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# Women entrepreneurs' struggles during the COVID-19 pandemic and their use of social media

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## Abstract

Small and medium enterprises (SMEs) throughout the world are facing a very complicated crisis due to COVID-19 pandemic and other structural challenges. This study is aimed at demonstrating the challenges faced by SMEs, particularly the struggles that women entrepreneurs of SMEs in Indonesia experienced to survive against these structural issues: COVID-19, digital presence and the male-dominated business sector in the country. Focusing on female-owned businesses in Yogyakarta, Indonesia, this paper carefully considers how social media platforms helped these businesses to continue. Using a descriptive quantitative approach, we collected data from 130 respondents and found that the COVID-19 pandemic has severely affected women entrepreneurs—especially those operating small and medium enterprises. They have experienced reduced income due to decreased sales, disrupted supply chains, difficulty paying credit instalments, and lack of access to government assistances. This study further sheds light on social media's important role in sustaining women-owned businesses. Facebook, WhatsApp, and Instagram have become the new tools through which women promote their products and reach new audiences. To overcome this issue, we advise a stronger government intervention to women-owned SMEs in the post-pandemic. Aside from managing social media for selling, we recommend women-owned small companies to internally intensify digital engagement, promotions, coupled by innovative products and attractive offers such as discounts.

**Keywords:** COVID-19, Social media, SMEs, Struggles, Women entrepreneurs

## Introduction

The extensive impact that the COVID-19 pandemic had during the 2020–2022 period on all areas in the economic sector has gained prominent academic attention globally and in Indonesia. Scholars, for instance, paid attention to the role of COVID-19 in disrupting all areas of the economy (Fendel et al., 2020), including small enterprises (Kaur & Kaur, 2020; Shafi et al., 2020). Other studies have confirmed that COVID-19 disproportionately affected women entrepreneurs (Jiménez-Zarco et al., 2021). Kritikos et al. (2020), for instance, reported that female business owners were 35% more likely to experience revenue loss than men and that female-owned businesses laid off a disproportionately higher share of workers. Halabisky (2017) and Villaseca et al. (2020) previously

found that female entrepreneurs face more difficult challenges than their male peers, as they had to overcome various obstacles such as limited access to financial resources, lack of networks, and gender biases.

Similar to the COVID-19 pandemic studies, studies of social media use in the development of SMEs have been conducted in many countries (Aloulou, 2019; Bernhard & Grundén, 2016; Fleet, 2012; Jones et al., 2015). Numerous studies have examined the relationship between social media and women entrepreneurs (Cesaroni et al., 2017; Etim, 2020; Genç & Öksüz, 2015; Mukolwe & Korir, 2016; Olsson & Bernhard, 2020; Ukpere et al., 2014). Studies by Kaur and Kumar, (2020); Kaur and Kaur, (2020); UN women, (2020) have demonstrated that tapping into online markets had been a critical coping strategy for business owners during the COVID-19 pandemic. However, there is still limited empirical evidence on women entrepreneurs' use of social media during the pandemic as a means of business survival. For instance, the recent study by Engidaw (2022) on the challenges faced by small businesses took place in Ethiopia, not Indonesia or elsewhere in Asia.

To advance those academic debate and fill the gap, this article examined the impact that the COVID-19 pandemic has on women entrepreneurs and explored the efforts made to sustain these businesses during the pandemic with a strong emphasis on the use of social media. Why we study women-owned small entrepreneur? The COVID-19 crisis was particularly detrimental for the female entrepreneurs around the world. Unlike earlier economic recessions, which primarily affected businesses operated by men, the pandemic left women more vulnerable (Alon et al., 2020). Women entrepreneurs concentrated in industries that were most affected by the pandemic, have relatively small financial buffers, and lack access to diverse financial sources. They are more likely to be self-funded or funded by friends and family (OECD, 2021). On average, their businesses are younger than male-owned ones.

Moreover, compared to male-owned businesses, women-owned ones faced problems such as balancing work and family responsibilities, finding and keeping qualified employees, and adapting to technological and marketplace changes (Mandishaya et al., 2015). In developing countries, women entrepreneurs also have to deal with cultural and traditional mores that provide less support, emphasise motherhood, position women as subordinate to men (particularly their husbands), and limit their mobility. More so than their male counterparts, women entrepreneurs' family ties impede the growth, sustainability, and performance of their businesses (Etim, 2020; Naidu, 2010). In short, we agree with the notion of Danish and Smith (2012) that women entrepreneurs are left 'triple blind', facing problems with financial capital, human capital, particularly during the COVID-19 pandemic.

This paper argues that the development of women entrepreneurs during the pandemic was compounded by various structural limitations. Dependence on informal financing and limited assets proved to be significant challenges. Yet, we corroborated Henry (2020) that they lacked access to mentoring and government relief programmes, where such programmes generally prioritise SMEs that possess a relationship with commercial lenders, while women entrepreneurs rely more on informal financing (Orser, 2020). The result of this study validates Sultan and Sultan (2020) finding that to cope with these difficulties, women adopted a range of digital marketing strategies. We particularly found

that social media emerged as a saviour for both small and medium women entrepreneurs who used it to reach their customers and provide them with the required products and services (Kaur & Kaur, 2020). It is globally estimated that 54 per cent of women-owned microbusinesses were use the internet to market their products (UN women, 2020). Meanwhile, in Indonesia women-owned businesses are more likely to use the social media to sell their products.

Using the COVID-19 pandemic within the rapid growth of social media users as its background, this study advances those issue and offers evidence as well as discussion on the effect that COVID-19 had on women entrepreneurs and how social media usage helped them ensure the survival of their businesses. The present study particularly contributes to the recent debate on SMEs' sustainability by exploring social media usage during the COVID-19 pandemic. This paper is organised as follows: Sect. 1 discusses the study background followed by a review of the relevant literature in Sect. 2. Section 3 discusses the research design, data collection, etc. Section 4 explores the findings of the study (the impact of COVID-19 on women entrepreneurs and the use of social media as an exit strategy). Finally, in Sect. 5, the conclusion, implications, and limitations of the study are discussed.

### **Women entrepreneurship and social media**

To understand the development of SMEs and social media use, we examined academic literature that discuss managerial issues faced by female small entrepreneurs. Particular attention was given to literature dealing with women's struggles in managing their business during the COVID-19 pandemic and the extent to which the rapid growth of digital technology had helped them. We shall start by looking at the definition of entrepreneurship and the critical position that women have in this male-dominated sector. We will then discuss the use of social media by entrepreneurs and how social media use facilitated their digital entrepreneurship during the pandemic.

The term entrepreneurship widely refers to the business activities undertaken by persons with initiative and decision-making skills, as well as specific capital and responsibility. Entrepreneurs, thus, are those who create their own businesses, operate, and assume its risks (Garg & Eisenhardt, 2017). In this regard, we agree with Mordi et al., (2010) that women entrepreneurs are women who participate in business and take risks by combining resources in a unique way, thereby enabling them to take advantage of opportunities in their immediate environment by producing goods and services. Zeb and Ihsan (2020) emphasised that economic development is impossible without involving women and that entrepreneurship is the most likely option for them (Ismail et al., 2016).

Any enterprise where more than 51 per cent of its capital/product originates from women and 51 per cent of the company's employable positions are allocated to women can be characterised as female-owned (Vijayakumar & Jayachitra, 2013). Female-owned businesses are generally small enterprises that engage in the trade and service sector (Sandri & Hardilawati, 2019). In Indonesia, according to recent studies nearly 40 per cent of all SMEs are women-owned (UN Women, 2020).

Looking at Indonesia's experience and many other developing countries around the globe, three issues come to mind. First, the long-standing stereotype that entrepreneurship has long been synonymous with men rather than women. The construction of

entrepreneurship as a masculine phenomenon has deep historical roots, which are supported by cultural and economic processes and embedded in social and cultural attitudes and norms (Gogar, 2019; Hamilton, 2013). What we can identify as gender biases in entrepreneurship are associated with the fact that entrepreneurship has traditionally been seen as a male gender role. As a consequence, women entrepreneurs appear invisible; they do not seem to fit the stereotypes, even though they play a key role in creating jobs (Javadian & Singh, 2012; Sharma, 2018).

The second issue is the marginalised position of women businesses. Women contribute substantially to a country's economic growth, yet many (if not most) women business owners opt to remain small and informal. Women entrepreneurs have relatively small financial buffers and lack access to different financial sources. Wei (2018), said, women-owned SMEs face several push and pull factors when deciding whether to remain small or expand their businesses. The demands of household domestic duties, as well as other time constraints, are major reasons for their decision to remain small and informal. Women's access to capital is also constrained; even when loan products are available, they do not necessarily fit their needs.

The advent of the global COVID-19 pandemic marked the third issue where female-owned businesses faced a managerial crisis. Unlike earlier economic recessions, which primarily affected businesses operated by men, the COVID-19 pandemic left women even more vulnerable (Alon et al., 2020), and stressed the importance of digital skills when coping with the pandemic (Afshan et al., 2021). The application of lockdown policies, which restricted mobility, paused all offline economic and social activities, and pushed them into the virtual/online realm. During the pandemic, physical mobility was restricted and, consequently, SMEs pushed to adopt social media platforms to keep connections with their market. On the one hand, social media offers an affordable, pervasive, user-friendly, and accessible platform that individuals could incorporate into their private lives (Högberg, 2018; Högberg & Olsson, 2019; Kaur & Kumar, 2020). On the other hand, social media bring benefits for small businesses, which often have limited resources to market their products (Barnes et al., 2012).

Scholars (i.e. Genç & Öksüz, 2015; Jones et al., 2015) argue that social media played an important role in maintaining female-owned SMEs. It is not merely an instrument for sharing data; it also ensured the survival of businesses during the COVID-19 pandemic. Unlike traditional media, social media offers friendship-based business tools that enable women to listen to and learn from customers in ways they have never done before. WhatsApp and Instagram are preferred by small entrepreneurs, as they are simpler and require less technical knowledge than blogs, Google+, or LinkedIn. These digital platforms are designed in such a way making users capable of sharing personal data and interacting online (Zuboff, 2015).

Evidences from many developed countries show that social media platforms offer women entrepreneurs a new space for marketing and challenge the unequal position between men and women in SMEs (Cesaroni et al., 2017). While the world of entrepreneurship is frequently described as a masculine area (Gogar, 2019), social media can present successful women entrepreneurs as role models. In line with that, Markowska et al. (2018) highlighted the importance of forefronting innovative women entrepreneurs as influencers on digital platforms. This idea is in-line with the general concept of digital

entrepreneurship, where entrepreneurs can find new ways of doing business based on digital technology, from offline to online ones (Kraus et al., 2018). With those ideas in mind, this paper seeks to answer two questions: *first*, to what extent did the COVID-19 impact women entrepreneurs in Indonesia? *Second*, how did women employ social media to cope with the pandemic?

### **Research methodology**

To address the research question illustrated above, this study employed a quantitative method. It helped us identify the empirical problems faced by informants, henceforth, women entrepreneurs from their own perspectives and allowed us to understand how the entrepreneurs adopted social media to deal with the challenges they encountered. The method also helped us analyse our empirical findings about women entrepreneurs' struggles and engagement with digital platforms.

### **Design**

This research employs a descriptive quantitative design. It aims at determining the independent value variable, either one variable or more (independent), without making comparisons, connecting with other variables, and testing hypotheses (Siedlecki, 2020). We use three independent variables, including the impact of COVID-19 on female-owned businesses, social media usage during the crisis, and the managerial tactics to maintain the small and medium business in Indonesia.

The impact of COVID-19 on female-owned businesses was measured by using five dimensions, including the pandemic impact on sales, supply chains, loans from financial institutions, strategies for paying instalments, and assistance programs from external parties. The variable of social media usage during the crisis was assessed by using six indicators comprising reason for using social media for business, experience in using social media, intensity of social media use during the pandemic, primary means of accessing social media, and social media platforms used. Meanwhile, the strategy to maintain the business was measured using two elements, namely managerial strategies to maintain SMEs and social media marketing strategy.

### **Participants**

The research participants were female entrepreneurs from five districts in Yogyakarta province with the following criteria: (1) actively used social media platforms such as WhatsApp, Facebook, and Instagram to manage their businesses; (2) female business founders and owners who had been in business for at least 2 years. Initial respondent data for this study were obtained from "Warung Rakyat", a website developed by the COVID-19 task force at Universitas Islam Indonesia (UII) to promote products made by small enterprises in Yogyakarta province, Indonesia (see: <https://www.uui.ac.id/tag/warung-rakyat/>). Women entrepreneurs listed on the website were then selected purposively based on their specific sector (i.e. food, beauty, fashion, and crafts). Subsequent data collection was made by using the snowball technique, wherein respondents identified other potential respondents.

Due to the unknown population of women entrepreneurs in Yogyakarta, Indonesia using social media, the sample size was determined following the formula developed by Lemeshow et al. (1997), as follows:

$$n = \frac{Z^2 \cdot 1 - \alpha / 2 \cdot P(1 - P)}{d^2},$$

where  $n$ : sample size;  $Z$ : standard normal variate corresponding to the level of significance (95%) = 1.96;  $p$ : expected prevalence = 0.5;  $d$ : absolute error or precision.

Based on this formula, the minimum sample size was calculated as below:

$$n = \frac{1.96^2 \cdot 0.5(1 - 0.5)}{0.1^2},$$

$$n = 96.4 = 100.$$

From the above formula, we selected and collected data from 130 respondents, and thus met the minimum sampling requirement.

### Instruments

A close-ended questionnaire was used to explore how women entrepreneurs struggle in times of crisis by using social media. The validity of the questionnaire was tested by using internal or logical validity. The term logical implies reasoning or rationality. The instrument has internal validity given that the criteria contained in it theoretically (rationally) reflect what is being measured (Cahit, 2015). As the COVID-19 pandemic limited our mobility and interactions, questionnaires were distributed to respondents digitally, primarily through WhatsApp. Each questionnaire consisted of two sections; the first collected demographic information on the respondents while the second gathered a profile of the selected women business operations and social media usage. Table 1 below summarises the demographic characteristics of 130 respondents, with a particular focus on their five indicators: age, education level, business sector, source of initial capital, and number of employee.

### Data analysis

To organise our analysis, this study used descriptive statistics by comparing the frequency and tendency of each variable. We connected all empirical findings pertaining to the participants' experiences during the COVID-19 pandemic and their shift from offline to online activities. This formula guided us in interpreting data by connecting them to the broader discussion on the economic impact of COVID-19, women's entrepreneurship, social media usage, etc.

### Results

The general survey results showed how COVID-19 impacted female-owned businesses and how women entrepreneurs found solutions using digital platforms. We find that the COVID-19 pandemic disrupted the overall economic activities of women in Indonesia. With the sharp downturn in economic activity, the women who

**Table 1** Demographic characteristics of respondents

<b>Age</b>				
< 25	25–34	35–44	45–54	> 55
4.61%	28.5%	33.1%	29.2%	4.61%
<b>Education level</b>				
Secondary high school	Diploma	Bachelor	Post-graduate	
33.8%	16.2%	48.5%	1.5%	
<b>Business sector</b>				
Food	Beauty	Fashion	Craft	Other
40.15%	3.03%	18.94%	4.55%	5.30%
<b>Source of initial capital</b>				
Personal savings	Spouse and family	Financial institution	Others	
70.7%	17.7%	8.5%	3.1%	
<b>Number of employees</b>				
0	1–3		> 3	
55.3%	27.27%		17.43%	

operate SMEs were particularly vulnerable to losing their livelihoods. In line with global trends, almost 87% of women surveyed in Yogyakarta, Indonesia, confirmed that their sales decreased after the beginning of the COVID-19 pandemic. The large-scale social restrictions applied by the Indonesian authorities led to a drastic decline in economic activity, as people were less likely to spend in these uncertain conditions. This is suspected to have reduced demand for SMEs' products (UNDP & LPEM UI, 2021).

The pandemic also severely disrupted the supply chains used by entrepreneurs. The 130 women entrepreneurs surveyed experienced problems with raw materials and production (35%), delivery and distribution (32%), and communication with customers and suppliers (23%). Another 9% indicated that they faced other problems, such as employees being unable to work due to lockdown policies or testing positive for COVID-19. Female-owned SMEs are particularly vulnerable to such issues, as they typically have weaker supply chains, smaller inventories, and limited supplier networks, making them more vulnerable to supply chain disruptions (WTO, 2020). Together, these problems reduced the sales and profits of female-owned SMEs.

Table 2 below highlights the detailed impact of COVID-19 to the women-owned businesses in Yogyakarta province, Indonesia.

How did most female-owned businesses cope with those problems? This study made interesting findings regarding the role of social media in sustaining businesses during and after the COVID-19 pandemic in Yogyakarta, Indonesia. Table 3 below summarises the reasonings and types of social media usage among the surveyed women entrepreneurs in Yogyakarta, Indonesia.

Table 3 demonstrates that affordability and user-friendliness were common reasons for using social media, as was this media's usage for societal communication. As for the devices used, smartphones were the most commonly used, followed by laptops.

**Table 2** The impact of Covid-19 on women-owned businesses

Criteria	Percentage
Decline in sales	
Yes	87
No	13
Supply chains	
Raw material and production	35
Delivery and distribution	32
Communications with the customers and suppliers	23
Other (employees unable to work due to the lockdown, tested positive for COVID-19)	9
Loans from financial institutions	
Yes	42
No	58
Strategy for repaying loans	
Rescheduling	47
Selling assets	29
Other (reducing working hours for employees, borrowing money from family)	24
Assistance related to the pandemic	
Yes	18.5
No	81.5

**Table 3** Women entrepreneurs and social media usage

Reason for using social media for business				
User friendly	Affordable	Trend and market demand		
70%	23.8%	6.2%		
Experience using social media				
1–2 years	3–4 years	> 4 years		
45.4%	30%	24.6%		
Intensity using social media during the pandemic				
< 1 h	1–5 h	6–10 h	> 10 h	
10.7%	60%	26.2%	3.1%	
Main means of accessing social media				
Cellular phone	Cellular phone and tablet	Cellular phone and Laptop	Cellular phone, Tablet, and Laptop	
69.8%	5.4%	23.8%	1%	
Social media platforms used				
WhatsApp	WhatsApp and Face-book	WhatsApp and Insta-gram	WhatsApp, Facebook, and Instagram	Other combinations
26.9%	7.7%	13.1%	45.55%	6.9%

The table also indicates that women-owned businesses mixed a variety of social media platforms in their digital engagement. Table 4 below details the strategies used by women entrepreneurs during the COVID-19 pandemic.

Table 4 shows the strategic roles of social media in sustaining the engagement of women business with its consumers. It also shows that to overcome the crisis triggered by the pandemic, women entrepreneurs used a variety of digital platforms, such as the



**Table 4** Women business survival with social media

Criteria	Percentage
Strategy to maintain business	
Promotion through social media (SM)	27.6
Offering discounts	4.6
Reducing employees	0.8
Product diversification	2.3
Additional services	1.53
Promotion through SM, offering discounts	14.6
Promotion through SM, reducing employees	3.1
Promotion through SM, product diversification	1
Promotion through SM, additional services	6.2
Promotion through SM, offering discounts, additional services and product diversification	36.7
Other combination	1.6
Marketing strategy through social media	
Posting photos and videos related to the products	43.1
Posting photos and videos related to the products, engaging in comments, and develop friend networks	54.6
Other	2.3

use WhatsApp (45.55%) in conjunction with Facebook and Instagram to make stable as well as new connections with customers, suppliers, and peers. A smaller percentage of surveyed women businesses combined WhatsApp with Instagram (31.1%) or Facebook (7.7%) or used another combination of platforms (6.7%). WhatsApp has long been the dominant application for daily personal communication in Indonesia. Likewise, it can easily be adapted for business use by tapping into their existing networks and quickly sharing information about their business activities.

## Discussion

Drawing from the findings above, it can be said that the pandemic irritated female-owned businesses. Why have these businesses been vulnerable to the COVID-19 pandemic? We conceptually found several answers, ranging from the business sectors themselves to the funding and management models used. As shown by Powers and Magnoni (2013), women-owned SMEs tend to have fewer employees than male-owned SMEs and are more likely to use temporary labour. As can be seen in Table 1, 40% of respondents were involved in the culinary sector. The remainder were engaged in other business sectors, including the fashion (28%) and retail (17%) sectors; fewer were involved in the craft (5%) and beauty (3%) sectors. The culinary, fashion, and retail sectors are highly dependent on consumer mobility, and thus slowed down significantly after the work-from-home policy was implemented.

According to Riyanti et al. (2022), the failure/success of a business is defined from many dimensions, including personal, organisational, and external factors. With this notion, we find that COVID-19 disrupted and potentially undermined their business activities. Government assistance was lacking before the pandemic and continued amidst the pandemic. The lack of digital competencies delayed the migration of women entrepreneurs to digital platforms.

This paper also supports the findings of previous studies, which have found that women mostly start businesses with internal capital sourced from personal savings (Bennett & Dann, 2000; Orser et al., 2006). The businesses are typically funded through personal savings, which can easily be transferred or repurposed to meet emergency needs. Most respondents (70%) indicated that their initial capital came from their personal savings. Only 3% of respondents received their seed capital from formal financial institutions such as banks or microfinance. We also proved the argument of Chowdhury et al. (2018) that women entrepreneurs face greater obstacles in accessing such institutions due to their lack of information, collateral, guarantor, and experience, as well as discriminatory laws.

It is important to note that, before and during the pandemic, women-owned businesses were more likely to be SMEs and tended to be operated individually. For example, approximately 40% of respondents indicated that they carried out all business activities without any employees; some 27% employed one to three persons; and 17% had more than three employees.

Female entrepreneurs were strongly dependent on personal savings, leaving them vulnerable, as they had limited access to formal financial institutions. Our survey indicates that women entrepreneurs are not considered bankable as they are unable to meet the criteria for receiving loans from formal financial institutions. Most operate in sectors with lower capital intensity and on a smaller scale, and this further exacerbates their difficulty in seeking external funding (World Bank Group, 2016). Table 2 shows that only 42% of the women entrepreneurs surveyed received loans from formal financial institutions. To overcome their drastically reduced revenue, most women MSE owners sought to reschedule their loans (47%). Other strategies included selling assets, borrowing money from family and friends, and reducing working hours for staff.

Without access to financial coping strategies, women also had difficulty accessing government support and stimulus programmes. Since the onset of the pandemic, the Government of Indonesia has implemented several stimulus packages to benefit both businesses and individuals, including social assistance programmes, direct cash transfers, working capital loans, and credit guarantees (UN Women, 2020). However, almost 81% of the women micro-entrepreneurs surveyed did not benefit from any of these programmes (Table 2). Government relief programmes have not specifically targeted female-owned SMEs. In practice, this has prevented women from benefitting from them. Social media, thus, helped them reduce operational costs.

Furthermore, this study showed that the drastic changes brought by the COVID-19 pandemic drove entrepreneurs to bring their offline business activities online and use social media for digital marketing. We agree with Jones et al., (2015), who write that social media plays a vital role in the development of female-owned SMEs because of its affordability, which enables women to overcome their limited financial resources. Social media provides an easy, user-friendly, and economical platform for rapidly disseminating information to diverse markets; as such, it has paved the way for the growth of women entrepreneurs (Duggal & Gupta, 2020). Supporting previous findings, most of the respondents in this study (70%) used social media for their SMEs because of its user-friendliness; another 23.8% of respondents chose social media due

to its affordability. A smaller percentage of respondents (6.2%) chose social media to follow market demands and trends.

Given that the majority of respondents (66%) were female entrepreneurs under the age of 45, this study supports Kozubíková et al. (2016), who argue that new business strategies (using the internet, mobile applications, and other information and communication technologies) are easier for women entrepreneurs. The usage of social media for entrepreneurial activities indicates that these women have had the time and education to develop their skills and knowledge, as well as the experience necessary to develop confidence in their abilities (Zali et al., 2018).

We also find women's level of education determines the ease of their migration to digital. Table 1 shows that approximately 66% of respondents received some form of tertiary education; the remaining 33% had some secondary education. Higher education generally seems to be one factor determining women entrepreneurs' success (Hunady et al., 2018), and women with higher levels of formal education indicated that they have the knowledge and skills needed for continued survival. Education plays a key role in digital literacy, as it provides people with the skills necessary to identify opportunities, develop digital tools, and make decisions effectively. All of these are crucial, as they have a direct impact on profitability, growth rates, job formation, and the creation of digital economic values (Ahmadov et al., 2021).

Following the COVID-19 pandemic, women's business models and technology use changed. They have increasingly used social media for interaction with clients, as can be seen in the above table. We agree with Melissa et al. (2013), who argue that this trend is driven by the facility of using digital platforms. Using social media, users can tag pictures and provide product information to potential customers with a single click (Melissa et al., 2015). In Indonesia, of the 549,740 users registered on Facebook as owners of small and medium enterprises, 176,300 are women (Melissa et al., 2013). Women use social media platforms such as Facebook as a strategy to increase sales and communicate with customers (Ukperere et al., 2014).

Our survey demonstrated that COVID-19 increased entrepreneurs' usage of social media after it was declared a global pandemic in 2020 (45% of respondents). This also shows that most respondents were relatively new social media users when the COVID-19 crisis began affecting their businesses. The pandemic likely encouraged women to seek alternative strategies, selling their products online to replace offline business. Rapidly embracing an online format enabled them to continue reaching customers during the lockdown, when face-to-face interactions were limited. At the same time, however, we find a relatively high percentage of women entrepreneurs had been using social media for 3–4 years (26%) and more than 4 years (30%). The majority of respondents (60%) confirmed that they spent 1–5 h on social media every day to run their businesses during the pandemic.

It can also be seen that social media was overwhelmingly accessed via cellular phone (69.8%). These devices were deemed to be more practical and efficient, as they can be used for multiple purposes (Rahim et al., 2020). Such digital devices have become pillars of socio-economic development during the crisis, providing entrepreneurs with new opportunities and simplifying transactions (Melchioly & Sæbø, 2010). In this

sense, we agree with Yahya and Mutarubukwa (2017), who write that digital platforms changed the way entrepreneurs interact with their customers.

Finally, to compare the case of Indonesia with other developing societies such as Ethiopia, the findings of this study reflect those of Engidaw (2022), who noted that COVID-19 reduced revenue, undermined business performance, and resulted in job loss. To cope with this situation, governments should partner with non-government organisations to offer financial aid and marketing tools to female-owned small businesses. This study supports the findings of Afshan et al. (2021), who investigated women entrepreneurs learning experiences when transitioning to virtual business activities in Indonesia.

## Conclusion

This study concluded that the COVID-19 crisis has profoundly impacted women-owned SMEs in Indonesia, resulting in particularly reduced sales and difficulty in repaying loans from formal financial agencies. Among all women entrepreneurs, only a few had received assistance from government and non-government programmes. We can also conclude that, coping with the pandemic, the entrepreneurs advanced their corporate goals by migrating to digital platforms. This shows that social media helped women entrepreneurs to continue providing business services: product promotion, discounts, and diversifying their products to cope with the crisis. Several platforms, especially WhatsApp, Instagram, and Facebook, have emerged as significant tools for the marketing survival of small and medium businesses.

In terms of academic contribution, this study provides a conceptual view of the interlink between the survival of small businesses and social media usage in Indonesia. It explored the approaches taken by women to secure their business during COVID-19, thereby offering an insight into how women entrepreneurs in a developing economy face the challenge of economic instability and struggle for their future.

Using Indonesia as a case study, we advanced previous studies on the utilisation of social media platforms to ensure the viability of female-owned SMEs, social media usage in the beauty and wellness industry, and start-up financing during the COVID-19 pandemic (Etim, 2020; Kaur & Kaur, 2020; Villaseca et al., 2020).

Moreover, the knowledge generated through this work may help policymakers reduce unplanned losses businesses face during times of crisis and help them to address the economic vulnerabilities of women entrepreneurs.

It is predicted that, following the pandemic, women entrepreneurs will continue to push into the digital realm as they seek to reach a broader customer base. Expanding the research sample is crucial to obtain a better view of the complex tactics that women entrepreneurs implement to deal with unexpected situations and crises. Although we consider gender issue following the pandemic, the current study leaves this for future research, which should consider investigating how women deal with gender issues on digital platforms while managing their small companies.

**Appendix**

**Questionnaire**

Before filling out the questionnaire sheet, please read the instructions for filling in each section

*Part 1* Personal identity

Name	(you may not fill in this section)
Age	
Marital status	a. Married b. Divorced
Educational background	a. Secondary High School b. Diploma c. Bachelor d. Post graduate
Business sector	a. Food b. Beauty c. Fashion d. Craft e. Other
Source of initial capital	a. Personal savings b. Spouse and family c. Financial institution d. Other

*Part 2* The second part of this questionnaire contains opinions and experiences of running a business before and after the Covid-19 pandemic

Does the Covid-19 pandemic have an impact on business turnover or income?	a. Yes b. No
Do you have a loan at a commercial bank/family/informal financial institution?	a. Yes b. No
If so, has the Covid-19 pandemic impacted your ability to pay instalments?	a. Yes b. No
This question is related to previous question. What strategy do you use if you are having trouble paying your loan instalments due to Covid-19?	a. Postponing instalment payments b. Selling assets to pay instalments c. Other
Did you get any assistance/assistance programs during the Covid-19 pandemic?	a. Yes b. No
What are the obstacles in running a business during a pandemic that you are facing?	a. Raw material and production b. Delivery and distribution c. Communications with the customers and suppliers d. Other

*Part 3* The third part of the questionnaire concerns your experience using social media as strategy to maintain business during the Covid-19 pandemic

What is your reason for using social media for business?	a. User friendly b. Affordable c. Trend & market demand
How long have you been using social media?	a. 1–2 years b. 3–4 years c. > 4 years
How intensively do you use social media during the pandemic?	a. < 1 h b. 1–5 h c. 6–10 h d. > 10 h

What is your main means of accessing social media?	a. Cellular phone b. Cellular phone & tablet c. Cellular phone & Laptop d. Cellular phone, Tablet, & Laptop
What social media platforms do you use?	a. WhatsApp b. WhatsApp & Facebook c. WhatsApp & Instagram d. WhatsApp, Facebook, & Instagram e. Other combination
What strategies that you use for marketing the product and service through social media?	a. Posting photos and videos related to the products b. Posting photos and videos related to the products c. Engaging in comments, & develop friend networks d. Other
What strategy did you use to save your business during a pandemic (you may answer more than one option)	a. Promotion through social media b. Offering discounts c. Reducing employees d. Product diversification e. Additional services

### Abbreviations

SMEs	Small and medium enterprises
COVID-19	Corona virus disease
OECD	Organisation for Economic Co-operation and Development
UN	United Nations
UNDP	United Nations Development Program
LPEM UI	Lembaga Penyelidikan Ekonomi Masyarakat Universitas Indonesia
WTO	World Trade Organization

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### Author contributions

Conceptualization: NSR and M; methodology: NSR and M; software: ERNE; validation: NSR and NE; formal analysis: NSR and M; investigation: NSR, M, and NE; resources: ERNE; data curation: NSR and ERNE; writing—original draft preparation: NSR; writing—review and editing: M; visualisation: M; supervision: M; project administration: ERNE; funding acquisition: NSR and M. All authors have read and agreed to the published version of the manuscript.

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### Availability of data and materials

All data generated or analysed during this study are included in this article. The raw data are available from the corresponding author upon reasonable request.

### Declarations

#### Competing interests

The authors declare that they have no competing interest.

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