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**Fashion Micro-and Small Enterprise Frugal
Innovation's In Facing Covid 19 Pandemic**

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Abstract

This study explores the business strategy for strengthening MSE's resilience during the Covid-19 Pandemic using the six principles of frugal innovation. These six points are used as a different approach which is related to strengthening business resilience in times of contagion. A qualitative study method was applied with a single case study at Saffana boutique Surabaya. The observation shows that Saffana boutique Surabaya was able to create more value and applied different approaches to explore strategy innovation in their product during the pandemic. The saffana boutique innovation is framed using the six values of frugal innovation, such as managing their cash flow in a flexible way for mobilizing the existing and potential resources, utilizing social media and social projects to engage and shape customer behavior, and; developing the sustainable solution and fashion concept through collaboration with the active customer to create new design based value and local culture; as well as make effective networks with the designer community and digital partners. Further, this study has important contributions to the theory of innovation and successful practices of the MSEs Organizational system.

Introduction

Micro- and Small Enterprises (MSEs) are sectors that have an important role in national economic growth. The Department of Cooperatives and SMEs of Indonesia stated that MSEs contributed to GDP (61%) and employment by up to 97% in 2018 (Bappenas 2020). Furthermore, MSEs were the backbone of the national economy during the monetary crisis in 1998, and the global financial crisis in 2008, where MSEs with their adaptability and resilience support the national economic recovery (Doern 2017). Meanwhile, the current crisis due to the Covid-19 pandemic has different problems. Apart from causing a high-level health crisis, it has also spread to an economic crisis and increased poverty rates in various countries, including Indonesia (Juhro 2020), especially for the sustainability of the MSE business which is significantly affected (Raharjo and Mulyani 2020).

On the other hand, Bank Indonesia (BI) survey in Victoria (2021), indicates that 12.5% of the MSE sector was still able to survive. Also according to Hardilawati (2020), some SMEs still survive (stable) and even increase in assets because of their strategies to respond quickly and adapt to unexpected conditions (Damarwulan, Ramdansyah, and Lutfi 2021; Hardilawati 2020; Raharjo and Mulyani 2020). Therefore, it becomes important for companies or managers to improve and have basic skills in business resilience. For example, responding to unexpected change (Saad et al. 2021; Sarkar and Clegg 2021) and redirecting their focus to short-term goals to help their business resilience (Technoserve 2020), and long-term goals to recover from adversity due to the pandemic crisis.

Business resilience refers to the ability of an organization to proactively adapt and recover from disturbances in the system beyond its control and unexpected (Comfort, Boin, and Demchak 2010). However, efforts to survive through innovation strategies for MSEs in dealing with their business problems and challenges, are considered to have some obstacles. One of them is in implementing innovation, SMEs have limited resources and scope in terms of technological capabilities (Soleh 2008). MSEs are associated with

high resource limitations and are vulnerable to external influences as their weaknesses (Borchardt et al. 2021; Doern 2017). However, according to Amir (2016), MSEs are more flexible in changing and trying new business directions. Even more, in terms of products, inputs, and prices, they are more adaptive and flexible (Amir 2016; Doern 2017), because of their speed in decision-making, and they as small-scale businesses generally can develop by utilizing an innovation (Raharjo and Mulyani 2020).

Innovation refers to a new way or something different and can grow anywhere. It is a fact that even more innovations grow and emerge in difficult environments with limitations (Utomo 2018). According to Peter F. Drucker (2002), one of the sources of innovation is unexpected events and conditions of incongruity. Same as the concept of frugal innovation which addresses the challenges of affordability and resource constraints, such as financial or material (Bhatti et al. 2018).

Frugal Innovation refers to innovation resource-constraint based, through '*doing more with less*' (Radjou and Prabhu 2015) to make sure the entire value creation process works efficiently, effectively, and productively (Corsini, Dammicco, and Moultrie 2021). Different from the innovation management process in general, which is only focused on how to reduce costs and waste, frugal innovation emphasizes how to make cost-efficiency as a means (by minimizing the use of resources) to achieve bigger company goals (create more value), especially focusing on creating greater value for more people (customers, stakeholders, suppliers) (Prabhu 2017).

Previous research has shown that frugal innovation was able to increase competitive advantage in the supply chain (Li, Zhang, and Gao 2020; Shibin et al. 2018), and contributes to sustainability (Iqbal, Ahmad, and Halim 2021). Moreover, several authors proposed the concept of frugal innovation for small and micro-scale enterprises which focuses on the needs and opportunities in the BOP market, the framework for SMEs supply chain, mentions the supporting dimensions for implementing frugal innovation in SMEs (Niroumand et al. 2020), and explores the process related to how some individuals at the grassroots level can successfully

conceptualize, develop, and apply their frugal innovations to achieve commercial success (Hossain 2020).

However, in the previous research above, research on frugal innovation is still being carried out directly to develop and find out effective strategies for MSEs in general. Thus, it is not yet possible to see the effectiveness of the proposed strategy when it is applied directly to MSEs in different conditions with all resource constraints and in a time of contagion, a pandemic. So, the position of this research focuses on the survival strategy and recovery efforts for MSE's resilience during the pandemic crisis by frugal innovation principles as a strategic approach.

This study refers to the literature on frugal innovation (Borchardt et al. 2021; Radjou and Prabhu 2015; Weyrauch and Herstatt 2017) and business resilience literature (Doern 2017; Fitrianto 2019; Saad et al. 2021) to answer that research question. This analysis study of frugal innovation is developed on a case study at MSE of Surabaya SA Boutique, one of the small-scale businesses in the field of fashion products, by exploring the strategy of business resilience under the six principles of frugal innovation in a time of constraints by Radjou and Prabhu (2015). These six principles were chosen as a theoretical approach in this study analysis. In general, applying an innovation poses different challenges in each different function and industry. Still, with these six, it is to be quite relevant to be adopted by all types of industries and companies, such as micro and small enterprises, which will be the object of discussion (Radjou and Prabhu 2015).

Review of Literature

Frugal Innovation: concept, principles, and application

The origin of Frugal Innovation was defined by The Economist in 2010, as an innovation that does not only focus on low production cost by exploiting cheap labor (although that also helps), but focuses on how to redesign the product and their processes to reduce unnecessary costs (Bhatti et al. 2018). Then, Radjou et al. (2012) define frugal innovation as a concept of thinking and acting by managers that are exclusive and effective in facing challenges by looking at opportunities, even in the worst circumstances; and can

improvise resource solutions in the simplest (Radjou, Prabhu, and Ahuja 2012). Meanwhile, Weyrauch and Herstaatt (2016) propose a frugal innovation concept with three criteria; a focus on the products and services innovation ideas based on reducing costs, core functionality, and optimizing performance levels.

The diffusion of frugal innovation in some previous studies has been mentioned, they focus on various discussion objectives. For example, in some works of literature, frugal innovation is used as a means (tool) to a strategic design for the development and improvement of a business model (Rosca, Arnold, and Bendul 2016; Winterhalter et al. 2017). Moreover, the application of frugal innovation in various types of firms and sectors has been observed in several various studies. For example, the health sector and the development of medical devices that are more affordable and focus on core functionality (Bhatti et al. 2018; Corsini et al. 2021; Khan and Melkas 2020; Winterhalter et al. 2017); Information and communication technology sector (Hossain 2017); Transportation sector, financial sector (Hossain, Simula, and Halme 2016; Sharmelly and Ray 2018); Agriculture Sector (Heryanto and Supyandi 2012); and Water sectors (Hyvärinen, Keskinen, and Varis 2016).

The Six Principles of Frugal Innovation

The principles that form the basis of this frugal research according to Radjou & Prabhu (2015) consist of six interrelated principles, as follows: *Engage and iterate*, which means focusing on the market by customer engagement repeatedly; *Flex your assets*, defined as building existing and potential resources more flexible and adaptable; *Create sustainable solutions*, it talks about how organizations develop independent sustainable performance (social, financial, environmental); *Shape customer behavior*, as a company strategy on how to increase brand loyalty and market share; *Co-create value with prosumers*, by building greater products and services brand affinity to jointly create more value; and *Make innovative friends*, build innovative networks rather than working alone to develop products and business models at lower cost and more efficient.

The Resilience of Micro- and Small Enterprises

The term resilience comes from the Latin, *rasilio*, which means *jumps back* or *bounces back* (Bruijne, Boin, and Eeten 2010). The origin concept of resilience was adapted from the study of psychology, a discipline that was considered the first study of resilience (generally in children), that is focused on the human ability to be able to respond and survive in uncontrollable and unwanted conditions (Puspitasari, Aini, and Satriani 2019). The concept is the same as the origin of the term "Resilience" refers to Holling (1973) cited by Saad et al. (2021:4), Holling describes resilience as the ability of an ecosystem to respond swiftly to unexpected and unexpected environmental changes and to return quickly to its original state (Comfort et al. 2010; Saad et al. 2021).

In the micro-and small enterprise context, resilience means the continuity and growth of a business after a crisis caused by an economic recession or other external shocks, and is often measured by an increase in sales (profits) or carrying out creative strategies, such as market expanding, absorbing more workers, or business investing (Doern 2017). Business resilience is also significantly influenced by the competitive advantage of a business, digital innovation, and entrepreneurial competence (Wahdi 2021).

Some authors mention the concept of resilience is related to the entrepreneur's main capabilities. To be a resilient business, a company must have core capabilities. *First*, the ability related to withstanding shocks that come from the external sphere (crisis management or risk management). *Second*, the ability related to recovery, adaptability, and growing towards a positive performance growth direction, where managers can quickly adapt, adjust, shape, and reinvent the business model of their company. *Third*, the ability to capture or see business opportunities in a challenging business environment (Monsson 2017; Saad et al. 2021; Sarkar and Clegg 2021). Thus, resilience has two main concepts including how to maintain and develop (Fitrianto 2019).

Efforts to build and develop resilience during threatening and dangerous environmental conditions need to be carried out effectively by taking into account the following components of resilience (Fitrianto 2019), as follows: knowing the needs and wants of the market, being aware of the potential and resources, can take

into account new possibilities and find alternative solutions, as well as can develop an effective communication system and network.

Saffana Boutique Surabaya in Brief

SAFFANA (SA) Boutique is a fashion Micro- and Small enterprise (SME) with a professional designer, namely Mrs. Saffana, who is also a boutique owner. SA Boutique has an operational place and product showroom (shop outlet) for sale located at Ciputra World Mall's first floor, Unit 57, Surabaya City, this place is the result of business expansion during the pandemic in early 2021. This boutique directly produces various kinds of Muslim fashion products in the form of ready-to-wear fashion products such as Muslim clothing, party clothes, tunics, skirts, prayer hijab, khimar, blouses, and scarves, as well as other types of women's clothing to order (custom design collection).

Based on participant observations by authors in the field (June-September 2020) when the Covid-19 pandemic crisis was at its peak, SA Boutiques were among those who were able to survive and bounce back. Describing the business strategy for boutique resilience before the pandemic crisis hit, the manager (owner) of SA boutique mentioned:

As a fashion designer, I liked branding names before. With so many people knowing us. Then, paying attention to our business which focuses on the customer base is very important to me, always (asking for feedback) after consumers buy, we always make sure the goods are delivered properly. (In the context of clothing design) design ideas come out quickly, because I like and often see and read clothing model references, see fashion shows of well-known designers, and find out trends in clothing models that people like through social media. And most importantly, in doing business, a relationship is really necessary, which is very important.

SA boutique also raises the concept for its fashion products with sustainable fashion models, where fashion products are developed with multi-purpose fashion designs which is one of the solutions to achieve sustainability (Radjou and Prabhu 2015). As an

example of sustainable fashion in an SA boutique, the creation of products with the concept of loungewear and easy-to-use fashion, as well as using eco-friendly fabrics.

Research Method

Research Design

The design research used to answer this research question is a single case study approach to gain a holistic and in-depth understanding of the application of frugal innovation principles in micro and small enterprises (Yusuf 2017). In this case study, the descriptive theory is needed to explain the scope and depth of the cases studied (Zainal 2007). A single case study method in this research was chosen for two reasons. First, according to Yin (1981), a case study as a research strategy has the characteristics to explain in-depth the phenomenon of real-life context. Second, following other relevant literature that uses single case studies to meet the diffusion of frugal innovation (Sharmelly and Ray 2018).

Case Selection

Research object as a focal case in this research is fashion SMEs, SA (Saffana) Boutique. The location of the SA boutique is in the residential area of the Jambangan sub-district, Surabaya City (A brief overview of SA Boutique has been provided in Table 1). SA boutique was chosen purposely for a reason, this boutique is one of the SMEs that is still able to operate (survive) in Surabaya during the pandemic crisis. SMEs that survive are inherent with a supportive environment to be explored regarding the emergence of an innovation that can be applied in a difficult business environment (Drucker 2002).

Table 1. Descriptive data on the case of micro-and small enterprise

Enterprise	Origin	Establishment	Product	No. Employee
SA Boutique	Surabaya, Indonesia	2016	Muslim Fashion	14

SA: SAFFANA Boutique

Source: Saffana, personal interview (2022)

Multiple sources of data collection

Multiple sources of data in this study are both primary and secondary data in which the data collection process will be carried out together with data analysis (an ongoing process). The data collection process includes determining problem boundaries through sample selection, collecting information, and setting the rules for documenting information (Creswell and Creswell 2018). In this research, data were collected in three ways: observation, interviews, and documentary evidence. Primary research sources are obtained from participant observation to identify the MSE's condition and their non-verbal variables factors (both active and passive observation) for six months from Juny-September 2020 (during the pandemic) and February-April 2022 (post-pandemic), as well as non-participants observation through media social updates for a month in 2022.

The primary researcher also conducted semi-structured and in-depth interviews to validate the observation results and identify other key variables that are not identified in the observation or documentary evidence. Interviews in March 2022 with the top manager (Owner) and middle manager (head of the operational and production department) as key informants in an internal boutique. The general question for all key informants. It is focusing on the business strategy and innovation decisions made by the SA boutique before, during, and after the Covid-19 pandemic crisis. The top manager is also asked specific questions directed at each of the six frugal innovation principles as a theoretical approach that is applied to the boutique. The results of the interviews were documented with a voice recorder and transcribed in a more structured manner. In addition, the researcher also interviews two customers as supporting information from the external boutiques. Minor questions related to products and services from boutiques before-after the pandemic. The questions are directed at the impact of implementing the six principles of frugal innovation as a boutique resilience strategy.

The third main source was Boutique documents and secondary data sources were also analyzed, including e-newspapers, academic journals, and other supporting documents. Then triangulation of observation data and interview data was

carried out. Research with triangulation techniques in the data collection process has also checked and tested the credibility of research data from various sources, time, and data collection techniques (Sugiyono 2013). In this study, only technical and source triangulation will be used to fulfill data similarities so that data credibility can be formed.

Data analysis

Analysis data in this study will be repeated from the beginning, during, and before entering the field. The analysis technique will go through the following steps: data reduction, data display, and conclusion (Sugiyono 2013). Data reduction is obtained from the results of observations and interviews and then adjusted for data needs related to research related to the role of frugal innovation as a strategic approach to strengthening MSEs during the pandemic. The data display is in the form of tables and descriptive text which is obtained after reducing the data repeatedly, to draw conclusions and take action (Yusuf 2017). Finally, conclusions will be drawn from the results of data analysis on factual information received to answer the questions compiled in the formulation of the problem.

Results

Frugal innovation to meet enterprises' resilience strategy

In the personal interview results, it was found that the boutique owner had made various efforts that were considered effective enough to make the SA boutique survive and even be through growth after recovering from the shocks caused by the pandemic crisis. Then, the principle of frugal innovation in this study was adopted as an analytical approach related to efforts to strengthen MSE resilience at the SA Boutique Surabaya. As described in (Table 2) regarding the results of the analysis of the application of the six principles of frugal innovation by Radjou and Prabhu (2015) at the SA Boutique.

Principle 1: Engage and iterate, that is through repeated customer engagement by SA boutique, including by engagement via social media platforms or when receiving feedback from customers. The top manager mentioned:

“...always (asking for feedback). After people buy, we always make sure the goods are delivered properly. Then ask about the lack of what and where. If there are complaints, we will fix them. ... But so far, the level of satisfied people is 1% if you say 1000:1. And they are generally satisfied”

In addition, apart from social media, the SA boutique also builds a community for its customers to celebrate an important moment together. For example, before the holy month of Ramadan, the SA boutique has arranged a mini-gathering event at its showroom store which aims to involve consumers in seeing the fashion styles that they are interested in wearing when celebrating Eid al-Fitr. Thus, SA boutique can produce products according to the actual customer needs and wants in which SA owners replace the main product (design exclusive dress) with a minimalist ready-to-wear and various mask models, as well as be able to adapt and recover from the shocks caused by the pandemic crisis.

Principle 2: Flex your assets, which is a business management effort that focuses on how to create more flexible (adaptable) resources (material, labor, time, or network) to be used in achieving the commercial success of the business and keeping the boutique profitable. At the SA Boutique, this principle is applied in managing its financial capital during the pandemic, which is turning every capital into product lines that have the potential to gain value in the sales market, which can improve the boutique’s cash flow.

Principle 3: Create sustainable solutions in which this solution is an effort to produce sustainable (social, financial, and environmental) performance. The implementation at the SA Boutique can be seen from the product design concept raised by the designer, the sustainable fashion concept. Such as creating clothes with the concept of loungewear, as well as paying attention to eco-friendly and skin-friendly fabrics that are rayon, linen, cotton, and others. Thus, the boutique is more adaptable and able to create a sustainable business. The head of the production department mentioned:

“...A dress model that can be worn formally or informally, so it can be worn continuously. Then, it stopped the production of

exclusive party dresses as the SA boutique's main products. Now it's more of a dress that you can wear to a party, after that you can also use it for a social gathering or meeting people. Going to the mall or going to a party is also okay. Do not matter.... The fabric is also cool and light.”

Table 2. SA Boutique strategy through frugal innovation

Strategy input (Principles of FI)	Organizational implementation (In SA Boutique)
Customer engagement iteratively	<ul style="list-style-type: none"> - Get customer feedback - Crowdsourcing - Social media engagement - Consumer involvement in the social project
Mobilizing the resource more flexible	<ul style="list-style-type: none"> - managing boutique cash flow on the potential product - Digitalization within the sales market
Develop sustainable solutions	<ul style="list-style-type: none"> - Product diversification - using the local resource (fabric material) - raising the sustainable fashion concept
Shape customer behavior	<ul style="list-style-type: none"> - knowledge, attitude, and behavior change (take advantage of social media) - share the product’s positive review
Co-creating value with an active customer	<ul style="list-style-type: none"> - co-development (business expansion) - co-branding (virtual fashion show)
Building an effective and innovative friend	<ul style="list-style-type: none"> - Join the designer community (Indonesian fashion chamber) - make a digital partner commerce (Tokopedia) - make collaboration with Ciputra world Mall

FI: Frugal Innovation

Principle 4: Shape customer behavior, an effort in marketing strategy through product literacy to shape behavior and increase customer loyalty. The SA Boutique owner in maintaining his

business continuity is very concerned about his customer base, intense communication is continuously carried out, and is very concerned about how his customers will think and act. Thus, SA Boutique can keep its customer base and improve its brand loyalty. Further, the boutique owner has done to shape their customer behavior by utilizing social media. *First*, providing information and consumer education about product attributes (knowledge change) such as collection themes, available colors, and sizes, fabric materials used, clothing designs, the price, components, and functions of the use of clothing. *Second*, providing strong information related to product advantages, and product image, as well as reference content for mixing and matching fashion styles that are suitable for use with the product. *Third*, provide information regarding positive reviews that have been given directly by SA boutique customers.

Principle 5: Co-create value with prosumers, that is doing business productivity with active customers. Creating shared value in this principle will be interpreted as an innovation process by deepening the involvement of external business parties to jointly build and create more value. SA Boutique applies this principle through self-involvement in co-branding through fashion shows, both at home and abroad; and business expansion together with its active customers, namely customers who also involve themselves as investors to develop a business in the skincare product line with the Saffana brand. Thus, the boutique can increase its market sales to keep the performance level growth.

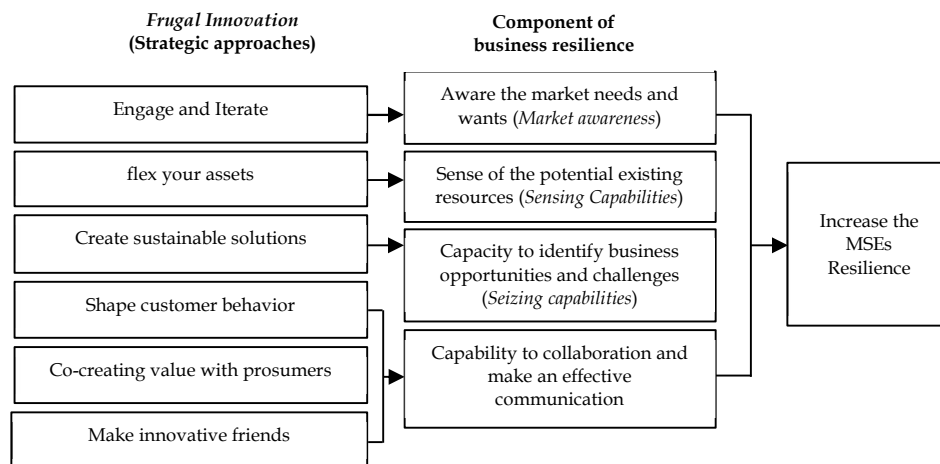
Principle 6: Make innovative friends, for the owner of this SA boutique, following a community or organization that has the same vision and mission is a must in doing business and the most influential on his business. The boutique owner joins several designer communities while developing his business, one of which is IFC (*Indonesian Fashion Chamber*).

The application of this principle is applied to SA boutiques by working with customers and suppliers to build new product lines with the same brand in the cosmetics and beauty sector (*Saffana skincare*). Additionally, SA boutique also builds relationships to develop the market, by opening new stores in collaboration with

companies that provide commercial facilities, and modern shopping centers (*Mall Ciputra World Surabaya*); as well as developing digital partners such as the marketplace (*Tokopedia*). From these efforts, the SA boutique was able to improve its financial performance amid the pandemic and also increase its market share.

Then, the results of the analysis also have a positive impact on the sustainability of the SA boutique business. This can be seen from several important components of resilience by Fitrianto (2019), which can be identified and appear at the SA boutique, as described in (Figure 1), as well as the explanation below. *First, Aware of the market and customer needs.* SA boutique conducted repeated observations and customer engagements to responsively read information and changes in business market conditions during the pandemic, both direct and indirect involvement, as the first principle of Frugal innovation by Prabhu. *Second, a sense of the potential existing resources.* The condition of SA Boutique due to the early covid-19 pandemic crisis, caused sales revenue to decrease significantly (down by 65-80%). Thus, the boutique owner makes efforts to recover the boutique's performance by creating these limited resources (financial and material) with more agility so that they are able to improve adaptability. As explained in (Table 1) the point of applying the second principle of frugal innovation.

Figure 1. Strategic approaches of FI to increasing SA Boutique resilience.



Third, Improve the capacity to identify business opportunities. That means developing a mindset from boutique owners in creating and implementing different innovation strategies in the boutique business model, as well as developing ways to understand and adopt new trends in the fashion world to achieve successful boutique performance (financially, socially, and environmentally) are sustainable. *Finally, Enhance the capability to make an effective network relationship.* It is necessary for business actors, such as the SA boutique, to seek social support (family or community) and improve their ability to build networks in the form of collaboration

Discussion

The resilience strategy in SA boutique has been analyzed through the frugal innovation principles approach. Because one of the important dimensions of this innovation is resilience (Farooq 2017). Additionally, the findings based on this case study have important implications for managers or actors of MSEs and other companies to be applied as an innovation strategy in their business continuity as follows.

First, improve the operational capabilities of MSE owners and their businesses. Where business managers (boutique owners) can make innovative decisions in times of changing limited and difficult conditions (due to the Covid-19 pandemic) through business operational concepts (production, marketing, and sales activities) as suggested by (Bhatti et al. 2018), that focus on; *productivity*, by optimizing boutique performance levels that pay attention to operational engineering characteristics (speed and accuracy); *effectiveness*, focusing on the core functionality of *fashion* products that directly target user needs (Hunger and Wheelen 2003; Weyrauch and Herstatt 2017); and *efficiency*, substantial cost reduction (affordable, low budget, and low prices).

Second, improve the dynamic capabilities of managers and boutique companies. Where boutique owners are more responsive to adjust to the changing conditions of their business environment characterized by (Borchardt et al. 2021), as follows: a. boutique owners can quickly understand new trends and market conditions through their innovative techniques (*sensing capabilities*) so that MSEs have an orientation in the market and customer needs which

has an impact on consumer loyalty. This is supported by previous research that states that innovative entrepreneurs or SMEs will increase customer loyalty to products that have been used (Marta, Hurriyati, and Dirgantari 2021); b. Capability to see business opportunities by combining and utilizing their resources optimally (*sizing capabilities*) (Fitrianto 2019); c. enhance the capability to make an effective network relationship. As Joel and David (1993) state that resource collaboration in the form of capital, access, and expertise is the best concept and the most optimal choice strategy for business resilience in the future (Junusi and Mubarak 2020; Raharja 2009)

Finally, the two implications points described earlier, will eventually have an impact on strengthening the resilience of the SA boutique business which is characterized by the existence of MSE business resilience indicators (Saad et al. 2021), as follows: a. Adaptability, SA Boutique can quickly adjust itself during the crisis pandemic through several efforts that have been made so that its business continuity at least remains sustainable and not until it closes (*adaptability*); b. Recover and develop (*performance growth*), characterized by recovering quickly in financial terms, where during the pandemic turnover fell significantly by 75-80% or around 25-60 million per month. However, in the following year (a year later) it can recover, and it can reach around 60% of the specified turnover target or around 40 million per week. As well as able to develop through involvement in business expansion both in the addition of sales markets and the launch of new product lines.

Conclusion

Frugal innovation in this study is an innovative concept to get more value (benefits) including increasing business resilience. In the context of business resilience strategy, frugal innovation with the six principles indicates the several positive impacts (benefits) obtained. Additionally, the findings indicate that frugal innovation can improve the capability of businesses and managers, both operational and dynamic capability, which is an important component of a business with good resilience.

However, this study is purely qualitative in which it is based on a single case study with limited verifiability. This study only uses a single enterprise to explore the application of frugal innovation in

SMEs to find effective strategies to increase business resilience. Further studies can relate the diffusion of frugal innovation and MSEs in other different sectors, or possibly hold a quantitative study on the impact of the six points of frugal innovation on enterprise resilience. Despite these limitations, this study provide new insight for many parties who need it, academics, micro and small enterprises, and the wider community by shedding light on the role of frugal innovation in MSEs.

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