

As business actors, the informants maintained their establishment as firmly as possible. They made use of available materials, production facilities, and workers. When the government allowed non-essential sectors to operationalize, they collaborated with other batik SMEs (a.k.a., their competitors) to jointly buy materials from suppliers to gain some bargaining power by reaching greater volume. They also made arrangements to do cross-selling, where they entrusted each other to sell products in their respective shop. Here is a quote describing their wholeheartedness.

"My employees were sent home, but **I still give them (salary) as much as possible.** Yes, as much as I can, using my savings. Later, I ended up making masks after my savings **had run out.** Whatever it takes (to save the business and employees)."

Following Goulding's (2005) guidance, this study extracted two themes **as SMEs' endeavors during the pandemic and one representing expected outcomes.** Each theme represents a cluster of actions and aspirations **of SMEs.** To validate the findings, four researchers thoroughly studied the narratives and listed the efforts and changes experienced by SMEs. After coding separately, researchers discussed the results and suggested a meaningful theme for each coding group. Table 1 provides the details of these results.

Table 1. Results of Phenomenology

SMEs' Endeavors	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., Instagram/Facebook/Website/Line/Whatsapp 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		
Expected outcomes: Sales, profit, productivity (output over input)	All informants	Performance	Results or achievements of endeavors

Resource utilization comprises SMEs' strategies to exploit existing resources to survive the pandemic. The interviews revealed that the owner's efforts in saving and utilizing excess or idle resources during the crisis had resulted in innovation. The qualitative findings also indicated that informants did anything arbitrarily to consume the remaining materials or use the skills of the remaining employees. Consequently, innovation was a byproduct of an initial survival strategy that produced novelty in products, processes, and marketing. Performance is the level of SME achievement from various endeavors.

4. Stage 2: Quantitative study

This study developed instruments based on themes that have emerged from phenomenological studies. The interviews revealed several main themes: *resource utilization*, *innovation*, and *performance*. Other variables were added based on input from one entrepreneur, namely *government assistance* and *partnerships*. These themes became variables in the quantitative study. One theme represented one variable, and the researchers used prior studies as a reference to develop the hypotheses and survey instrument.

The concept of an organizational survival strategy is a growing stream of research (Rahman *et al.*, 2022; Islam *et al.*, 2021). However, with the unprecedented COVID-19 pandemic, more research has been directed toward organizational behaviors during and after

1
2
3 the crisis. This pandemic began with a viral outbreak that forced governments worldwide to
4 close national borders and stop all economic activities. Although policies, strategies, and
5 patterns vary between countries, the consequences are similar, impacting the global
6 community's public health, economic conditions, education, and social life. Hence, previous
7 studies categorize organizational strategies for surviving a pandemic as considerably more
8 intensive than when dealing with previous crises (Sharma *et al.*, 2020), and there is a call for
9 more research (Chatzoudes *et al.*, 2022).

11 12 13 4.1 Theoretical background and hypotheses development

14 The pandemic, which created uncertainties in the business environment, has forced
15 companies to shift their focus to maximizing internal utilization (Chatzoudes *et al.*, 2022).
16 Studies argued that the basis of organizational success is more internal resources and
17 capabilities than products (Lukovszki *et al.*, 2021). Aligned with Resource-Based Theory
18 (RBT), companies obtain a competitive advantage from resources and capabilities that are
19 unique, valuable, difficult to imitate, or replaced (Barney *et al.*, 2011). These resources,
20 including physical, financial, human, and intellectual capital and capabilities, such as
21 employees' skills and talents, can be maximally utilized during uncertain times of crisis to
22 maintain a company's cash flow (Bettiol *et al.*, 2022).

23 According to Wenzel *et al.* (2020), there are at least four survival strategies during a crisis:
24 *retrenchment* or efficiency; *persevering* or maintaining as-is conditions with persistence;
25 *innovation*; and *exit*. In a study of SMEs in Indonesia, Yunus *et al.* (2023) mapped four
26 strategies implemented in the short and long term. Another study on SMEs' struggles showed
27 that SMEs engaged in more innovation practices during a crisis (El Chaarani *et al.*, 2021;
28 Caballero-Morales, 2021) while seeking government support (Arslan *et al.*, 2021; Chatzoudes
29 *et al.*, 2022), or seeking assistance from the external environment during the crisis, such as
30 from families and even competitors (Safari and Saleh, 2020; Arthur *et al.*, 2022; Yunus *et al.*,
31 2023). RBT is insightful in shedding light on the behavior of SMEs to sustain their
32 businesses.

33 Similarly, previous studies have also linked SMEs' actions, which can be sporadic, in
34 offering new products or existing products with new value propositions with their ability to
35 survive during crises (Cottrell and Nault, 2004; Rahman *et al.*, 2022). In this case, the
36 keyword is SMEs' ability to develop innovation continuously (i.e., innovation capability).
37 Previous studies have shown that a company's ability to develop innovation increases during
38 crises, especially for SMEs (Lukovszki *et al.*, 2021; Rahman *et al.*, 2022). Miroshnychenko
39 *et al.* (2021) further proved that the ability to absorb and utilize external information can
40 increase company innovation and ultimately affect organizational performance.

41 Drawing from the qualitative findings, this study revealed two pertinent themes as SMEs'
42 survival responses during the pandemic: resource utilization and innovation. Resource
43 utilization emerged as an intuitive strategy in the early days when SMEs sensed the urgency
44 to save their businesses. Efforts have been made to develop innovative practices for this
45 purpose.

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

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

5 *H1: Resource utilization positively affects SMEs' innovation in times of crises.*

6
7
8 Previous studies have consistently provided empirical evidence regarding the impact of
9 innovation capabilities and practices on performance in both large-scale and small- and
10 medium-sized companies (Saunila *et al.*, 2014; Saunila, 2016). Ismail (2023) defined
11 *innovation performance* as "a firm's capacity to effectively leverage its innovation resources
12 and capabilities to create innovative outputs that ultimately lead to market success" (p. 2).
13 Innovation performance has significantly improved economic and social performance (Rauter
14 *et al.*, 2018). It is especially pertinent to investigate SMEs since they face greater challenges
15 than larger companies and more so in developing countries (Le and Do, 2023).

16
17 The ability to innovate does not necessarily improve performance; however, if followed
18 by sustained practices, companies will produce products and services that are superior to
19 competitors. Companies can generate discipline through a conducive corporate culture
20 (Ismail, 2023) so that innovation initiatives emerge from employees' knowledge, skills, and
21 commitment (Rubel *et al.*, 2023). Especially in the small and medium-sized business sectors,
22 the ability to innovate must be fostered through a willingness to learn from experimentation,
23 failure, and success (Shaik *et al.*, 2023).

24
25 Under crisis conditions, innovation capabilities and practices become more critical
26 (Chesbrough, 2020) because companies face situations in which buyers have lower
27 purchasing power and compete for smaller markets. This study projects the same result for
28 SMEs in developing countries. We investigated economic performance in this study because
29 economic performance is more relevant in a crisis. Moreover, Rauter and colleagues (2018)
30 have provided evidence of the positive correlation between economic and sustainable
31 performances.

32
33 *H2: Innovation positively affects company performance in times of crisis*

34
35 Small and medium enterprises will be the first to be affected by economic crises due to
36 limited working capital (Adam and Alarifi, 2021); hence, they will turn to the government as
37 one such source of assistance (Safari and Saleh, 2020; Arslan *et al.*, 2022; Huynh, 2022).
38 Studies have confirmed government support's impact on improving SMEs' resilience (e.g.,
39 Trieu *et al.*, 2023). It would be valuable if academic research also validated the benefits of
40 government assistance in increasing SMEs' fighting power to survive crises. These findings
41 offer important lessons for policymakers. In this case, there is a difference between SMEs
42 receiving assistance and those not receiving one. Therefore, this study hypothesizes the
43 following.

44
45 *H3: There is a significant difference between SMEs that receive and do not receive*
46 *government assistance in the relationship between resource utilization and innovation,*
47 *such that SMEs that receive assistance are more able to increase innovation through*
48 *resource utilization than those that do not.*

49
50
51 Previous studies have shown that SMEs try to maximize the use of their resources for
52 business continuity. However, during a prolonged crisis, SMEs need external assistance and
53 use their networks to survive (Lukovszki *et al.*, 2021). SMEs could collaborate with their
54 supply chain partners and competitors to jointly create new creations that the market needs.
55 These collaboration practices were also seen in the Indonesian batik community.

56
57 The absorptive capacity theory also supported companies to absorb new information from
58 their environment and utilize it to produce new products (Müller *et al.*, 2020). Based on our
59 observation and interview with Indonesian batik SMEs, we would argue that the SME owners
60

collaborating with their suppliers, distributors, or competitors during their initial survival strategy would become more innovative.

H4: There is a significant difference between SMEs that partner with external parties in the relationship between resource utilization and innovation, such that SMEs that engage in partnerships are more able to increase innovation through resource utilization than those that do not.

4.2 Quantitative study: Instrument development

Instrument development began with a literature review concerning SMEs' endeavors and outcomes. Four researchers developed the instrument and applied its face validity through confirmation with SME entrepreneurs. The scale used was a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). *Resource utilization* consisted of five question items, *innovation* had seven items, and *performance* had six items. For questions regarding *government support* ("Did you get a government assistance program for your business during the pandemic?") the choices were Yes/No answer, and the respondent wrote down the form of the assistance program received (if any). Meanwhile, for *partnerships*, respondents determined the extent of collaboration in innovation activities with other parties using a 5-point Likert scale.

Before starting the full-scale survey, the researchers conducted an instrument pre-test with 30 batik business owners to ensure the ease and consistency of the narratives. The pre-test indicated that the instrument was valid and reliable; therefore, we proceeded with the survey. The last appendix, **Appendix D**, presents the measurement of each construct along with its psychometric properties.

4.3 Survey data collection and analysis

For quantitative research, this study determined the sample size by considering the 95% confidence interval level, with the number of Batik SMEs in Indonesia being 4900 businesses. With 75% of them on Java, the minimum sample was 298. This study used convenience sampling and a snowball approach. Since most SMEs were closed even after the government lifted the lockdown policy, we contacted those who opened their business and asked their willingness to participate in our study. All business owners we approached were willing to share their survival stories, so we found no issues during data collection.

Data collection took approximately four months in the middle of 2022. The researchers gathered data directly by visiting batik centers in Java and requested SME owners to fill in a printed questionnaire. This study obtained 352 SMEs, with the most extensive distribution occurring in the West and Central Java regions.

This study performed several analyses, including Exploratory Factor Analysis for Harman's single-factor test (Podsakoff *et al.*, 2003), Confirmatory Factor Analysis for instrument testing (that is, convergent & discriminant validity and reliability tests), followed by Structural Equation Modeling (SEM) for hypothesis testing. All data were checked for completeness and processed using JASP ver. 0.16.4, based on R Lavaan.

4.4 Survey results: profiles

The survey showed that the oldest SME was established in 1923 (a side note: one SME owner did not remember the year of establishment since the business had been passed down for generations). Most small and medium-sized enterprises (SMEs) were established in 2017. Table 2 displays the detailed profiles of the 352 Batik SMEs who participated in the survey.

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%

Before progressing to the hypothesis, we tested the data to ensure they were free from violations and further 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 variance inflation factor (VIF) below the threshold: all tolerance values greater than 0.1 or VIF below 10 (Hair *et al.*, 2019). Finally, a 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 in 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 informants to measure predictor variables and criteria; especially for SMEs in general, the business owners usually play a full role and control all aspects of the business. This study

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2
3 allowed respondents to be anonymous and voluntary when collecting survey data because
4 there were no right or wrong answers; hence, they refrained from common method issues.

5
6 We also performed statistical diagnostics to detect common method bias using Harman's
7 one-factor test (Podsakoff *et al.*, 2003). We loaded all variables in the exploratory factor
8 analysis (EFA), and the results showed that the data were spread into three underlying
9 factors. The first factor was not the dominant factor (26.44%), and the three factors explained
10 65.79% of the variance in the data. The EFA also shows that each item is incorporated into
11 the relevant factors (i.e., resource utilization, innovation, and performance). Only one item
12 did not meet the loading requirements of above 0.5 (Performance Item-5). Considering that
13 no single factor appears or one factor dominates the entire measurement, this study concludes
14 that common method variance is not an issue. **Appendix C** presents the EFA results.

15
16 The study continued with Confirmatory Factor Analysis (CFA), where the CFA results
17 confirmed the level of unidimensionality and convergent validity of the measurement. The
18 CFA results showed that the measurement used met unidimensionality, with a goodness-of-fit
19 value above the threshold (Gerbing & Anderson, 1988; Hair *et al.*, 2019), namely $\chi^2/df =$
20 2.912, CFI = 0.9577, TLI = 0.9477, NFI = 0.9373, IFI = 0.9579, GFI = 0.9900, RMSEA =
21 0.0737. The CFA also confirmed the EFA results that one item should be removed due to low
22 loading, as suggested by Anderson and Gerbing (1988). After one item deletion, all
23 standardized factor loadings were above the 0.5 threshold (Hair *et al.*, 2019). Hair *et al.*
24 (2019) also suggested that variance-extracted measures should be greater than 0.5, while
25 construct reliability should be above 0.7. We also checked each variable's reliability using
26 Cronbach's alpha, and all three showed a good internal consistency level above 0.80 (Hair *et al.*
27 *et al.*, 2019). **Appendix D** (Table D1) presents the convergent validity and reliability of the
28 survey measures.

29
30 This study assessed discriminant validity using guidance from Hair *et al.* (2019): to
31 guarantee that a conceptual measurement or construct is different from other constructs, the
32 AVE of the specified construct must be greater than the squared correlation values with other
33 constructs. Table D2 in **Appendix D** compares the AVE of each variable with its squared
34 correlation estimates. As the AVE was above the squared correlation associated with the
35 variable, discriminant validity was not an issue.

36 37 38 39 4.5 Hypothesis testing

40 After confirming that we had an excellent data distribution of data and measurements, we
41 proceeded with hypothesis testing using covariance-based Structural Equation Modeling from
42 JASP ver. 0.16.4. This study tested a positive direct relationship between resource utilization
43 and innovation and between innovation and performance. Furthermore, two moderating
44 effects are tested: government support and partnership; each variable is expected to
45 strengthen the influence of resource utilization on innovation.

46
47 The model met the good goodness-of-fit parameters ($\chi^2/df = 2.68$, CFI = 0.9606, TLI =
48 0.9499, NFI = 0.9389, IFI = 0.9608, GFI = 0.9909, and RMSEA = 0.0691) so that it could be
49 continued for the path analysis using SEM. The first test examined the direct relationship
50 between resource utilization and innovation. The SEM results showed a significant positive
51 relationship (t -value = 7.31, $p < 0.001$). These results support H1. The next test was the direct
52 relationship between innovation and performance, in which a higher level of innovation
53 impacts higher business performance. The results of this test were significant (t -value = 8.68,
54 $p < 0.001$), thus supporting H2.

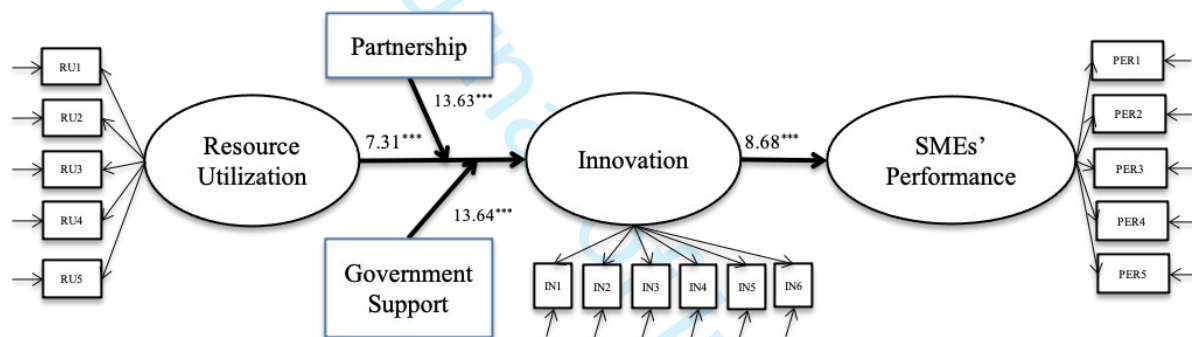
Table 3. Results of Structural Equation Modeling

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

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

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 partnership (t -value = 13.63, $p < 0.001$), supporting H3 and H4. The overall results are shown in Table 3 and mapped in Figure 2.

**Figure 2. Results of Structural Equation Modeling**

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

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 to achieve 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 resources and capabilities. These efforts increase innovation in products, processes, and organizations and further improve the performance of SMEs. The motivation for utilizing existing resources (personnel, production facilities, and distribution networks) is not to innovate initially. However, the interviews revealed that their ability to innovate had increased. This relationship was validated by surveying 352 Indonesian small and medium-sized enterprises (SMEs).

These findings are similar to previous studies (Wenzel *et al.*, 2020; Rahman *et al.*, 2022; Chatzoudes *et al.*, 2022), in which SMEs initiated rescue endeavors during short- and long-term crises. In general, SMEs economize in multiple aspects, progressing into innovation capabilities that benefit businesses (Lukovszki *et al.*, 2021; Trieu *et al.*, 2023). Bettiol *et al.*

(2022) argued that the pandemic had increased the urgency to innovate to survive these challenging situations.

The results of this study also show that SMEs take advantage of networks and partner with various parties. Suppliers and competitors can leverage efforts to utilize resources to increase their ability to innovate. This result aligns with that reported by Lukovszki et al. (2021). Likewise, government assistance will increase SMEs' ability to develop innovation through the utilization of resources, as previously argued by Zhang and Xu (2019), Safari and Saleh (2020), and Chatzoudes *et al.* (2022). The whole effort will ultimately improve the performance of SMEs, not only in terms of turnover and sales but also in terms of productivity and profit. The implications of this study are discussed next.

5.1 Implications for literature

The COVID-19 pandemic is an unpredictable and immensely challenging phenomenon for vulnerable SMEs and even more so for the non-essential sector, which experienced substantial restrictions on business activities during the pandemic. Phenomenological studies are needed to investigate the experiences of SME business actors, their maneuvers, and the fundamental changes they experience. This study collects data from the mid of 2022 and draws lessons from the surviving SMEs. A qualitative study, followed by a survey, provided more comprehensive findings.

From these two approaches, this study found that SMEs in Indonesia exploit their capabilities and resources to obtain cash flow that allows them to continue to pay for their employees. This finding aligns with several previous studies that argue that internal capabilities would significantly affect defensive actions during a crisis (Huynh, 2022). Resource exploitation gives birth to SMEs' ability to innovate, not just within the mainstream but beyond the current mindset, such as by adding new businesses. In line with this, Christensen *et al.* (1998) argued that companies that venture into new markets through innovation are more successful than those that depend merely on their existing markets. Batik SMEs that expand their target segments, such as the youth market or career women working from home through the newest creations, will survive better during the pandemic. Several SMEs sold food or produced personal protective equipment (PPE) during the pandemic to maximize the utilization of their facilities and employees to acquire new profitable and sustainable businesses. In this case, employees could engage in innovation initiatives by utilizing their knowledge, skills, and commitment (Rubel *et al.*, 2023).

The resource-based theory emphasizes the unique, valuable, and irreplaceable resources and capabilities to win a long-term competition (Barney, 1991; Barney *et al.*, 2011). However, in times of crisis, SMEs do not face competition because the existing business is at a halt (consumers do not need it). Nevertheless, RBT helps explain how SMEs that identify, analyze, and exploit their existing capabilities and resources become more innovative and ultimately survive.

This study empirically shows fundamental differences between SMEs that exploit their networks and those that receive government aid. Both (partnership and assistance) do not directly improve innovation but increase the capacity of SMEs to utilize resources to create new products/services. In this case, the ability of SMEs to gain external knowledge and assimilate it into a company is essential. Thus, the absorptive capacity theory does play a role in explaining the impact of absorbing new information or skills from external parties and increasing innovation in SMEs. The company's ability to assimilate various new and valuable information increases the company's innovation power (Cohen and Levinthal, 1990; Miroshnychenko *et al.*, 2021).

This study links two well-established strategic management theories: Resource-Based Theory (Barney, 1991; Barney *et al.*, 2011) and Absorptive Capacity (Cohen and Levinthal,

1990; Zahra and George, 2002). Instead of assuming that the two theories are at odds, this study considers both essential to fully explaining SMEs' maneuvers when the phenomenon occurs.

Finally, several SMEs convey the importance of technology and digitalization during crises. Studies confirm the need for SMEs to adopt digital technologies to accelerate innovation (Bettiol *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 **without incurring** additional costs, for example, using open-source software for business processes or interactive social media for sales and promotions.

5.2 Implications for practice

The COVID-19 pandemic has only recently recovered, and many countries have started to liberate their social and business activities so that their economies can return to normal. Many lessons can be drawn from the efforts of SMEs to survive the crisis, primarily actions 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 endeavors during the pandemic and ultimately provide valuable knowledge to themselves and their stakeholders.**

Based on its findings, this study suggests that SMEs utilize their internal resources and use existing production facilities and raw materials for immediate survival. Although initially only for short-term survival, these efforts have been proven to increase innovation capabilities to provide better value-added products than competitors. When the business climate recovers, the ability to innovate will remain and become one of the sustainable strengths of SMEs.

At the same time, SMEs should remain receptive to available government assistance. In Indonesia, the government provides direct cash subsidies to businesses; yet, if SMEs merely rely on this kind of aid from the government, their business life will only last for a while. The more critical is assistance that can increase SMEs' capabilities in utilizing available internal resources, such that it can impact their innovation capabilities. One type of help deemed beneficial for batik business actors was training related to dyeing batik cloth using natural materials. Thus, SMEs gain more ability to utilize internal resources to produce new creations.

This study also recommends business actors to engage in closer relationships with suppliers and consumers. Cooperation with competitors in times of crisis is also suggested because it will strengthen small businesses' competitiveness in the industry.

6.3 Study limitations and suggestions for future research

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

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

Conclusion

Indonesian Batik SMEs are chosen as central **because** they reflect the philosophical meanings and symbols of the heritage of Indonesian culture, as well as local wisdom that must be preserved. **Studies on batik are rare, and although studies on batik suggest Indonesia's uniqueness, the efforts are very likely representative of the various strategies of SMEs across countries.** These SMEs struggled and responded by utilizing many retrenchment strategies, such as resource utilization initiatives. SME entrepreneurs should sustain their survival strategies and seize external support and partnerships to **enhance** their potential. Various **endeavors** due to the pandemic **have** created 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 **that** 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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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. 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

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

Table D1. Results of Construct Validity and Reliability

Items and loading	AVE*	Cronbach's alpha	Construct reliability
Resources Utilization	0.566	0.8728	0.865
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	0.667	0.9233	0.923
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	0.812	0.9550	0.956
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

*AVE=average variance extracted

Table D2. Results of Discriminant Validity

	RU	IN	PER
RU	0.566	0.217	0.206
IN	0.466***	0.667	0.210
PER	0.326***	0.458***	0.812

* $p < 0.5$; ** $p < 0.01$; *** $p < 0.001$

Legend: RU=resource utilization, IN=innovation; PER=performances

Note: Values above the diagonal are squared correlations among variables, values below the diagonal are correlation estimates, diagonal values are the average variance extracted of each variable.