Digitalization and Business Transformation: Young MSME Practitioners' Perspectives on Current Economic Changes

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Abstract **-** The COVID-19 pandemic has forced many businesses to shut down their operations and shift to digital platforms to survive and ensure their business continues. Hence, Micro, Small, and Medium Enterprises (MSMEs) have undergone an accelerated digital transformation to adopt technological innovations. The research aimed to identify the factors that encouraged and hindered digital innovation in MSMEs during economic destabilization, focusing on the perspectives of young entrepreneurs in Makassar City. Qualitative methods were used, involving in-depth interviews with 25 young entrepreneurs in Makassar City to explore the positive and negative impacts of transitioning to digital platforms post-pandemic. Data analysis was conducted using the inductive content analysis method. The results show that digital innovation in MSMEs after the pandemic is influenced by external factors (market and demand restrictions) and internal factors (personal and professional development). The limited financing, technology, and management of MSMEs compared to large enterprises make them more vulnerable to post-pandemic bankruptcy. Barriers faced in running businesses post-pandemic include market challenges on digital platforms, the need for necessary skills, and infrastructure availability. The implications of these findings are expected to develop programs that support young entrepreneurs and provide recommendations for the government in formulating policies and strategies to encourage digital entrepreneurship, especially in developing countries after the current pandemic.

Keywords: digitalization transformation, business transformation, Micro, Small, and Medium Enterprises (MSMEs), economic changes

I. INTRODUCTION

During the COVID-19 pandemic, countries enacted various policies to prevent the spread of the virus, which threatened global public health (Juergensen et al., 2020). These policies included lockdowns, social distancing, travel restrictions, and business closures. The Indonesian government also implemented preventive measures, restricting mobility and physical interactions (Andhini & Andanawarih, 2022). These policies significantly declined face-to-face interactions, shifting many social and economic activities to digital platforms. This shift was particularly evident in digital entrepreneurship, where businesses quickly adapted to online tools to maintain operations and customer engagement (Dannenberg et

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al., 2020). The transition to digital platforms mitigated the pandemic's immediate economic impact and accelerated the adoption of digital technologies, likely influencing future business operations and customer interactions (Risdwiyanto et al., 2024).

Previous research has explored the factors driving digital transformation in business and public policy, highlighting its impact on economic growth and job creation (Lopes et al., 2018; Maritz et al., 2020). Key enabling technologies include social media, open educational resources, digital imaging, and data mining, which help young entrepreneurs to overcome barriers to creating new ventures (Steininger, 2019). These technologies offer cost-effective marketing, access to knowledge, rapid prototyping, and data insights, fostering innovation and inclusivity in the entrepreneurial ecosystem. They promote economic growth by stimulating innovation, creating jobs, and enhancing productivity across various sectors.

The COVID-19 pandemic has significantly accelerated digital transformation by changing consumer habits and driving innovation in MSMEs and large corporations (Shafi et al., 2020). Businesses and consumers have increasingly adopted digital platforms as the "new normal" (Mukhoryanova et al., 2021). The impact on enterprises varies: some have closed, while others have shown resilience and adaptability. Successful MSMEs often benefit from financial literacy, savings culture, and technological adaptation. In contrast, those struggling with financial challenges and lacking online presence face greater difficulties (Igbinakhase, 2021). Overall, the pandemic has highlighted the importance of digital literacy and technology for business resilience, emphasizing the need for ongoing support to ensure economic growth and stability.

MSMEs can take three paths to success in digital transformation. First, MSMEs with high digital maturity can further transition into fully digital enterprises, enhancing efficiency and competitiveness. Second, MSMEs with liquidity issues but low digital maturity can start digitizing their sales operations and adopting e-commerce and online marketing to improve cash flow and reach new customers. Third, MSMEs with limited digital literacy can seek support from partners with strong digital capabilities, gaining access to expertise, training, and digital tools. These strategies help MSMEs to navigate digital transformation, improve resilience, and support economic growth (Reuschke et al., 2021).

To strengthen the economy, MSMEs in developed and developing countries must upgrade to compete in the digital era. Digitalization enhances their competitiveness, efficiency, and resilience. Previous studies show significant benefits. For example, Muhamad et al. (2021) found increased digital adoption among Malaysian MSMEs during the pandemic. Due to digital technology, Mohapatra et al. (2022) reported improved customer satisfaction and problem-solving in manufacturing. Additionally, Jorge-Vázquez et al. (2021) discovered that digitalization significantly improved the efficiency, productivity, and competitiveness of MSMEs in the European agri-food sector. Critical for food security and rural development, this sector had seen notable advancements through digital tools that streamlined operations, enhanced product quality, and optimized supply chains. Similarly, Lungu et al. (2021) identified that digital transformation could address pressing issues in the medical industry, with technologies like blockchain revolutionizing data management and ensuring secure, transparent, and efficient handling of medical records and transactions.

MSMEs can succeed by following three paths. First, those with high digital maturity can become fully digital enterprises for greater efficiency and market reach. Second, those with liquidity issues but low digital maturity can start digitizing their sales operations and using e-commerce and online marketing to reach new customers and improve cash flow. Third, those with limited digital literacy can seek support from digitally capable partners for expertise, training, and tailored digital solutions. These strategies help MSMEs to navigate digital transformation, improve resilience, and support economic growth.

In Indonesia, MSMEs can absorb 94% of the total labor force and garner up to 61.4% of total investment (Mujianto et al., 2023). The perspective of young entrepreneurs is crucial as they are considered catalysts for innovation and economic growth, with a desire to create positive change in society (Riswandi et al., 2023; Setiawan et al., 2024). Digital innovation has great potential for young entrepreneurs' contribution to the success of MSMEs' socio-economic agenda (Sussan & Acs, 2017).

Several previous studies have shown the impact of the COVID-19 pandemic on MSMEs. The research is limited to Indonesia, particularly Makassar City. Therefore, the research explores the drivers and barriers to the digital transformation of MSMEs from the perspective of young entrepreneurs in Makassar City. It aims to (1) examine the challenges faced in transitioning to digital platforms and (2) evaluate implications and provide recommendations for government policies and strategies for economic recovery through online entrepreneurship. The findings can inform the recommendations for the government and stakeholders to support entrepreneurship as a means of economic recovery after the pandemic.

II. METHODS

The research examines the lived experience of young entrepreneurs in managing an online business after the pandemic. The research aims to deepen the understanding of the problem using qualitative methods (Yin, 2016). The method uses a phenomenological approach to understand the participants' context, behavior, beliefs, and life experiences. This qualitative method provides in-depth and illustrative information to understand the various

dimensions of the problem being analyzed, focusing on understanding and explaining the dynamics of complex social relationships that cannot be quantified (Denzin & Lincoln, 2017).

In the research, respondents are called participants because they contribute to in-depth interviews to share their experiences. Limiting the number of participants allows for more in-depth information than based on statistical significance. Interviews are conducted to provide a deeper understanding of the issue researched (Flemming & Noyes, 2021). The research is conducted in Makassar City, South Sulawesi, between September and December, involving 25 young entrepreneurs, 60% male and 40% female, aged between 17 and 40 years old. Participants include micro-entrepreneurs with less than ten employees, small businesses with 10 to 50 employees, and medium-sized businesses with 50 to 100 employees. Sampling is purposive based on the criteria of young entrepreneurs from Makassar City who have started an online business during and after the pandemic and are willing to participate with reports that meet the research questions. The researchers use a sample size based on "data saturation" and conduct data analysis and collection simultaneously to address data saturation (Tracy, 2013). Participant anonymity is maintained by assigning codes and providing coded data to participants to verify and review their responses.

The research also employs inductive content analysis to develop theories and identify themes by examining documents, recordings, and other verbal materials (Flick, 2014). This method's advantages include its sensitivity to content, flexibility in research design, and capacity to analyze diverse types of qualitative data. Unlike other qualitative analysis methods, content analysis enables researchers to systematically and objectively describe research phenomena at a theoretical level applicable to various documents. Figure 1 illustrates the detailed findings of the research.

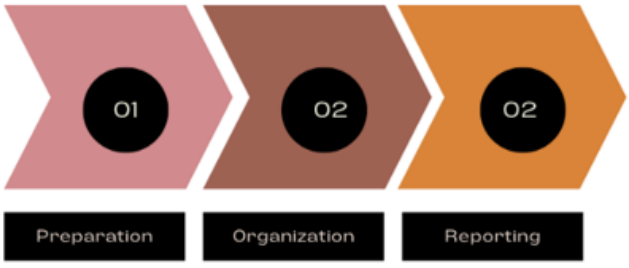

Figure 1 Research Procedure

Figure 1 illustrates that inductive content analysis generates concepts, categories, and themes from collected data. This process involves three main steps: preparation, organization, and reporting (Flick, 2014). Preparation involves identifying data collection methods and sampling strategies. The researchers then read the data in-depth, defining the units of analysis such as words, sentences, meanings, or themes. Participants are ensured confidentiality, with data access restricted to researchers. Data organization includes categorization, abstraction, interpretation, and sample representativeness checks. Open codes are identified from the raw data, and similarities and differences are analyzed to group these codes. The abstraction process forms sub-categories grouped into general and main categories. The researchers then verify these categories by returning to the raw data, ensuring that all relevant issues are addressed, and appropriately naming the sub-concepts and main concepts. Reporting involves systematically and logically presenting the analysis results. The researchers explain the identified concepts through sub-categories and open codes, providing authentic quotes from diverse participants to reflect different parts of the analysis and link results to the raw data.

III. RESULTS AND DISCUSSIONS

The researchers divide the content analysis into two main parts. The first part focuses on analyzing the challenges faced by young entrepreneurs during the pandemic, which prompts them to start online businesses. The second part analyzes policy recommendations that can help them overcome these challenges.

The challenges faced by young entrepreneurs in starting digital entrepreneurship are identified through 14 codes, which are then grouped into seven sub-categories and two general categories. The results of this classification are presented in Table 1. Research participants outline their challenges, including entrepreneurial skills, related markets, and the business environment during and after the pandemic. Table 1 also summarizes the resulting codes and significant responses that support the findings.

Young entrepreneurs who are new to the online business world face various challenges, including a lack of knowledge about online business operations, the use of information technology, and personal management skills. They also face market challenges in digital platforms, such as financing issues for startup businesses, digital transformation of the market, online transaction issues, licensing of application businesses, and content copyrights on platforms such as YouTube. In addition, business environment conditions during and after the pandemic have exacerbated challenges for young entrepreneurs in the digital transformation of MSMEs. These challenges include inadequate energy and telecommunications infrastructure and community quarantine restrictions to reduce the spread of the pandemic.

Next, the research explores policy recommendations to support digital entrepreneurship, identified through 11 codes, 7 sub-categories, and 3 general categories. The general categories include government support for new businesses,

skills development for young entrepreneurs, and provision of better infrastructure to facilitate digital entrepreneurship. Table 2 summarizes the results of the classification of policies recommended by young entrepreneurs to support the digitalization of MSMEs, including a summary of significant codes and responses that support these findings.

Young entrepreneurs emphasize that initial financial support is crucial in starting a business. They want loan options with minimum interest, subsidies during the post-pandemic period, and tax reductions or exemptions during economic inflation. In addition, young entrepreneurs express the need to promote their products through online marketing to reach a wider range of customers and have assistance in business registration. Participants also hope the government can legally protect entrepreneurs and customers from fraud.

The government must provide entrepreneurial skill-building programs to ensure new MSMEs compete competitively and sustainably in business competition. The participants consider important financial, accounting, information technology, and business management skills. They also recommend that schools offer subjects that teach the basics of entrepreneurship. Additionally, the government should implement programs that foster competition among telecommunications companies and enhance the quality of Internet connectivity. Developing infrastructure for more reliable electricity sources, especially in rural areas, is also a crucial priority.

Through qualitative inductive content analysis of the experiences of young entrepreneurs, two significant findings emerge: extrinsic and intrinsic

Table 1 Digital Innovation Challenges

General Category	Sub Category	Code (Frequency of Statement)
Challenges in Entrepreneurship skills	Business skills	Creativity in advertising/marketing strategy (4)
		Establishing good client trust (3)
	Technology skills	Skills in using technology (4)
	Personal management skills	Resilience confidence in direct selling (2)
		Pressure/mental distraction in time management (5)
Market Challenges in Starting an Online Business	Business financing	Difficulty or lack of raising capital (4)
	Market conditions	Strong competition among sellers (6)
		Limited number of clients/customers (5)
		Small profits for beginners (2)
		Different target markets (4)
	Online transactions	Availability of inventory (5)
		Legitimacy of the supplier/seller
		Non-payment of delivered goods and canceled orders (3)
		Order quality (2)
	Legal issues	Content copyright issues, business licenses, and others (4)

Table 2 Policy Recommendations for Micro, Small, and Medium Enterprises (MSMEs)

General Category	Sub Category	Code (Frequency of Statement)
Government Support for Startup Business	Financial support	Subsidies, loans, incentives/tax deductions (18)
	Marketing and administrative support	Startup support (marketing, business licenses, and others) (15)
		Facilitated marketing and product exhibition (6)
	Legal support	IT support and legal protection for sellers and buyers (6)
Skill Development	Skills upgrading	Difficulty raising capital (2)
		Lack of capital (2)
	Entrepreneurship education	Entrepreneurship education as an elective course (4)
Infrastructure Development of Internet	Improving Internet connectivity	Increase Internet speed (5)
		Expanded telecommunications (2)
		Lower Internet rates (3)
	Energy and technical upgrade	Improve energy infrastructure (3)

motivations driving digital innovation during and after the pandemic. Extrinsic motivation involves performing tasks to achieve external goals, avoid punishment, or receive rewards (Ganlin et al., 2021; Prasetyo & Saefudin, 2023). Participants in the research face challenges, such as shifts in market demand, market conditions, and household economic status, due to the pandemic. Additionally, entrepreneurial ability, quality of business ideas, financial resources, and networks are crucial for starting a business during and after the pandemic (Costa & Castro, 2021; Ferine et al., 2023).

The results show that the COVID-19 crisis severely affects MSMEs, leading to financing problems, supply chain disruptions, decreased demand, and reduced profits. However, the preference for entrepreneurship among young people increases post-pandemic as they value entrepreneurship more and possess greater entrepreneurial skills (Kim, 2021). Young entrepreneurs respond to extrinsic drivers of digital innovation, aligning with theories of leverage, bricolage, resilience, and dynamic capabilities (Ferine et al., 2024; Mohapatra et al., 2022). Intrinsic motivation, driven by interest, pleasure, satisfaction, and the challenge of the work itself, also plays a significant role (Cueto & Agaton, 2021; Purwanto et al., 2021). Participants cite personal motivation, professional growth, and the opportunity to help others as reasons to start digital businesses. The research highlights that intrinsic motivation is as crucial as extrinsic factors for MSMEs' digital innovation. The findings underscore the importance of internal and external factors in driving digital entrepreneurship and demonstrate the benefits of using qualitative methods for deeper insights compared to quantitative methods with limited questionnaires.

Participants in the research identify three main barriers to post-pandemic digital entrepreneurship: entrepreneurial skills, market conditions on digital platforms, and the business environment. These findings align with previous research highlighting various challenges in digital entrepreneurship (Braun et al., 2021; Reuschke et al., 2021). Other studies have identified organizational structure, IT infrastructure, market changes, uncertainty in new technologies, and country-specific regulations (Damoah, 2020; Shafi et al., 2020). Some studies note that weak institutional infrastructure and corruption can hinder entrepreneurial operations. Additional barriers include income uncertainty, the risk of losing property or money, and lack of steady employment, which can suppress entrepreneurial capabilities (Dannenberg et al., 2020; Eller et al., 2020; Maritz et al., 2020). Barriers to MSME digitalization are categorized into internal and external factors (lack of digital awareness and literacy) (Lopes et al., 2018).

The research also highlights additional barriers that young entrepreneurs face due to the COVID-19 pandemic and its aftermath. Challenges include mobility restrictions, limited banking and business hours, health risks in delivering goods and services online, and increased operational costs due to stricter transportation regulations. Regional and local restrictions have caused economic hardship, forcing offline businesses to adopt new business models and increasing online retail and personal service transactions. Government restrictions also hinder entrepreneurs from networking with peers, advisors, and mentors, which is critical for social support. Overcoming these challenges requires young entrepreneurs to possess resilience, influencing skills, courage, and dynamic capabilities.

Beyond policy implications, the research impacts the business and managerial industries. Understanding MSMEs' digitalization dynamics can help organizations to make better decisions in the new business landscape. Entrepreneurs should focus on two IT capabilities affecting performance in a fast-changing environment: flexible IT infrastructure and IT assimilation (Kee et al., 2019; Steininger, 2019). Familiarity with digitizing products and services helps businesses to overcome e-commerce barriers and transition from conventional to digital operations (Antonizzi & Smuts, 2020; McCormick, 2016). This shift to e-commerce provides wider customer access through digital platforms. Digital technology is key to adapting business strategies, especially for pandemic-affected industries. Online services have significantly grown, offering more options than ever (Farooq et al., 2019; Putritamara et al., 2023). Preparedness and strategies, such as price sensitivity and changes in the online buying process, help to manage online businesses' supply chains and sustainability.

MSMEs have made significant progress recently, particularly on e-commerce platforms. Digital tools are employed for finance, production, operations, human resources, and marketing (Baker & Nelson, 2005; Geibel & Manickam, 2017). Management must understand e-commerce deeply to strengthen their brand and gain customer trust (Kilay et al., 2022; Li et al., 2018; Tran, 2021). Enhancing websites and logistics services is crucial for maximizing customer service. Reliable Internet connections are essential for business productivity and data security. Blockchain technology can accelerate digital transformation by improving data management (Rayes & Kayiaseh, 2017; Sussan & Acs, 2017). Entrepreneurs need skilled human resources to manage online platforms and customer transactions (Ganlin et al., 2021).

Social networks are vital for MSMEs' digital transformation, and entrepreneurs should invest in social capital to gain a competitive edge online (Del Olmo-García et al., 2020). Strengthening social networks through social media and e-commerce platforms provides access to previously unavailable knowledge and resources (Nambisan, 2017). According to the bricolage theory of entrepreneurship, entrepreneurs' actions in building their brand impact company growth and transactions, especially for diverse service offerings pre-pandemic (Fisher, 2012). Digital innovation is crucial for young entrepreneurs to introduce new products and services despite inherent

risks. These risks can be mitigated through related diversification and effective innovation strategies, inflation, or particularly during economic disruptions like pandemics. Figure 2 provides a summary of the results.

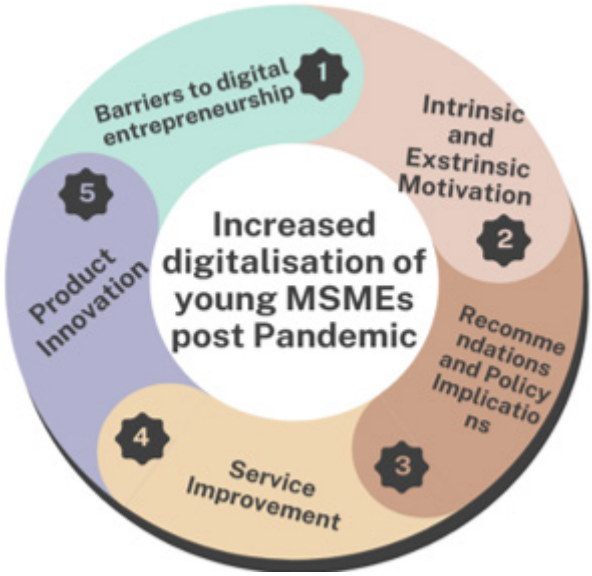

Figure 2 Increased Digitalization of Young Micro, Small, and Medium Enterprises (MSMEs) Post-Pandemic

In the digital era, product and service innovation are crucial for young entrepreneurs to attract and retain customers (Kraus et al., 2019). However, they face barriers to digital innovation. The research suggests several policy implications to help them to overcome these challenges and start online businesses during and after economic disruptions. First, the government should support MSMEs with technical capacity, financing, business registration, and marketing. Financial incentives like tax deductions and subsidies can stimulate technological innovation, helping firms to increase productivity and survive economic shocks (Riswandi et al., 2023). Policies aimed at providing financial support can prevent liquidity crises and minimize job losses. Additionally, technical, financial, and soft assistance, such as networking, mentoring, education, and training, are crucial for MSME survival.

Second, the government should train young entrepreneurs in technology, marketing, and finance. Technological and innovation capabilities are vital for the continuity of MSMEs during and after the pandemic (Mujianto et al., 2023). Enhanced accounting capabilities through digital technology improve MSMEs' performance (Kilay et al., 2022). Policies should focus on building skills through education and training programs, including cybersecurity. The government should also help young entrepreneurs to build networks to access funds, partners, clients, and suppliers, encouraging public-private partnerships to reduce barriers.

Third, the government needs to improve IT infrastructure to accelerate digital innovation. Compared to other developing Asian countries, Indonesia's Internet infrastructure lags, hindering innovation motivation. The government should enhance the competitiveness of the energy and IT infrastructure industries. Upgrades in IT infrastructure should be complemented with digital skills training and information on existing technologies, enabling more dynamic e-commerce and increasing online services offered by MSMEs (Mohapatra et al., 2022).

The government must also offer effective broadband connectivity options, especially to remote and rural areas, through new satellite systems that complement current fiber technology connectivity. By ensuring faster and cheaper Internet access, MSMEs in remote areas can participate in the digital economy, reach a wider market, and improve their competitiveness.

Overall, the research findings underscore the importance of government support in various forms to help young entrepreneurs to overcome barriers to digital innovation. By providing financial support, skills training, IT infrastructure upgrades, and strengthening partnership networks, the government can create a conducive environment for MSMEs' growth in the digitalization era. It will not only help MSMEs to survive and thrive during the time of economic crisis but also drive more inclusive and sustainable economic growth in the future.

IV. CONCLUSIONS

After the pandemic, MSMEs have undergone an accelerated digital transformation, prompting entrepreneurs to adopt technological innovations to sustain their businesses. Research indicates that digital innovation in MSMEs during and after the pandemic is driven by external factors like market restrictions and demand changes and internal factors such as personal and professional development and concern for others. The pandemic has particularly affected MSMEs due to their limited resources compared to large enterprises in management, financing, and technology. Despite minimal government support, young entrepreneurs sustain their businesses by adopting digital innovations, meeting the increased online demand for goods and services during lockdowns. These innovations reflect theories of leverage, bricolage, resilience, and dynamic capabilities amid economic uncertainty and disruption. However, young entrepreneurs also face challenges, including the skills needed to run an online business, marketplace issues in the digital realm, mobility restrictions, and inadequate Internet infrastructure.

Future research can further explore how MSMEs can optimize the use of digital technology to improve operational efficiency and competitiveness in the global market. Longitudinal studies can be conducted to assess the long-term impact of digital technology adoption on MSMEs' business performance. In addition, research can explore the best strategies to

strengthen the digital skills of young entrepreneurs through training programs supported by the government and private sector. Further analysis is also needed to understand the influence of government policies in supporting the digital transformation of MSMEs and how collaboration between various stakeholders can be optimized to build a more inclusive and sustainable business ecosystem. Research on the social impact of MSME digitalization on local communities and rural economies can also be an important focus, given the potential of technology to reduce economic and social disparities.

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