T20 Policy Brief

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Task Force 05

INCLUSIVE DIGITAL TRANSFORMATION

Digitalizing MSMEs for Employment Creation and Sustainable Development

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Abstract

This policy brief focuses on digitalizing Micro, Small, and Medium Enterprises (MSMEs) in Indonesia. It explores how MSMEs can contribute to SDGs while ensuring decent work opportunities. In Indonesia, where MSMEs contribute significantly – 61% to the GDP and 97% to employment – this brief underscores their indispensable role as economic pillars. This policy brief delves into crucial aspects of MSMEs' digital transformation, including digitalization, e-commerce, cybersecurity, and the digital divide. Specifically, it explores the challenges and opportunities presented by these areas and proposes recommendations to enhance digital capabilities. The brief introduces the MSMEs digitalization framework as a strategic roadmap, offering lessons for other countries. The recommendations aim to inspire collaborative efforts among G20 nations to support global MSMEs digitalization, fostering economic growth, reducing inequalities, and advancing sustainable development.

Keywords: digitalization, MSMEs, e-commerce, cybersecurity, digital divide, sustainable development

Diagnosis of the Issue

Background

The digitalization of Micro, Small, and Medium enterprises (MSMEs) in Indonesia is critical to broader digital transformation and sustainable development agenda. Recognizing the significant impact of digital solutions on global economies, the G20 has emphasized the importance of integrating MSMEs into the digital landscape. MSMEs form the backbone of many economies, and their successful digitalization aligns with the G20's commitment to inclusive growth, reducing economic disparities, and achieving sustainable development goals (SDGs).

Many enterprises in developing countries remain distant from the technology frontier, hindering competitiveness and economic growth. The strong positive association between technology sophistication and labor productivity extends across countries and within regions. This correlation also holds at the firm level, emphasizing the importance of closing the gap between technological advancements and adoption for sustainable development and competitiveness (Cirera, Comin, Cruz, 2022).

The aim of this policy brief is to delve into the complex connection between digital solutions, challenges in digitalization, and sustainable development within Indonesian MSMEs – aiming for a global impact that resonates with other G20 nations and beyond. This broader perspective fosters collaboration for global economic resilience and sustainable development, aligning with Task Force 5: Inclusive Digital Transformation, Sub-Topic 4: New Digital Technologies for SDGs and Decent Work. Paul et al. (2023) suggest future research focus on digital technologies' impact on entrepreneurship, digital platform use by entrepreneurs, digital business transformation factors, and shortcomings of the digital ecosystem.

Problem Formulation

MSME digitalization is closely linked to achieving SDGs. It supports gender equality (SDG 5) by empowering women-owned MSMEs. It also contributes to decent work and economic growth (SDG 8) by creating jobs, boosting sales, and reaching remote areas. It promotes industry, innovation, and infrastructure (SDG 9) growth but faces challenges with digital enablement. Moreover, it reduces inequalities (SDG 10) by fostering entrepreneurship and alleviating poverty. This brief aims to develop an MSME Digitalization framework to address these issues and support SDGs.

In 2021, the MSME landscape in Indonesia demonstrated significant economic and employment contributions. A substantial presence of 64.2 million MSMEs collectively contributes to 61% of the country's Gross Domestic Product (GDP). These MSMEs also play a crucial role in employment, with around 97% of the total workforce, approximately 119.6 million people, engaged in this sector (Indonesia Coordinating Ministry for Economic Affairs, 2021).

While MSMEs make substantial economic contributions, there's a digital integration disparity. Only 17.5 million out of the total have embraced e-commerce, revealing untapped potential. This gap underscores the opportunity for further digitalization and integration into online markets, offering avenues for growth and efficiency in the digital landscape (Indonesia Coordinating Ministry for Economic Affairs, 2022).

The majority of MSMEs in Indonesia, around 64.5%, are led by women, amounting to approximately 37 million businesses (Indonesia Ministry of Communications and Information, 2023). However, women are more likely to operate micro-sized firms, with their representation decreasing as the scale of businesses increases. A study revealed that while men ran 60% of micro and small firms, females were more likely to operate the smallest, micro firms (TNP2K, 2015). National data on the female labour participation

rate in 2021 showed a rate of only 53.31%, significantly lower than men at 82.41% (Indonesia Ministry of Women Empowerment and Child Protection, 2021).

As Chen et al. (2023) noted, the digitalization of MSMEs offers immense potential for market expansion, operational efficiency, and innovation. It facilitates better customer engagement, data-driven decision-making, and adaptability. However, challenges such as limited capital, demand, and skilled workforce hinder full digital adoption. A recent Kompas (2024) report highlights a prevalent pseudo-digitalization trend among MSMEs. Nevertheless, MSMEs remain pivotal in driving the digital economy due to their close ties with everyday life.

According to AAG (2024), global cyber-attacks surged by 125% in 2021 compared to 2020, and Check Point (2023) reported a further 38% increase in 2022 compared to 2021. Data breaches affected an average of 97 victims per hour worldwide in 2021, with the Asia-Pacific region seeing a 168% rise in cybercrime between 2020 and 2021, particularly in countries like China, Japan, and South Korea. These cyber-threats have eroded digital confidence among MSMEs, leading to concerns about financial loss, customer trust, and technical challenges. Many MSMEs lack the expertise to manage cyber security effectively, risking their reputation and customer relationships, especially in online-centric businesses.

Furthermore, the potential for innovation within the MSMEs sector is stifled by the digital divide, as businesses without access to digital tools and resources are less likely to innovate by developing new products, exploring new markets, or finding innovative solutions to business challenges. The disparity in digitalization manifests as a pronounced digital divide, especially evident in the contrasting situations between regions in Java Island and those in Eastern Indonesia.

Recommendations

In a dynamic digital world, the G20 has the crucial task of leveraging technology for global inclusivity. Four core priorities arise: (i) enabling MSMEs' digitalization through tailored frameworks, (ii) fostering e-commerce growth to overcome barriers like limited capital and digital-skilled worker shortages, (iii) enhancing cybersecurity to counter rising cyber threats, and (iv) bridging the digital divide through expanded connectivity and digital literacy efforts.

MSMEs digitalization framework

This policy brief advises focusing on MSMEs' unique business aspects in digitalization efforts, which will inform government policies for a supportive system. The proposed MSMEs Digitalization Framework is outlined in Figure 1. The framework aims to create jobs, following the International Labour Organization's (ILO) guidelines for Decent Work. This involves supporting productive activities, creating decent jobs, fostering entrepreneurship and innovation, and helping MSMEs grow by providing financial services.

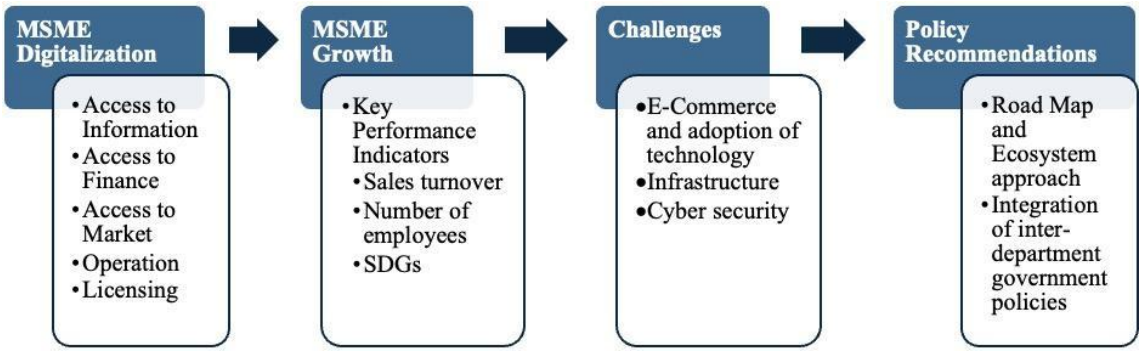

FIGURE 1. Proposed MSMEs digitalization framework

The Indonesia Ministry of Cooperative and SMEs has implemented digitalization initiatives for MSMEs. The digitalization roadmap focuses on four key areas: digital literacy, increased production capacity, improved product quality, and market access. The goal is to benefit 30 million MSMEs by the end of 2024 (Suhayati, 2023; Warta Ekonomi, 2021). The proposed framework aims to offer additionl insights and serve as a reference for other countries looking to enhance their MSME digitalization efforts.

Embracing e-commerce

E-commerce is pivotal for MSMEs' digitalization, enabling outreach to new customers, boosting engagement, and driving sales. This shift overcomes geographical barriers, taps into broader markets, and enhances competitiveness in the digital space, ultimately improving business operations and extending their reach. However, while rapidly growing, Indonesia's e-commerce sector faces significant challenges: limited capital, insufficient demand, a shortage of digital-skilled workers, and various other evolving obstacles, indicating areas for improvement and strategic intervention, as illustrated in Figure 2 (Indonesia Statistics Agency, 2023).

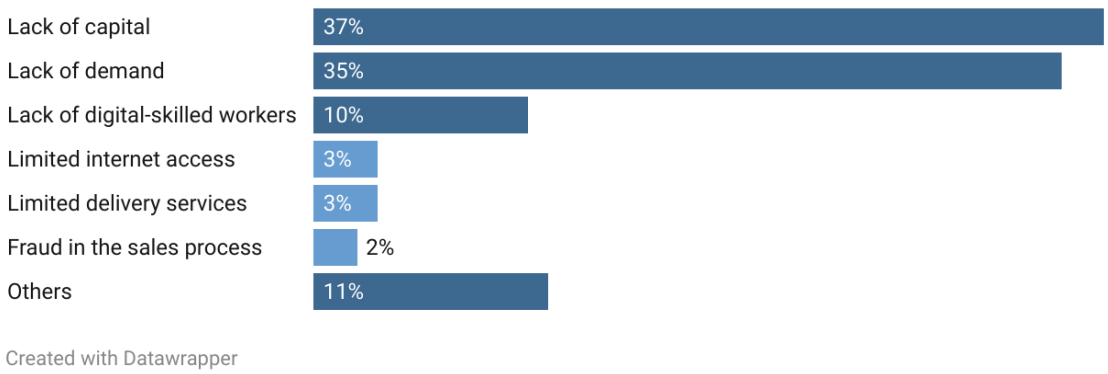

FIGURE 2. Percentage of e-commerce based on main constraints in 2022

Improve MSMEs' access to capital:

- Offer low-interest loans, targeted grants, or subsidies
  - Collaborate with financial institutions, government agencies, and private investors/entities to provide accessible and customized low-interest loans with favorable terms for MSMEs.
  - Provide financial incentives to offset initial investment costs, focusing on supporting MSMEs with growth potential, job creation, and innovation.
- Facilitate partnerships between financial institutions and e-commerce platforms
  - Standardize loan application procedures and automate approval systems for MSMEs on e-commerce platforms.
  - Implement risk-sharing mechanisms like partial loan guarantees or risk-sharing agreements.
  - Establish joint funding programs tailored for MSMEs operating on e-commerce platforms.
- Provide financial literacy training
  - Conduct workshops, seminars, and online resources focusing on financial management and capital access.
  - Utilize digital platforms for training and offer incentives to encourage MSMEs' participation in financial literacy programs.

Stimulate e-commerce demand:

- Implement targeted marketing campaigns
  - Develop and execute campaigns to promote MSMEs products and services through social media, digital advertising, and email marketing.
  - Offer incentives like discounts, promotions, loyalty programs, and rewards to boost consumer purchases.
- Foster government procurement collaborations
  - Advocate for policies prioritizing MSME procurement by government agencies and public institutions.
- Promote cross-border e-commerce
  - Advocate for improved trade agreements facilitating cross-border e-commerce.
  - Streamline customs procedures and logistics infrastructure for efficient cross-border transactions.
  - Develop secure digital payment solutions and partnerships with global e-commerce platforms for market access.

Enhance workforce digital skills:

- Implement training programs and workshops
  - Collaborate with educational institutions, industry experts, and e-commerce platforms to develop and deliver training.
  - Customize programs for essential e-commerce skills like digital marketing and data analytics.
  - Integrate training modules into e-commerce platforms for seamless access.
- Establish certification programs

- Design certifications to validate proficiency in crucial digital skills for e-commerce success.
- Emphasize the value of certifications for career growth.

- Promote lifelong learning
  - Create skill development platforms with tailored resources.
  - Foster networking and mentorship opportunities for ongoing skill enhancement.

Further improvements:

- Enhance research and intervention
  - Conduct thorough research and analysis to identify challenges and develop targeted interventions for e-commerce digitalization.
- Establish e-commerce support centres
  - Support MSMEs in setup, operations, and problem-solving, fostering collaboration and information exchange among stakeholders through workshops, seminars, and online platforms.

Combating cybercrime and creating digital confidence

The fear of cyber-attacks and data breaches presents a major challenge for MSMEs, leading to financial losses, reputational damage, and legal concerns. Robust cybersecurity measures entail significant software, training, and IT personnel costs, which many MSMEs struggle to afford. This lack of expertise and resources hampers their digital transformation efforts. Moreover, cyber-attacks can tarnish an MSMEs' reputation and diminish customer trust, particularly for those heavily reliant on online sales, deterring smaller businesses from prioritizing cybersecurity.

- Provide cybersecurity supports
  - Collaborate with industry associations, educational institutions, and cybersecurity experts to offer cost-effective or free training programs and resources for MSMEs.
  - Conduct workshops, webinars, and online courses focusing on cybersecurity best practices, threat detection, and incident response.
- Launch awareness campaigns
  - Initiate targeted campaigns to educate MSMEs about cybersecurity importance and cyber-attack risks.
  - Offer practical tips, guidelines, and best practices for enhancing cybersecurity posture, including regular software updates, robust password policies, data encryption, and training.
  - Partner with industry associations, media, and online platforms to amplify cybersecurity awareness messages.
- Introduce cyber insurance
  - Promote cyber insurance tailored for MSMEs, providing financial protection in cyber incidents or data breaches.

Addressing the digital divide for building digital equity

Digital equity is crucial for MSMEs to excel in the digital realm, ensuring equal access to internet, devices, and digital literacy training to overcome barriers. This facilitates effective competition by providing access to digital tools and resources, empowering MSMEs to streamline operations, enhance communication and customer service, and drive innovation. Consequently, this contributes to increased online presence, e-commerce growth, adoption of digital marketing tools, and improved productivity.

However, the persistent digital divide poses a significant challenge, limiting MSMEs' access to crucial digital infrastructure and skills. The Digital Competitiveness Index in Figure 3 indicates that Java Island provinces lead, while Sumatra and Kalimantan hold intermediate positions, emphasizing the necessity for increased digitalization in Eastern Indonesia regions, which should be a priority in MSMEs' digital transformation efforts.

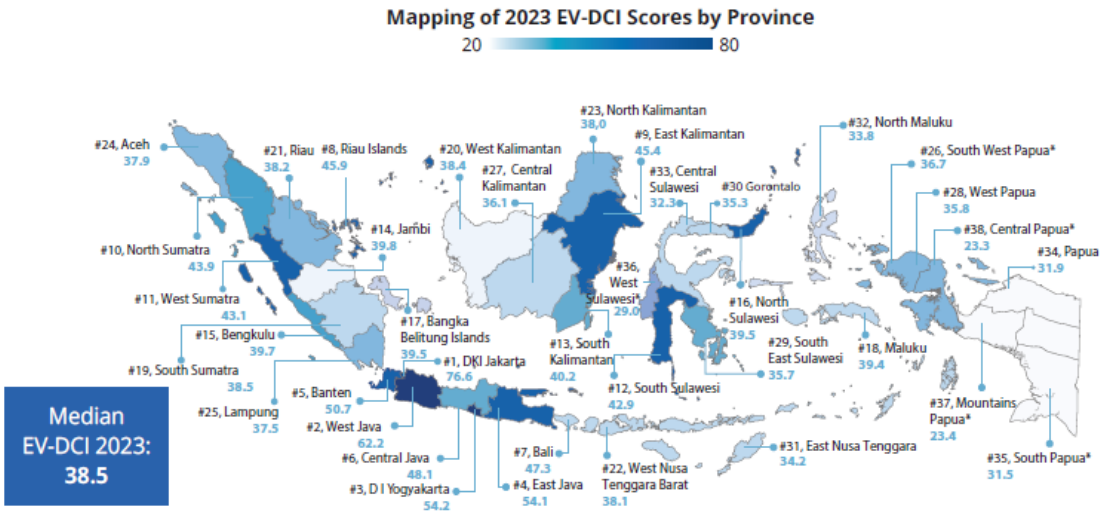

FIGURE 3. East Ventures Digital Competition Index across provinces in Indonesia. Source: East Ventures (2023). The EV-DCI comprises three sub-indexes: Input, Output, and Support. Each sub-index contains three pillars, and each pillar includes 3-9 indicators. Overall, the index is compiled using 50 indicators.

- Invest in digital infrastructure development
    - Collaborate with public and private entities to expand broadband infrastructure in underserved regions
    - Offer subsidies for internet connectivity to MSMEs in remote areas.
- Provide affordable technology solutions
    - Partner with manufacturers and private companies to offer affordable access to digital tools and software for MSMEs through subsidies, discounts, and subscription options.

- Address language barriers
  - Develop digital literacy programs in local languages and encourage multilingual interfaces in online platforms and services.
  - Distribute online resources and educational materials in local languages to facilitate understanding and accessibility.
- Sustain collaboration for digital equity
  - Foster collaboration among governments, NGOs, private sector entities, and educational institutions for digital infrastructure development and skills training initiatives.
  - Advocate for digital rights, fund MSMEs' digital initiatives, and raise awareness about digital literacy and access through policy advocacy and campaigns.
  - Maintain regular dialogue, knowledge sharing, and progress monitoring to ensure effective implementation and adapt strategies as needed.

Scenario of Outcomes

Embracing e-commerce

Improve MSMEs' access to capital

Outcome: Increased availability of low-interest loans and targeted grants for MSMEs

- *Potential risks include increased debt burden, financial instability without balanced revenue generation, and exclusion of smaller businesses, prompting concerns about fairness and inclusivity.*

Stimulate e-commerce demand

Outcome: Increased consumer demand and sales for MSMEs in the e-commerce sector, leading to business growth and market expansion.

- *Marketing campaigns require significant investment, posing a trade-off between cost and effectiveness.*
- *Collaborating with government procurement offers lucrative opportunities but risks dependency on government contracts, limiting private market diversification.*
- *Cross-border e-commerce brings new markets but entails challenges like complex customs, secure payments, and diverse regulations.*

Enhance workforce digital skills

Outcome: Improved digital skills, leading to increased productivity, innovation, and competitiveness for MSMEs in the digital economy.

- *Training programs demand substantial time and financial investment, balancing thoroughness against resource constraints.*

- *Certification programs might not mirror practical experience, potentially conflicting formal credentials with on-the-job proficiency.*
- *Lifelong learning, while beneficial, necessitates balancing ongoing skill development with daily responsibilities for MSMEs.*

Further improvements

Outcome: Enhanced understanding of challenges faced by MSMEs in e-commerce.

- *In-depth research and analysis demand time, resources, and expertise, potentially clashing with the need for swift action and limited budgets.*
- *Targeted interventions might miss broader or systemic issues, requiring a balance between tailored solutions and overarching strategies.*
- *Support centres offer benefits but face long-term sustainability and scalability challenges, needing continuous funding and operational planning.*

Combating cybercrime and creating digital confidence

Provide cybersecurity supports

Outcome: MSMEs equipped with cybersecurity knowledge and resources to mitigate cyber risks, leading to improved digital confidence and resilience.

- *Balancing training costs with effectiveness in enhancing cybersecurity readiness.*
- *Allocating resources for training while addressing other digitalization needs and financial constraints.*

Launch awareness campaigns

Outcome: Increased awareness among MSMEs about cybersecurity risks and best practices, leading to improved cybersecurity behaviors and practices.

- *Balancing clear guidance without overwhelming MSMEs with technical jargon.*
- *Maintaining long-term impact without becoming repetitive over time.*

Introduce cyber insurance

Outcome: MSMEs protected financially against cyber incidents, fostering digital confidence and risk management strategies.

- *Balancing cost against coverage and benefits, ensuring affordability without compromising protection.*
- *Educating MSMEs about cyber insurance without overreliance on it as the sole cybersecurity strategy.*

Addressing the digital divide for building digital equity

Invest in digital infrastructure development

Outcome: Improved access to reliable internet and digital services for MSMEs.

- *Balancing costs with reaching underserved regions effectively.*
- *Weighing immediate impact against long-term sustainability and scalability.*

Provide affordable technology solutions

Outcome: Increased affordability and accessibility of digital tools for MSMEs.

- *Balancing affordability and quality of digital tools for MSMEs while ensuring the sustainability of subsidy programs.*

Address language barriers

Outcome: Improved accessibility and inclusivity in digital literacy and services for diverse linguistic communities.

- *Balancing standardized multilingual solutions with customized approaches for specific linguistic needs.*
- *Addressing challenges of implementing multilingual interfaces and ensuring user-friendly experiences.*

Sustain collaboration for digital equity

Outcome: Strengthened partnerships and coordination among stakeholders

- *Balancing resource allocation, funding distribution, and stakeholder participation.*
- *Ensuring policy coherence and alignment across sectors and governance levels for effective digital equity support.*

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