The Influence of Entrepreneurial Characteristics and Digital Maturity on the Resilience of Micro, Small, and Medium Enterprises in Bandar Lampung, Indonesia

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Abstrak

Usaha Mikro, Kecil, dan Menengah (UMKM) memiliki peran penting dalam perekonomian Indonesia; namun, ketahanan mereka sering kali menghadapi berbagai tantangan. Penelitian ini bertujuan untuk menganalisis pengaruh karakteristik kewirausahaan dan kematangan digital terhadap ketahanan UMKM di Bandar Lampung. Dengan menggunakan pendekatan kuantitatif, data dikumpulkan dari 100 pemilik UMKM melalui kuesioner dan dianalisis menggunakan regresi linear berganda. Hasil penelitian menunjukkan bahwa karakteristik kewirausahaan berpengaruh positif terhadap ketahanan bisnis dengan koefisien regresi sebesar 0,137 dan tingkat signifikansi 0,061. Sementara itu, kematangan digital memiliki pengaruh yang lebih signifikan dengan koefisien regresi sebesar 0,729 dan tingkat signifikansi 0,000. Nilai R Square sebesar 0,668 menunjukkan bahwa 66,8% variasi dalam ketahanan bisnis dapat dijelaskan oleh kedua variabel tersebut. Temuan ini menegaskan bahwa kematangan digital memiliki peran yang lebih dominan dibandingkan karakteristik kewirausahaan dalam meningkatkan ketahanan UMKM. Oleh karena itu, pemilik UMKM didorong untuk mengadopsi teknologi digital guna memperkuat daya saing dan ketahanan bisnis mereka.

Kata Kunci: *UMKM; Ketahanan Bisnis; Karakteristik Kewirausahaan; Kematangan Digital; Teknologi Digital*

Abstract

Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in Indonesia's economy; however, their resilience often faces numerous challenges. This study aims to analyze the influence of entrepreneurial characteristics and digital maturity on MSME resilience in Bandar Lampung. Using a quantitative approach, data were collected from 100 MSME owners through questionnaires and analyzed using multiple linear regression. The findings reveal that entrepreneurial characteristics positively influence business resilience, with a regression coefficient of 0.137 and a significance level of 0.061. Meanwhile, digital maturity has a more significant impact, with a regression coefficient of 0.729 and a significance level of 0.000. The R Square value of 0.668 indicates that 66.8% of the variation in business resilience can be explained by these two variables. These findings confirm that digital maturity plays a more dominant role than entrepreneurial characteristics in enhancing MSME resilience. Therefore, MSME owners are encouraged to adopt digital technology to strengthen their competitiveness and business resilience.

Keywords: *MSMEs; Business Resilience; Entrepreneurial Characteristics; Digital Maturity; Digital Technology*

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INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in Indonesia's economy, particularly in generating employment opportunities and driving national economic growth (Juminto, 2020). MSMEs contribute significantly to economic stability, absorbing a large portion of the workforce and fostering inclusive economic development. However, the sustainability of MSMEs frequently encounters multiple challenges, especially concerning business resilience in response to a dynamic economic environment (Indarto & Santoso, 2020). Business resilience refers to a company's ability to adapt, survive, and thrive amid internal and external challenges (Steinmetz, 1969; Struwig et al., 2019; Indarto & Santoso, 2020; Robertson et al., 2020). Given the rapidly changing business landscape, where economic disruptions, technological advancements, and market fluctuations are becoming increasingly prevalent, ensuring MSME resilience is more critical than ever. This is particularly relevant in Bandar Lampung, one of Indonesia's economic hubs, where MSMEs serve as the backbone of local economic activities. Here are the tables showing the number of MSMEs in Bandar Lampung:

Table 1. Number of MSMEs in Bandar Lampung (2020-2021)

Year	Micro Enterprises	Small Enterprises	Medium Enterprises	Total Enterprises
2020	116,590	1,900	43	118,533
2021	116,615	1,875	43	118,533

Source: BPS Kota Bandar Lampung (2023)

Table 2. Number of MSMEs in Bandar Lampung (2022-2023)

Year	Micro Enterprises	Small Enterprises	Medium Enterprises	Total Enterprises
2022	4,460	-	-	4,460
2023	30,934	2	4	30,940

Source: BPS Kabupaten Pringsewu (2024)

The significance of MSMEs in Bandar Lampung is reflected in their substantial contribution to employment generation and economic development. In 2021, the number of MSMEs in Bandar Lampung reached 118,533, with micro-enterprises dominating the sector. However, there was a sharp decline in 2022, with only 4,460 MSMEs recorded, primarily due to a drastic reduction in the number of micro-enterprises, while small and medium enterprises were nearly non-existent. By 2023, the number of MSMEs in Bandar Lampung had increased again to 30,940, with micro-enterprises still making up the majority and small and medium enterprises beginning to recover (BPS Kota Bandar Lampung, 2023; BPS Kabupaten Pringsewu, 2024). These fluctuations highlight the vulnerability of MSMEs and emphasize the

urgency of identifying key factors that can enhance their resilience. Without adequate support and strategic interventions, MSMEs in Bandar Lampung risk experiencing further instability, ultimately affecting the city's overall economic growth and employment rates.

One of the primary factors contributing to MSME resilience is entrepreneurial characteristics, which encompass the mindset, skills, and attitudes of business owners in managing their enterprises (Steinmetz, 1969; Struwig et al., 2019). Entrepreneurial characteristics, such as risk-taking, innovation, locus of control, need for achievement, self-confidence, and adaptability, have been shown to play a role in making an entrepreneur adapt better to challenges and changes (Anwar & Saleem, 2019; Indarto & Santoso, 2020). Prior studies have indicated that entrepreneurs exhibiting innovative and proactive characteristics are more capable of withstanding economic uncertainties (Essel et al., 2019). However, further investigation is required to comprehensively understand the specific impact of these characteristics on MSME resilience at the local level, particularly in Bandar Lampung.

In addition to entrepreneurial characteristics, digital maturity has emerged as a critical determinant in strengthening MSME resilience. Digital maturity refers to a business's readiness and capability to adopt and leverage digital technologies to enhance operational efficiency and competitiveness (Westerman et al., 2012, 2014; Rader, 2019). The increasing accessibility of digital technologies enables MSMEs to expand their market reach, optimize business processes, and enhance their competitiveness in the digital economy (Robertson et al., 2022). A study by Robertson et al. (2022) revealed that MSMEs with a higher level of digital maturity tend to be more resilient in addressing economic challenges. Nonetheless, digital technology adoption levels among MSMEs remain heterogeneous, particularly in areas with uneven levels of digital technology adoption, such as Bandar Lampung City.

Given the significance of these two factors, this study aims to examine the relationship between entrepreneurial characteristics and digital maturity concerning MSME resilience in Bandar Lampung. Specifically, the study seeks to assess the extent to which entrepreneurial characteristics influence MSME resilience, explore the role of digital maturity in enhancing business endurance, and analyze the interaction between these variables in the context of urban MSMEs. The findings of this study are expected to contribute valuable insights for MSME owners, policymakers, and academics in formulating effective strategies to bolster MSME resilience in an increasingly globalized and dynamic economic landscape.

Thus, this research is not only academically relevant but also holds practical implications in supporting the sustainable development of MSMEs in Bandar Lampung. Given the fluctuating number of MSMEs in the region, understanding the role of entrepreneurial characteristics and digital maturity is essential for developing targeted policies and strategic interventions. By identifying and strengthening these resilience factors, MSMEs in Bandar Lampung can be better equipped to navigate future economic challenges, remain competitive, and contribute to sustainable regional economic growth.

METHODOLOGY

Population and Sample

The study's population comprises all MSME owners in Bandar Lampung, which totaled 30,940 business units in 2023 (Sekaran & Bougie, 2016; Hair et al., 2020). The sample, representing a subset of the population, was selected to facilitate the generalization of research findings (Sekaran & Bougie, 2016). This study employed a probability sampling method, specifically the simple random sampling technique, ensuring that each member of the population had an equal chance of selection (Sekaran & Bougie, 2016; Hair et al., 2020). The final sample comprised 100 MSME owners, determined using a 5:1 ratio against the number of variable indicators, which totaled 20 (Hair et al., 2019). This approach was chosen due to the homogeneous nature of the population, eliminating the need for stratification while minimizing selection bias. Furthermore, this method is deemed representative in reflecting population characteristics and ensuring data validity and reliability (Sekaran & Bougie, 2016).

Types and Sources of Research Data

Primary data were directly obtained from MSME owners in Bandar Lampung through pre-designed questionnaires (Sekaran & Bougie, 2016). The questionnaire employed a five-point Likert scale, ranging from Strongly Disagree (1) to Strongly Agree (5) (Sekaran & Bougie, 2016). Meanwhile, secondary data were sourced from indirect references, including academic journals, research articles, and relevant statistical reports. Secondary data collection was conducted through literature reviews from online sources to strengthen the study's findings and provide a robust theoretical foundation for data analysis.

Operational Definition of Research Variables

Operational definitions outline measurable dimensions or characteristics to facilitate the understanding of research concepts (Sekaran & Bougie, 2016). This study examines three main variables: Entrepreneurial Characteristics (X1), assessed based on risk-taking propensity, innovation, and locus of control (Anwar & Saleem, 2019); Digital Maturity (X2), encompassing leadership, strategy, and technology aspects (Schumacher et al., 2016); and Business Resilience (Y), influenced by monitoring and reporting, responsiveness to change, and governance structure (Lee et al., 2013). These variables were measured using a Likert scale.

Research Instrument

The research instrument consisted of a questionnaire adapted from previous studies. The Entrepreneurial Characteristics variable (X1) was derived from six statements by Anwar & Saleem (2019), whereas the Digital Maturity variable (X2) was based on nine indicators from Schumacher et al. (2016). Meanwhile, the Business Resilience variable (Y) referred to five indicators from Lee et al. (2013). The questionnaire comprised a total of 20 statements.

Data Analysis and Hypothesis Testing

Data analysis was conducted using the Statistical Program for Social Sciences (SPSS), which offers various statistical techniques, including regression analysis, factor analysis, and basic assumption testing (Sahir, 2021). Descriptive statistical analysis was employed to provide an overview of each variable, such as mean values, standard deviations, and minimum-maximum values (Sahir, 2021). A quantitative analytical approach utilizing multiple linear regression was applied,

given the presence of multiple independent variables. This method examines the relationship between independent and dependent variables, assessing both positive and negative influences (Hair et al., 2020). The regression model used in this study is as follows:

Y = α + β1X1 + β2X2 + ε

where Y represents business resilience, X1 denotes entrepreneurial characteristics, and X2 signifies digital maturity. α represents the constant, βX signifies the regression coefficient, and ε indicates the standard error. Hypothesis testing was conducted using the t-test to evaluate the individual impact of each independent variable on the dependent variable (Hair et al., 2020). The significance level was set at 5% (0.05); however, in cases where the results deviated from expectations, the significance level could be extended to 10% (0.1) (Hair et al., 2020).

RESULT AND DISCUSSION

Respondent Characteristics

The respondents in this study consist of micro, small, and medium enterprise (MSME) owners who have integrated digital technology into their business operations, whether through e-commerce, social media, or a combination of both. Data collection was conducted online from November 27 to December 5, 2024, with a total of 100 respondents. The majority of respondents were female (67%), underscoring the significant role of women in the MSME sector, particularly due to the flexibility in time and location that digital business models provide. In terms of age distribution, most respondents were between 25–29 years old (28%) and 30–34 years old (20%), reflecting the predominance of a productive generation that is highly familiar with digital technology and demonstrates innovation in business development.

The most common types of businesses operated by respondents were in the food and culinary sector (66%), followed by retail (12%), which are relatively easy to establish and experience consistently high demand. Regarding business longevity, the majority of respondents had been in operation for 1–4 years (59%), suggesting that businesses surviving beyond the first year tend to exhibit greater resilience. In terms of digital technology utilization, social media emerged as the most widely adopted tool (57%), followed by e-commerce platforms (15%), while 28% of respondents utilized a combination of both. These findings highlight the crucial role of digitalization, particularly social media, in facilitating MSME marketing and business growth in the digital era.

Descriptive Analysis of Respondent Responses

An analysis of the first independent variable (X1), Entrepreneurial Characteristics, yielded a total mean score of 4.25. This result indicates that MSME owners in Bandar Lampung exhibit relatively high entrepreneurial characteristics. The highest-rated indicators were the belief that their lives are determined by their own actions (X1.3) and their ability to complete difficult tasks (X1.5). Conversely, the lowest-rated indicators included the willingness to take high risks for potentially greater profits (X1.1) and the tendency to experiment with various business approaches (X1.2), suggesting a need for improvement in these aspects.

For the second independent variable (X2), Digital Maturity, the analysis produced a total mean score of 4.16. The highest-rated indicators were the

integration of products into digital platforms (X2.4) and the implementation of continuous learning and open innovation (X2.6). However, aspects requiring enhancement included compliance with Industry 4.0 labor regulations (X2.8) and the preparedness of human resources to support digitalization implementation (X2.1).

Regarding the dependent variable (Y), Business Resilience, the total mean score was 4.17. The most dominant factors contributing to business resilience were strong team collaboration (Y3) and effective leadership in crisis situations (Y5). Meanwhile, areas that necessitated improvement included resource allocation for emergency situations (Y2) and information dissemination among employees (Y4). Overall, MSMEs in Bandar Lampung demonstrate a relatively high level of business resilience, which is essential for sustaining their operations amid economic challenges.

Multiple Linear Regression Analysis

The multiple linear regression analysis results yield an equation illustrating the relationship between entrepreneurial characteristics, digital maturity, and business resilience. The estimation results indicate that entrepreneurial characteristics have a coefficient of 0.137 with a significance value of 0.061, while digital maturity has a coefficient of 0.729 with a significance value of 0.000. The constant of 0.018 suggests that even in the absence of the two independent variables, business resilience remains present, albeit to a minimal extent. These findings imply that while entrepreneurial characteristics influence business resilience, their effect is not as significant as that of digital maturity.

Table 3. Multiple Linear Regression Analysis

Coefficients[a]					
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0,018	1,546		0,012	0,991
	Entrepreneurial Characteristics (X1)	0,120	0,063	0,137	1.893	0,061
	Digital Maturity (X2)	0,474	0,047	0,729	10,086	0,000
a. Dependent Variable: Business Resilience (Y)						

The quantitative analysis using Multiple Linear Regression indicates that Entrepreneurial Characteristics (X1) positively influence Business Resilience (Y) by 13.7%. This suggests that stronger entrepreneurial traits enhance business resilience. Additionally, Digital Maturity (X2) has a significant positive impact of 72.9% on Business Resilience (Y), implying that higher digital maturity leads to greater business resilience. These findings are supported by partial hypothesis testing, which shows a significance level of 0.061 for X1 and 0.000 for X2, both below the 0.1 threshold. This confirms that Digital Maturity plays a more substantial role in strengthening business resilience than Entrepreneurial Characteristics.

Hypothesis Testing

A partial hypothesis test (T-test) was conducted to evaluate the impact of entrepreneurial characteristics and digital maturity on business resilience based on significance values. The results indicate that entrepreneurial characteristics have a significance value of 0.061, which is less than 0.1, indicating a positive impact on business resilience. Meanwhile, digital maturity has a significance value of 0.000, also less than 0.1, demonstrating a statistically significant positive effect on business resilience. Consequently, both the first hypothesis (H1) and the second hypothesis (H2) are accepted, signifying that both independent variables contribute to business resilience, with digital maturity exerting a more substantial influence.

Table 4. Hypothesis Testing Result

Independent Variable	Significance	Conclusion of Influence
Entrepreneurial Characteristics (X1)	0,061	Influenced
Digital Maturity (X2)	0,000	Influenced

Coefficient of Determination Results

Quantitative analysis using multiple linear regression demonstrates that entrepreneurial characteristics (X1) positively influence business resilience (Y) by 13.7%, suggesting that stronger entrepreneurial characteristics correlate with higher business resilience. In contrast, digital maturity (X2) has a statistically significant positive impact of 72.9%, highlighting its dominant role in enhancing business resilience. The R Square value of 0.668 indicates that 66.8% of the variations in business resilience are explained by these two variables, while the remaining 33.2% are attributed to other factors. These findings underscore that digital maturity exerts a more pronounced effect on business resilience compared to entrepreneurial characteristics.

The Role of Entrepreneurial Characteristics and Digital Maturity in Strengthening MSME Resilience

The findings of this study indicate that the Entrepreneurial Characteristics variable (X1) has a positive partial effect on Business Resilience (Y) within the context of micro, small, and medium enterprises (MSMEs) in Bandar Lampung. These results confirm the first hypothesis (H1), which posits that entrepreneurial characteristics contribute to business resilience. This underscores the role of individual entrepreneurial traits, such as risk-taking propensity, innovation, locus of control, need for achievement, self-confidence, and tolerance for ambiguity, in sustaining business continuity (Anwar & Saleem, 2019). Although the effect is relatively minor, these findings suggest that an entrepreneur's internal attributes contribute to business resilience, as highlighted in previous literature that emphasizes the importance of managerial competencies and strategic efforts in addressing external challenges (Steinmetz, 1969; Struwig et al., 2019). In today's dynamic business environment, adaptability is a crucial determinant of business sustainability (Essel et al., 2019).

These findings are also consistent with prior studies. For instance, Dwiastanti and Mustapa (2020) found that entrepreneurial characteristics are a dominant factor in determining business sustainability. Similarly, Abubakar and Palisuri (2018)

asserted that entrepreneurial characteristics significantly impact the sustainability of the traditional culinary industry. Indarto and Santoso (2020) reported a significant effect of entrepreneurial characteristics on business success. Mayr et al. (2020) found that strong entrepreneurial traits can reduce the risk of business failure. Islam et al. (2011) stated that robust entrepreneurial characteristics enhance business resilience. However, a study by Dari et al. (2022) yielded different results, indicating that entrepreneurial characteristics do not have a significant effect on business resilience.

Furthermore, the examination of the Digital Maturity variable (X2) demonstrates that it has a positive effect on Business Resilience (Y), aligning with previous research by Robertson et al. (2022), which found that MSMEs with higher levels of digital maturity tend to exhibit stronger organizational resilience. Consequently, the second hypothesis (H2), which asserts that digital maturity contributes to business resilience, is supported. These findings indicate that awareness of digital technology, effective risk management, and adaptive capacity play a crucial role in business endurance.

In the digital era, technology adoption is essential for MSMEs to remain relevant in an evolving market. The shift in consumer behavior toward digital platforms compels MSMEs to develop technology-driven strategies to enhance operational efficiency and expand their market reach. The adoption of an omnichannel strategy enables MSMEs to integrate physical stores with digital platforms, such as e-commerce and social media, thereby increasing market penetration and business competitiveness. This strengthens business resilience through innovation and diversification of sales channels.

This study also identifies a positive correlation between entrepreneurial characteristics and digital maturity in enhancing business resilience. Khurana et al. (2022) suggest that a combination of strong entrepreneurial traits and high digital maturity can help businesses navigate unforeseen challenges. Audretsch et al. (2024) argue that these two factors contribute to business sustainability and growth by fostering innovative and adaptive strategies. Hokmabadi et al. (2024) emphasize that the interplay between entrepreneurial characteristics and digital maturity enhances the resilience of startup ventures through digital transformation. Levy-Tadjine et al. (2022) further highlight that this combination enables MSMEs to respond more effectively to competition and crises.

Descriptive analysis results indicate that most respondents exhibit high self-confidence, reflecting an internal locus of control. They believe that business success or failure depends on their decisions rather than external factors such as luck. Additionally, respondents recognize the significance of digital transformation in their business operations and have successfully adopted digital technologies to improve business efficiency. The adoption of digital tools, such as e-commerce and social media, enables MSMEs to reach broader markets and sustain their competitiveness in a challenging business environment.

Moreover, the findings suggest that strong interpersonal relationships within the business environment also contribute to business resilience. Respondents reported that effective communication and teamwork facilitate better responses to challenges. These factors, along with business strategy, effective management, and adequate resources, are critical elements in sustaining business continuity. Therefore, MSMEs are advised not only to focus on individual entrepreneurial traits and digital

technology but also to foster a harmonious and cohesive work environment to strengthen overall business resilience.

CONCLUSION

Based on the research findings, it can be concluded that entrepreneurial characteristics have a positive influence on the resilience of micro, small, and medium enterprises (MSMEs) in Bandar Lampung. Although the effect is not predominant, stronger entrepreneurial traits contribute to greater business resilience. The key characteristics that play a role in this resilience include risk-taking propensity, innovation, locus of control, need for achievement, self-confidence, and tolerance for ambiguity. Furthermore, digital maturity has a significant and positive impact on business resilience. The optimal adoption of digital technology, particularly through an omnichannel strategy, enhances the competitiveness and sustainability of MSMEs.

Given these findings, it is recommended that MSMEs strengthen their entrepreneurial characteristics, particularly in terms of risk-taking ability. Additionally, MSMEs should actively embrace digital technologies to improve operational efficiency and expand market reach. The implementation of an omnichannel strategy is crucial to enhancing competitiveness. Moreover, investment in preparedness for unforeseen circumstances should be increased to further optimize business resilience. Future research could explore additional variables, such as business environment, innovation, strategic management, and organizational practices, to provide a more comprehensive understanding of the factors influencing MSME resilience.

REFERENCE

Abubakar, H., & Palisuri, P. (2018). Karakteristik Wirausaha Terhadap Keberlanjutan Industri Kuliner Tradisional. *Seminar Nasional Dan Call for Paper: Manajemen, Akuntansi Dan Perbankan 2018*, 403–410.

Anwar, I., & Saleem, I. (2019). Exploring entrepreneurial characteristics among university students: an evidence from India. *Asia Pacific Journal of Innovation and Entrepreneurship*, *13*(3), 282–295. https://doi.org/10.1108/apjie-07-2018-0044

Audretsch, D. B., Belitski, M., Caiazza, R., Drapeau, M. D., Menter, M., & Wales, W. J. (2024). Resilience and Digitally-Advanced Entrepreneurship. *Entrepreneurship and Regional Development*, *36*(1–2), 1–9. https://doi.org/10.1080/08985626.2023.2275193

Dari, S. W., Inapty, B. A., & Mariadi, Y. (2022). Pengaruh Karakteristik Wirausaha, Lingkungan Eksternal, Kecanggihan Teknologi dan Strategi Bertahan Terhadap Keberlangsungan UMKM di Kecamatan Gerung, Kabupaten Lombok Barat Selama Pandemi Covid-19. *E-Journal Ekonomi Bisnis Dan Akuntansi*, *9*(2), 94–101. https://doi.org/10.19184/ejeba.v9i2.30676

Dwiastanti, A., & Mustapa, G. (2020). Pengaruh Karakteristik Wirausaha, Lingkungan Eksternal dan Strategi Bertahan Umkm dalam Menjaga Keberlangsungan Usaha di Musim Pandemi Covid 19. *Business and Accounting Education Journal*, *1*(3), 228–240. https://doi.org/10.15294/baej.v1i3.42740

Essel, B. K. C., Adams, F., & Amankwah, K. (2019). Effect of entrepreneur, firm, and institutional characteristics on small-scale firm performance in Ghana. *Journal of Global Entrepreneurship Research*, *9*(1). https://doi.org/10.1186/s40497-019-0178-y

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis*

(Eighth). Cengage Learning. www.cengage.com/highered

Hair, J. F., Page, M., & Brunsveld, N. (2020). *Essentials of Business Research Methods* (Fourth). Routledge.

Hokmabadi, H., Rezvani, S. M. H. S., & de Matos, C. A. (2024). Business Resilience for Small and Medium Enterprises and Startups by Digital Transformation and the Role of Marketing Capabilities—A Systematic Review. *Systems*, *12*(6), 220. https://doi.org/10.3390/systems12060220

Indarto, I., & Santoso, D. (2020). Karakteristik Wirausaha, Karakteristik Usaha dan Lingkungan Usaha Penentu Kesuksesan Usaha Mikro Kecil dan Menengah. *Jurnal Riset Ekonomi Dan Bisnis*, *13*(1), 54–69.

Islam, M. A., Khan, M. A., Obaidullah, A. Z. M., & Alam, M. S. (2011). Effect of Entrepreneur and Firm Characteristics on the Business Success of Smal. *International Journal of Business and Management*, *6*(3), 289–299. https://doi.org/http://dx.doi.org/10.5539/ijbm.v6n3p289

Juminto, M. S. (2020, June). *Adaptasi UMKM saat New Normal.* https://www.jawapos.com/opini/01275798/adaptasi-umkm-saat-new-normal

Khurana, I., Dutta, D. K., & Ghura, A. S. (2022). SMEs and digital transformation during a crisis: The emergence of resilience as a second-order dynamic capability in an entrepreneurial ecosystem. *Journal of Business Research*, *150*, 623–641. https://doi.org/https://doi.org/10.1016/j.jbusres.2022.06.048

Lee, A. V ., Vargo, J., & Seville, E. (2013). Developing a Tool to Measure and Compare Organizations ' Resilience. *Natural Hazards Review*, *14*(1), 29–41. https://doi.org/10.1061/(ASCE)NH.1527-6996.0000075.

Levy-Tadjine, T., Agulhon, S., Hani, M., Velmuradova, M., Tokatlioglu, S., & Satouri, T. (2022). Entrepreneurial Action: Redefining the Sense and Building Resilience as Coping Strategies for SMEs and Traditional Enterprises Facing the New Digital and Crises Environment. *RUDN Journal of Psychology and Pedagogics*, *19*(2), 320–335. https://doi.org/10.22363/2313-1683-2022-19-2-320-335

Mayr, S., Mitter, C., Kücher, A., & Duller, C. (2020). Entrepreneur characteristics and differences in reasons for business failure: evidence from bankrupt Austrian SMEs. *Journal of Small Business and Entrepreneurship*, 1–20. https://doi.org/10.1080/08276331.2020.1786647

Robertson, J., Botha, E., Walker, B., Wordsworth, R., & Balzarova, M. (2022). Fortune favours the digitally mature: the impact of digital maturity on the organisational resilience of SME retailers during COVID-19. *International Journal of Retail and Distribution Management*, *50*(8–9), 1182–1204. https://doi.org/10.1108/IJRDM-10-2021-0514

Sahir, S. H. (2021). *Metodologi Penelitian*. Penerbit KBM Indonesia.

Schumacher, A., Erol, S., & Sihn, W. (2016). A Maturity Model for Assessing Industry 4.0 Readiness and Maturity of Manufacturing Enterprises. *Procedia CIRP*, *52*, 161–166. https://doi.org/10.1016/j.procir.2016.07.040

Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill Building Approach* (Seventh). John Wiley and Sons Ltd.

Steinmetz, L. L. (1969). Critical stages of small business growth: When they occur and how to survive them. *Business Horizons*, *12*(1), 29–36. https://doi.org/10.1016/0007-6813(69)90107-4

Struwig, F. W., Krüger, J., & Nuwagaba, G. (2019). The influence of the business environment on the growth of informal businesses in Uganda. *The Southern African Journal of Entrepreneurship and Small Business Management*, *11*(1), 1–10. https://doi.org/10.4102/sajesbm.v11i1.200

Westerman, G., Bonnet, D., & McAfee, A. (2014). *Leading Digital: Turning Technology into Business Transformation*. Harvard Business Review Press.

Westerman, G., Tannou, M., Bonnet, D., Ferraris, P., & McAfee, A. (2012). The Digital Advantage: How Digital Leaders Outperform their Peers in Every Industry. *MIT Sloan Management Review*, 2, 1–24. http://www.capgemini.com/resource-file-access/resource/pdf/The_Digital_Advantage__How_Digital_Leaders_Outperform_their_Peers_in_Every_Industry.pdf