The Path to Success:

How Women-owned Businesses Transform in the Era of Digitalization

Case Studies from Indonesia, Cambodia, Malaysia, and Myanmar

woomentum

KONRAD ADENAUER STIFTUNG

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Foreword from Woomentum

Mouna Aouri

Digital technologies are fundamentally changing the way we live, work, and innovate. Touching every sector, digitalization is not only opening new doors for business growth but transforming the foundations of the way business is run in the twenty-first century. The Covid-19 pandemic has both accelerated adoption of these digital changes and brought their potential into sharp focus.

But the endless possibilities created by digital technologies can present their own challenges for small businesses uncertain about where to begin this transformational journey. What strategy should I adopt? How do I learn about it, and who will help me implement it? Is the technology I want available to me? And if not, are there equivalent technologies in my local context and within my budget? Adopting new technology can be overwhelming as it requires knowledge, an open mindset, and suitable infrastructure. These issues are the focus of this research, which attempts to answer these questions and develop recommendations for key stakeholders to help businesses achieve success.

Why is digitalization so important? Is it a necessity or an optional extra? These are questions we often hear from our respondents and community members. The Southeast Asian digital economy is estimated to hit $300 billion by 2025.* We believe that women entrepreneurs should be equipped to be part of it, keeping their businesses relevant, prepared to scale, and enabled to flourish. Not only that: we firmly believe, in the long run, that this digital revolution can help women entrepreneurs overcome the gender-specific challenges they face, in turn empowering their families, communities, and society as a whole.

How will they do this? Today, in our target countries (and beyond), women entrepreneurs must juggle their business responsibilities alongside traditional family roles, often with no support from their spouses. Women entrepreneurs still cannot network the way their male counterparts can due to social and cultural stigmas. Yet today, there are tools that can help address those issues, providing women with the flexibility they need. From remote team collaboration platforms to e-commerce, digital tools can help women increase the efficiency of their business processes, increase productivity, save costs, and grow their revenues.

I am grateful for the eighty-six women entrepreneurs from Indonesia, Myanmar, Malaysia, and Cambodia, who came forward to share in-depth the successes and struggles they have experienced in running their businesses. We've been blown away by the stories of courage and determination in the face of the Covid-19 pandemic. I am also grateful for the forty-seven industry experts, policymakers, private sector, and professional association leaders who came together both online and offline to contribute to the findings.

I believe that by understanding the challenges facing women entrepreneurs, both as business owners and as women, we can recognize the inhibiting factors to their success. Only once these obstacles are identified can we create solutions. I hope this publication will provide recommendations that will help advance the ecosystems that support women-owned SMEs.

Finally, I hope this publication can reach readers around the world who are interested in the topic and keen to understand it in the context of Southeast Asia. I am also excited to share with our readers that this publication will be translated into Khmer, Burmese, and Bahasa Indonesia so that everyone can benefit from the findings in their native language.

I would like to thank my team at Woomentum and all the country researchers, report writers, editors, and designers, for their tireless work to make this publication come to life.

We are proud to partner with Konrad-Adenauer-Stiftung (KAS), who are big advocates for gender equity in the region and beyond. It has been a incredible journey producing concurrent research in four countries managed from KAS Tokyo office amid the COVID-19 crisis. We couldn't have done it without digital technologies!

Sincerely,

Mouna Aouri
Founder & CEO of Woomentum

*Source: Google/Temasek Holdings/Bain & Company Annual report 2020

Foreword from Konrad-Adenauer-Stiftung

Rabea Brauer

Cristita Marie Perez

The main obstacles hindering women from being successful entrepreneurs goes beyond equal opportunities and quotas. Oftentimes, it is as simple as not being granted a bank loan because of unmet requirements. Sometimes, the inability to escape the dependencies of family obligations scales back your business. It is the lack of technical means leading to the disadvantage of digital solutions.

These are some of the main findings of our research project "The Path to Success: How Women-owned Businesses Transform in the Era of Digitalization. Case Studies from Indonesia, Cambodia, Malaysia, and Myanmar".

The entire project is a collaboration between the Konrad-Adenauer-Stiftung (KAS) regional program, Social and Economic Governance in Asia (SOPAS), and Woomentum, a membership-based collaboration platform that connects entrepreneurs, industry experts, corporate leaders, and investors to share knowledge, solve challenges, and access opportunities to grow their businesses. This project is an important component to the SOPAS pillar, advancing women in leadership positions and an additional contribution to the (admittedly scarce) literature on the current state and experiences of digitalization among women-owned small and medium enterprises (WSMEs) in Asia.

One-on-one interviews, expert interviews, and advisory panels with WSMEs, government institutions, and business associations in four Southeast Asian countries were conducted to measure the impact of digitalization, assess its challenges, and demonstrate the new opportunities that are available to women entrepreneurs. The research looks at the effects of digitalization on WSMEs' (1) access to financing, (2) access to mentoring, networking, and skills, (3) business process and management, as well as (4) COVID-19 crisis management.

The common WSME challenges across four countries are highlighted in the introductory chapter. The chapter also discusses a general framework, comprising both policy and practical recommendations that governments and private organizations can take on to encourage women entrepreneurs to take advantage of the opportunities that digitalization offers. The succeeding chapters include country studies on Cambodia, Indonesia, Malaysia, and Myanmar. The country case studies provide a more in-depth analysis of the general findings introduced in the first chapter.

We would like this research to contribute to the much-needed improvement of the policy framework (and, to some extent, to the cultural and social context) that governs women-owned SMEs as they play an increasingly significant role in Southeast Asian economies.

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Acknowledgments

This report was prepared as a joint effort between the Konrad-Adenauer-Stiftung (KAS) and Woomentum to shed light on the challenges faced and opportunities provided by digitalization to women-owned small and medium enterprises in Southeast Asia, particularly in the backdrop of the COVID-19 global pandemic. This research idea was initiated by Mouna Aouri and Socheata Touch and fully funded by KAS. Mouna Aouri designed and directed the project with the assistance of Juliana Tyan.

Talitha Amalia managed and co-authored this multi-country report production with Anuradha Rao and Suhaila Binte Zainal Shah. The case studies are from 1) Indonesia, whose research was conducted and written by Talitha Amalia, assisted by Farah Aulia and Nenden Sekar Arum, 2) Myanmar, whose research was conducted and written by Su Mon, assisted by Su Lynn Myat, 3) Malaysia, whose research was conducted and written by Tina Leong, assisted by Lim Zhen Hui, Nadhilah Zainal Abidin, and Amani Mohamad Husaini and 4) Cambodia, whose research was conducted by Sophorn Tous, assisted by Sar Senkethya. The Cambodia case study was authored by Anuradha Rao, assisted by Talitha Amalia and Suhaila Binte Zainal Shah.

During the book's preparation, many colleagues at the KAS, Woomentum, and elsewhere made important contributions in the form of invaluable technical advice and comments. The project team would also like to recognize the valued contributions from all the experts and advisory panelists participating in the research through interviews and sharing of experiences, including government officials, investors, entrepreneurs, business associations representatives, academia, and other key stakeholders. Lastly, the team would like to apologize to anyone who may have been overlooked inadvertently in these acknowledgments.

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Acronyms and Abbreviations

ACWO	ASEAN Confederation of Women's Organizations
ADB	Asian Development Bank
API	Application Programming Interface
AI	Artificial Intelligence
ASEAN	Association of Southeast Asian Nation
B2B	Business-to-Business
B2B2C	Business-to-Business-to-Customer
B2C	Business-to-Consumer
BIM	Building Information Modelling
BNI	Business Networking International
CCRIS	Central Credit Reference Information System
CEO	Chief Executive Officer
CIES	Cambodia Inter-censal Economic Survey
COVID-19	Coronavirus Disease 2019
CRM	Customer Relationship Management
CWEA	Cambodian Women Entrepreneur Association
DEDC	Digital Economy Development Committee
DFS	Digital Financial Services
DIY	Do It Yourself
DIGITAL ID	Digital Identification
DKN2030	Dasar Keusahawanan Nasional 2030
DOSM	Department of Statistics Malaysia
e-Books	Electronic Books
e-Commerce	Electronic Commerce
ECF	Equity Crowdfunding
EDCF	Economic Development Cooperation Fund
ESOs	Electronic System Operators
EY	Ernst & Young

F&B	Food and Beverage
Fintech	Financial technology
FMCG	Fast-moving consumer goods
GDP	Gross Domestic Product
GPS	Global Positioning System
GST	Goods and Services Tax
HR	Human Resources
ICT	Information Communication and Technology
IDI	ICT Development Index
IFC	International Finance Corporation
ILO	International Labour Organization
INGO	International Non-Governmental Organization
IoT	Internet of Things
IT	Information Technology
ITU	International Telecommunication Union
JICA	Japan International Cooperation Agency
KAS	Konrad-Adenauer-Stiftung
KWSP	*Kumpulan Wang Simpanan Pekerja* (Employees Provident Fund)
LMS	Learning Management Systems
LDJ	Lightning Decision Jam
LHDN	*Lembaga Hasil Dalam Negeri Malaysia* (Inland Revenue Board)
LPEM UI	*Lembaga Penyelidikan Ekonomi dan Masyarakat, Universitas Indonesia* (Institute for Economic and Social Research, University of Indonesia)
MaGIC	Malaysian Global Innovation and Creativity center
MCO	Movement Control Order
MCSME	Ministry of Cooperatives and Small and Medium Enterprise
MDeC	Multimedia Development Corporation
ME	Medium Enterprise
MED	Ministry of Entrepreneur Development
MEDAC	Ministry of Entrepreneur Development and Cooperatives
MESTECC	Ministry of Energy, Science, Technology, Environment & Climate Change
MITI	Ministry of International Trade and Industry
MOOC	Massive Open Online Course
MoF	Ministry of Finance
MOSTI	Ministry of Science, Technology, and Innovation

MSC	Multimedia Super Corridor
MSMEs	Micro, Small, and Medium Enterprises
MTDC	Malaysian Technology Development Corporation's
MyCIF	Malaysia Co-Investment Fund
NGO	Non-Governmental Organization
NLD	National League for Democracy
NRI	Network Readiness Index
OECD	Organization for Economic Co-operation and Development
P2P Lending	Peer-to-peer Lending
PE	Private Equity
POS	Point Of Sales
R&D	Research and Development
RPA	Robotic Process Automation
SC	Securities Commission
SE	Small Enterprise
SME	Small and Medium Enterprise
SMEWG	SME Working Group
SMIDEC	Small and Medium Industries Development Corporation
SOP	Standard Operating Procedure
SQL	Structured Query Language
UMFCCI	Union of Myanmar Chambers of Commerce and Industry
UN	United Nation
UNCTAD	United Nations Conference on Trade and Development
UPM	*Universiti Putra Malaysia*
US EPA	United States Environmental Protection Agency
USAID	United States Agency for International Development
VC	Venture Capital
WSME	Women-owned Small and Medium Enterprise
YEAC	Young Entrepreneurs Association of Cambodia

Executive Summary

Key Issues

Digital technologies, often referred to as computer-based products and solutions, are transforming industries everywhere, and the Southeast Asia region is no exception. In particular, Southeast Asian countries stand to benefit from digitalization embraced by its small and medium enterprises (SMEs), which includes women-owned SMEs (WSMEs).

Catalyzing women's entrepreneurial talent can bring many benefits, such as the advancement of women's economic empowerment and female labor participation, which in turn will fuel the region's socio-economic growth. However, although the rate of self-employment of women in the Southeast Asian region is high, women-owned businesses often lose out in competition, profitability, and size to male-owned enterprises, with little potential for further growth. Moreover, women entrepreneurs face many formidable challenges, especially as gender inequality and underutilization of female talent are deeply ingrained in Asian countries.

Economies and societies around the world, however, have been hit hard by the Novel Coronavirus or COVID-19 outbreak that engulfed the world from early 2020 onwards. COVID-19 has not only caused disruptions in global supply chains and border management but also severely impacted normal day-to-day social interactions, behaviors, and practices. However, the onset of COVID-19 also brought about a new appreciation for digitalization, as companies all over the world were forced to adapt and embrace new digital technologies during lockdowns. This study argues that digitalization can offer new potential for WSMEs to grow and innovate, as well as offset some of the gender-related barriers towards further leveling the playing field. By undertaking a comparative study in real-time and by considering the impacts of COVID-19 on the relationship between digitalization and WSMEs, it is hoped that this report makes a significant contribution to the emerging literature on digitalization and WSMEs in Southeast Asia.

A qualitative approach was adopted for this research, with data collection conducted in four Southeast Asian countries and each consisting of three main components: a series of in-depth interviews with female entrepreneurs, expert interviews with different stakeholders, and an Advisory Panel, involving women in entrepreneurship and experts brought together to formulate practical and workable recommendations and solutions. The interviews with WSMEs, experts, and the advisory panel discussion were structured to gather insights surrounding four pillars as representative of key areas in which digitalization can bring opportunities and challenges: 1) Access to Financing, 2) Access to Mentoring, Networking, and Skills, 3) Business Processes and Management, and 4) Crisis Management (COVID-19).

Key Findings

Pillar 1: Access to Financing

The issues that WSMEs faced concerning access to financing in each of the four countries varied slightly. In Indonesia, the key obstacle in the utilization of digital technology to gain external financing was fear and lack of motivation, as participants mentioned that there was no urgency to do so. For WSMEs in Myanmar, access to financing was the most challenging issue. Aside from the rarity of grants targeted explicitly at WSMEs in Myanmar, there was also a lack of alternative financing options. Meanwhile, in Malaysia, the key issue to emerge was WSMEs doubts over stakeholder protection in the alternative financing sector, especially when compared to established financial institutions. This is likely due to a notable lack of awareness, as expressed through inaccurate perceptions of the mechanisms of alternative financing, as well as specific financing options from the government. In Cambodia, limited financial literacy and tax compliance were cited as key factors that hindered participants' adoption of digital technologies to finance their businesses.

Across all four countries, we found that most WSMEs interviewed utilized internal financing to run their business. Of the fewer number of participants that had gained external sources of funding, the most common type of funding was bank loans in Cambodia and financing acquired from personal connections in Indonesia. In Malaysia, however, a strong preference for internal financing was found amongst participants, with bank loans rarely used. Utilization of alternative financing through digital financial services (DFS) was found among very few participants, possibly due to lack of awareness and understanding of external funding sources.

Pillar 2: Access to Mentoring, Networking, and Skills

A common theme discovered among the research participants was their limited professional networks, which further limited their access to mentoring and skills development. In Indonesia, many participants believed that as family responsibilities fell on their shoulders, family should come first. Therefore, they often missed opportunities to attend mentoring, networking, or skill-building programs run by the government or private sector, even if they were held online. The limiting factor for WSMEs in Myanmar was found to be more external, in that there were less informal networking opportunities available for women than for men. In Malaysia, there was an existing reluctance to seriously explore global business opportunities—partly owing to the fear of being on the losing end of business deals, particularly in foreign countries. As in the case of Indonesia, WSMEs in Cambodia also found it quite challenging to participate in mentoring events or find time for e-learning opportunities, as they were already struggling to juggle their business and family obligations. They also had limited access to information on mentoring programs both inside and outside Cambodia.

WSMEs across all four countries also generally displayed eagerness in learning, with the increased utilization of digital technology as a means to obtain new knowledge in the face of COVID-19. Digital tools were leveraged to listen to talks and webinars, attend e-learning programs or courses, watch videos on relevant topics, and to connect with mentors and peers within their industries.

Pillar 3: Business Processes and Management

While participants in Indonesia and Cambodia were observed to experience issues with regard to gender-related business processes, this was not the case in Myanmar and Malaysia. The participants in Indonesia and Cambodia mentioned they were struggling to juggle between business and family obligations. As they undertook cultural roles as mothers and daughters while also operating their enterprises, they faced time constraints that restricted them from participating in skills development, as well as social networks and association activities and events. In Myanmar, the main barriers to digital adoption into WSMEs' business processes were language, awareness, skills, and resources.

Here, language was the biggest barrier for many of them to find appropriate digital solutions and acquire new digital skills. Malaysia's main obstacle to wider digitalization of business processes was a mismatch of features in relation to WSME critical business needs, as well as the cost of existing digital tools. Tools and software that may seem affordable to large corporations were seen as a major burden by many WSMEs.

The most popular digital technology used by a large majority of the participants was was to increase sales/marketing, such as social media and official websites. Several participants had also adopted digital tools for improving internal business processes, such as procurement systems, supply chain management systems, customer relationship management (CRM) systems, and data analytics. In Indonesia, Myanmar, and Malaysia, the decision to digitalize seemed to be market-driven.

Pillar 4: Crisis Management (COVID-19)

In the face of COVID-19, a majority of WSME participants said they had been negatively affected, especially those in the business of tourism and food and beverage (F&B). Most participants were able to adapt with the aid of digital technology— however, this was mostly a reactive response and not the result of anticipatory crisis management. The COVID-19 pandemic forced WSMEs in all four countries to increase digitalization of their business, or begin to adopt digitalization if they hadn't before, to maintain productivity and collaborate while working remotely.

Key Recommendations Specific to Government Institutions

Initiate gender-focused financing schemes, such as investing in and with women entrepreneurs, which can be accessed digitally.

The government can regulate and increase the amount of financing flowing to WSMEs, such as loans or equity financing, through funds that invest with a gender lens. Such intervention will ideally be combined with other capacity-building programs for the WSMEs and financial intermediaries.

Develop business training programs for owners and employees that specifically address the gender-equality agenda.

This can include incentive schemes for women entrepreneurs who innovate with digital technology applications. Education and training targeted at WSMEs should take into account societal and cultural contexts, such as using local language(s), and incorporate practical tips for women to thrive in both business and personal life.

Ensure the accessibility, safety, and transparency of all regulatory compliance that can support the growth of WSMEs.

Make gender-equality policies mainstream across all major SME policy-making agencies, and ensure all regulatory compliance processes are more centralized, transparent, and efficient to reduce gender-based discrimination. E-government initiatives are necessary, but they need to be supported with regulations to protect data privacy and security of WSMEs and all ecosystem stakeholders.

Provide pandemic stabilization and recovery funds, employment wage subsidy schemes, loan relaxations, and tax waivers to WSMEs.

The pandemic aid provided for WSMEs should also be time-limited, targeted, transparent, and non-discriminatory, equally accessible for both small and medium enterprises. In addition, governments can work with the private sector to proactively provide clear requests and guidelines for WSMEs to put measures in place that will prevent the spread of COVID-19 in the workplace while ensuring productivity.

Key Recommendations Specific to Institutions Providing Assistance to WSMEs

Increase public awareness and make the funding gap for WSMEs more visible.

The private sector, including think-tank organizations and nonprofits, can highlight stories about how scarce woman CEOs and woman founders are. Furthermore, they can investigate if funding for WSMEs is widely accessible, e.g. how many venture capital-backed WSMEs, woman investors, and women acting as grant committees exist.

Encourage non-conventional skills development and address gender stereotypes through training and talks in local languages.

A gender stereotype is harmful when it limits women entrepreneurs' capacity to develop their personal and professional abilities. . Moreover, as technologies constantly transform economies, soft-skills education, such as a growth mindset and change management, is needed for WSMEs to thrive.

Popularize success stories of digitally- enabled WSMEs.

Institutions providing assistance to WSMEs can help increase the awareness of data privacy and security in publicly- or privately-organized events. Success stories provide tangible examples to inspire other WSMEs to adopt digitalization.

Promote the benefits of joining business communities and associations so that WSMEs can learn from other experienced entrepreneurs and mentors to prepare for crises strategically.

Business communities and associations can provide more digital networking, skills building, and mentoring opportunities. This will be an important area for the private and public sectors to innovate, given that digitalization will only increase in the post-pandemic environment. Furthermore, consultation and learning opportunities provided by qualified professionals with a proven track record in relevant fields are needed to develop business continuity plans and prepare for unprecedented changes.

1 Digitalization and Women-owned SMEs in Southeast Asia

1.1 Introduction

Digital technologies, from the advent of mobile internet, social media, and cloud technology to big data analytics, are transforming industries everywhere, triggering massive changes and bringing new opportunities to innovate and improve the way people do work and business across the globe. The Southeast Asia region is no exception. In 2018, although the digital economy of Association of Southeast Asian Nations' (ASEAN[1]) member countries was only 7 percent of its GDP (compared to 16 percent of China, 27 percent of the European Union Five (EU-5), and 35 percent of the United States), it was estimated that the successful integration of digital technologies could add USD 1 trillion to the region's GDP, amounting to a total of USD 5.1 trillion by 2025[2], and pushing ASEAN to the forefront of global competitiveness as a digital hub. This prediction was, of course, made prior to the emergence of the Novel Coronavirus or COVID-19 global pandemic in early 2020, which significantly impacted Southeast Asia's GDP growth. This is explained later in this section, as well as in the respective country reports.

In particular, Southeast Asia stands to benefit from its small and medium enterprises (SMEs) embracing digitalization, which generally refers to a business model driven by "the changes associated with the application of digital technology in all aspects of human life".[3] SMEs are widely-recognized as the backbone of ASEAN economies, having contributed to more than 50 percent of ASEAN's GDP, employing more than 80 percent of the workforce, and representing 99 percent of business enterprises in key sectors.[2] The ongoing digital revolution thus brings new potential for SMEs to leverage new and emerging digital innovation and tools towards improving their business operations and work towards market expansion and growth beyond local markets.

Female Entrepreneurship and Women-owned SMEs in Southeast Asia

Women's entrepreneurship is also a dominant trend in Southeast Asian countries. Across the 10 ASEAN member states, there were about 61.3 million women entrepreneurs who owned and operated businesses in 2015—which accounted for 9.8 percent of the total ASEAN population.[4] However, women entrepreneurs still lag behind their male counterparts in the region: a 2017 OECD report noted that the ASEAN female self-employment rate was about 77 percent of the male rate, ranging from a high of over 119 percent of the male rate in Cambodia to a low of 48 percent in Singapore.[5]

This gap notwithstanding, it must be acknowledged that many of these women-owned businesses are SMEs, which underscores women's increasingly significant role as key players in Southeast Asian economies. Further supporting women-owned SMEs (WSMEs) and catalyzing women's entrepreneurial talent can bring many benefits, such as the advancement of women's economic empowerment, female labor participation, and further contributions to the region's socio-economic growth. For instance, a research based on three Southeast Asian countries (Malaysia, Philippines and Thailand) found that women business owners hired a higher percentage of women employees compared to their male counterparts.[6] An additional USD 12 trillion could also be added to the annual global output by 2025 with the increase in women's economic participation,

where efforts to close the gender gaps in working hours, participation, and productivity could add up to 30 percent of GDP gains for East and South-East Asia (excluding China).[5] Research has also highlighted that women are more likely to spend their income productively: for instance, a World Bank study found that women tended to dedicate 90 cents of every dollar they earned on their families and child's welfare — incomparison to 30-40 cents saved for this purpose by men.[7]

Though the rate of self-employment of women in the Southeast Asian region is high (around 50 percent) compared to their Organization for Economic Co-operation and Development (OECD) counterparts[5], women-owned businesses often lose out in competition, profitability, and size to male-owned enterprises, with little potential for further growth. Moreover, women entrepreneurs face many formidable challenges, especially as gender inequality and underutilization of female talent are deeply ingrained in Asian countries.[8] Furthermore, compared to male entrepreneurs, women business owners have limited access to education and training, financial resources, technology, social capital, and business networks, which are exacerbated by persisting discriminatory social and cultural norms. Here, women are still shouldering a disproportionate bulk of caregiving duties, household labor, and childcare responsibilities and are facing societal expectations and pressures reinforcing stereotypical gender roles of women as homemakers that might make it harder for them to be accepted, recognized, and treated as business leaders. The simultaneous pursuit of business ownership and motherhood can also be daunting to many women, who are already struggling with limited personal resources, such as time and effort to fulfill these dual demands of work and household responsibilities.

Impacts of COVID-19 and Potential Digitalization Opportunities for WSMEs

Economies and societies around the world have been hit hard by the COVID-19 outbreak that emerged in early 2020. COVID-19 caused disruptions in global supply chains and border management but also severely impacted normal day-to-day social interactions, behaviors, and practices. This, combined with the many safety measures and restrictions imposed by countries, took its toll on global economic activity, bringing much of it to a halt.

Southeast Asia is no exception. IMF estimates that the weakening of Southeast Asia economies could amount to 15 percent of the region's GDP while the Asian Development Bank (ADB) has revised the growth forecasts for 10 ASEAN countries from 4.4 percent in 2019 to 1 percent in 2020.[9] Moreover, the unemployment rate is expected to increase in countries across the region[9], with 10-15 million people aged between 15 and 24 at risk of losing their jobs.[10] At the time of writing this report, many businesses, including WSMEs in Southeast Asia, were grappling with the unprecedented economic, business, and social effects of the global pandemic on their business operations. The gendered impact of COVID-19 on WSMEs is a critical area of research, as research has shown that pandemics and extreme crises are likely to impact women and girls disproportionately.[11] Preliminary findings on the impact of COVID-19 on women-owned micro, small and medium enterprises (MSMEs) in the Asia Pacific region show that women are overrepresented in the hardest-hit sectors, such as construction, footwear, garments, and tourism, and that those in the informal sector cannot benefit from government relief measures.[12]

However, the onset of COVID-19 also brought about a new appreciation for digitalization, as companies all over the world were forced to adapt and embrace new digital technologies during lockdowns. This study argues that digitalization can offer new potential for WSMEs to grow and innovate, as well as offset some of the gender-related barriers towards further leveling the playing field. Yet, there is a notable absence of in-depth studies that examine the current state and experiences of digitalization amongst WSMEs within and across Southeast Asia.

This report is an attempt to fill this gap by undertaking a comparative study in real-time, and especially to consider the impacts of COVID-19 on the relationship between digitalization and WSMEs. This report thus details findings from the cross-regional research that examines the emerging challenges and new opportunities that digitalization brings to WSMEs in four countries in the region, viz., Cambodia, Indonesia, Malaysia, and Myanmar.

Highlighting gender-related issues and the unique problems faced by WSMEs is the first step to assess risks and vulnerabilities these actors face in the new post-COVID environment, which would significantly differ from the pre-pandemic context. By proposing practical and policy recommendations based on these findings, the study aims to contribute to informed policy-making in the region, providing key government and private stakeholders insights for better policy frameworks and the creation of a more enabling ecosystem for WSMEs to survive and thrive in the post-COVID 'new normal'.

1.2 Methodology

This chapter summarizes findings from all the country case studies presented in this report. A qualitative approach was adopted for this research, with data collection consisting of three main components conducted by a team of researchers in each of the participating countries (Indonesia, Myanmar, Malaysia, and Cambodia).

First, a series of in-depth interviews (using open-ended questions) were carried out with female entrepreneurs from a list of WSMEs that were invited to participate in the study. The 84 WSME participants were carefully selected to represent the three sectors of raw materials, manufacturing, and service providers, and grouped following the categorization based on table 1.1 below.

Type	Indonesia	Myanmar	Malaysia	Cambodia
Small Enterprises (SE)	Approx. USD 20,000 to USD 170,000	Approx. Up to USD 74,000 for wholesale and service Approx. Up to 37,000 for retail and other	Approx. USD 72,000 to USD 720,000	Approx. USD 50,000 to USD 250,000
Medium Enterprises (ME)	Approx. USD 170,000 to USD 3.4 million	Approx. USD 74,000 to USD 222,000 for wholesale Approx. USD 74,000 to USD 148,000 for service Approx. USD 37,000 to 74,000 for retail and other	Approx. USD 720,000 to USD 4.8 million	Approx. USD 250,000 to USD 500,000
	(Calculated at 1 USD = 14,702 IDR exchange rate)	(Calculated at 1 USD = 1,350 MMK exchange rate)	Calculated at 1 USD = 4.16 MYR exchange rate.	Calculated at 1 USD = 4,070 KHR exchange rate.

Table 1.1: SME Annual Revenue Categorization in Indonesia, Myanmar, Malaysia, and Cambodia[13]

The WSME participants were diverse in terms of sub-sectors representation. The diversity in sectors was deliberate to researchers evaluate patterns in digital technology adoption amongst the participants.

Indonesia	Myanmar	Malaysia	Cambodia
Livestock	Organic Dyed Textile	Logistics	Food and Beverage (F&B)
Agriculture and Forestry Development	Bags Production	Childcare Center	IT Firm
Food and Beverage (F&B)	Online TV Channel	Food and Beverage (F&B)	Health and Personal Care
Clothing	Wood Working	Tax, Audit and Accounting	Skill Development (HRD)
Herbs & Spices	HR Consultancy	Internal Audit and Corporate Governance	Handicraft
Pharmacy	Up-skilling Platform for Women	Autism Children's Centre	Home Care, Household, and Construction Supply
Renewable Energy	Education	Printing	Consulting Firm
Homecare	Women's Clothing	Property Management	E-Commerce
Produce Retailer	Food Production	Architecture	Logistic and Forwarding
Education	Ice Production	Cosmetics Retail	Engineering and Construction
Recreation	Cheroot Production	Stationery Retail	
Construction	Bird's Nest Production	Digital Marketing/Event Management	
Export & Import	Fast-moving Consumer Goods Distribution	Building Contractor	
Digital Content	Organic Food E-commerce	Organic Baby/Skincare Products Manufacturer	
Furniture Retailer	Silkscreen Printing	OEM Cosmetics Manufacturer	
Fashion Retail	Medicine Distribution	Organic Fertilizer and Animal Feed Manufacturer	
Children's Toys Retailer			
Islamic Pilgrimage Travel			

Table 1.2: WSME Participants by Sub-sector

Insights from this segment then guided the next component, which comprised expert interviews with different stakeholders to achieve a better understanding of the digitalization and WSME ecosystem, as well as to identify steps needed to overcome challenges mentioned by the WSMEs. The interviews with 18 carefully-selected experts, from the fields of digital transformation, entrepreneurship, and women-in-business association, helped the research team to gain macro-level insights as well as practical insider knowledge from a wide circle of influential players within the ecosystem.

Finally, findings from both the WSME and expert interviews were brought to an advisory panel comprised of 29 representatives of government bodies, investment firms, banks, business associations, tech companies, and leading female entrepreneurs. The panel was structured to discuss findings gathered from the interviews and then to ideate solutions—moving from micro experiences of the WSMEs to a more macro view from experts and members of the advisory panel. The advisory panel was aimed at formulating practical and workable recommendations and solutions focused on how WSMEs could achieve the maximum potential of digitalization.

The summary of WSME participants, experts, and members of the advisory panel profiles participated in the study are summarized in Table 1.3.

Country	WSMEs			Experts	Advisory Panel
	Number of Participants	Participant Age	Business Maturity		
Indonesia	26 Women (12 SEs, 14 MEs)	Majority in late 20s and 30s	Majority <6 years	5 Experts	7 Representatives
Myanmar	20 Women (10 SEs, 10 MEs)	Majority in late 30s and 40s	Majority 1 to 5 years	5 Experts	6 Representatives
Malaysia	18 Women (16 SEs, 2 MEs)	Majority in 50s	Majority <10 years	4 Experts	9 Representatives
Cambodia	20 Women (12 SEs, 8 MEs)	Majority in 30s	Majority from 5 to 10 years	4 Experts	7 Representatives
Total	84 Women owners/WSMEs			18 experts across digital transformation, SMEs entrepreneurship, & women in business associations	29 Representatives from policy makers, academia, leading female entrepreneurs, digital transformation experts, women in business association experts, & investment experts

Table 1.3: Number and Brief Profile of Participants for this Research

The interviews with WSMEs, experts, and the advisory panel discussion were structured to gather insights surrounding four pillars - as stated in Figure 1.1. These pillars were specifically chosen as representative of key areas in which digitalization can bring opportunities and challenges to the management and operations of WSMEs, and against the backdrop of the COVID-19 pandemic.

Figure 1.1: Research Pillars

Challenges and Limitations

A number of challenges were faced by all four country teams in undertaking this research, which was conducted at the height of the COVID-19 pandemic, with its resulting safety measures and restrictions in place. Primarily, the research teams had to employ online research methods, such as online interviews, and mobile and video calling/ conferencing tools to communicate and collect data remotely, wherever possible. Although the necessary information could be gathered virtually, some of the authors found it challenging to establish rapport with participants (which is a crucial factor in qualitative interviewing), while factors such as electricity outage and weak internet connectivity affected the quality of discussion at times.

Due to time constraints, this research was limited in breadth as it is based on a small sample size of WSME participants, experts, and panelists from each of the chosen countries. Though not generalizable to wider populations, the authors believe that the insights gathered from this research are valuable in revealing the state of digitalization amongst WSMEs in the Southeast Asia region. This report is also significant in that it sheds light on a range of opportunities and challenges that female entrepreneurs and their SMEs face in real-time in the management of their businesses amid a global pandemic.

1.3
New Business Opportunities Offered by Digitalization

It is undeniable that digital technology brings many opportunities for SMEs around the world to leverage their business strategies and make customer journeys more efficient and scalable. For example, WSMEs can adopt digital technology to transform existing products into digital variants that offer advantages over tangible products, and create more efficient business processes and management.[14] Over the last two decades, digital technologies have been adopted by companies of all sizes (micro, small, medium, and large) and all maturity levels (those established in the digital age and those founded in earlier periods).[15] In the following paragraphs, the authors mapped the new opportunities that digital technologies offer to WSMEs in terms of the four pillars mentioned earlier.

Figure 1.2: New Opportunities in Business Offered by Digitalization

Pillar 1: Access to Financing

Access to affordable and reliable financing options is critical for WSMEs' growth. Currently, the most common way for WSMEs to launch and sustain their enterprises is to use personal savings, loans from their inner circle (family and friends), and angel investors. Digitalization has democratized innovative alternative financing models possible for WSMEs to access, such as private equity (PE), venture capital (VC), equity crowdfunding (ECF), invoice financing, peer-to-peer lending, digital microfinance, innovation, and women-focused grants.

In particular, ECF is accessed digitally through online platforms. ECF differs significantly from other crowdfunding forms. It contains investment decisions with a prospect of a potential return on investment compared to reward-based crowdfunding, where funders get material or immaterial rewards for their financial support.[16] Further, equity crowdfunding can reduce the funding gap for innovative SMEs by offering new sources of capital to innovation-driven enterprises. This can be significant if crowdfunding acts as a source of finance for projects that would not be funded otherwise. Crowdfunding can also generate money in a more efficient way than traditional investors such as banks and professional equity investors (business angels and venture capital funds).[17]

Leveraging an online crowdfunding platform can help SMEs reach a broad audience of potential investors, rather than trying to figure out how to identify promising investors, get connected, and pitch. A study in 2018 found that investors used a crowdfunding platform to maintain communications with entrepreneurs and further develop their products and services.[18] The same study concluded that crowdfunding was found to hold promise for a crowd-effect and enabling growth for the rising entrepreneurs through the utilization of posts, comments, and followers on the platform.

Another model falls under the category of crowdfunding, which is called peer-to-peer (P2P) lending. P2P lending "describes the loan origination process between private individuals on online platforms where financial institutions operate only as intermediates required by law" (p.2).[19] P2P lending can be accessed through digital means that can compensate for a lack of liquidity in traditional financial channels. While ECF provides an opportunity to invest in companies for a return in equity (shares), P2P lending returns are obtained through interest rates.

Both ECF and P2P lending have been regulated in Indonesia and Malaysia, making it safely accessible for WSMEs. The financial services authority in Indonesia has regulated ECF through regulation no. 37 /POJK.04/2018[20] and P2P lending through regulation no. 77/ POJK.01/2016.[21] In Malaysia, most of the regulations pertaining to ECF and P2P lending lie in the "Guidelines on Recognized Markets" issued by the Securities Commission of Malaysia (SC) in 2015, followed by the revision in 2016.[22]

Pillar 2: Access to Mentoring, Networking, and Skills

To ensure social distancing does not mean social disconnection, virtual mentoring and networking provides a platform for mentors, mentees, and peers to continue their relationships.[23] Indubitably, every entrepreneur needs support to make business decisions, and women entrepreneurs need more support, especially those in male-dominated industries, due to the long-standing societal and cultural discriminations that women experience.

Having a business mentor and support groups can help bridge the gap in receiving expert guidance and be an invaluable sounding board that can make the difference between business success and failure. More than ever, access to other successful women entrepreneurs and role models becomes important, especially for women who navigate male-dominated business environments. This report explores whether and how digitalization can make access to mentoring, networks, and skills easier.

Moreover, WSMEs need to continuously learn to keep up with trends and customers' behaviors. Digital technologies offer new opportunities for training, adult education, and human resource development in many organizations.[24] The increasing use of technology-mediated environments affords flexible, ubiquitous, and on-demand access to learning materials. For example, business owners and employees can develop their knowledge and skills in massive open online courses (MOOC),[25] learning management systems (LMS)[26], in webinars[27], or with videos available online.[28]

Pillar 3: Business Processes and Management

Digitalization is transforming the customer journey through more supply chain integration and product differentiation.[29] Digital technologies can help reduce costs and save time and resources, especially for enterprises that handle smaller volumes of production and who typically have a limited market and negotiation power and less internal capacity to deal with complex business environments. From the costs associated with information to transport and border operations, digital technologies can play a role in it. For example, customer relationship management (CRM) solutions and marketplaces typically help connect demand and supply, pool resources, and expand reach in sourcing and selling locally and internationally, creating room for WSMEs to achieve scale without mass.[30]

In particular, social media represents an efficient medium for SME marketing. Facebook and Instagram were observed to be popular amongst WSME participants in Indonesia, Myanmar, Malaysia, and Cambodia. Interestingly, Myanmar's WSME participants were found to be over-reliant on Facebook for both personal uses as well as for business. Facebook in Myanmar has become a primary tool for shopping and searching for information in the country. Due to the vast number of Facebook users, digital content in Myanmar language has concentrated on Facebook, which consequently attracts the users to search for information on the platform, rather than looking elsewhere on the internet using search engines.

Another popular digital solution amongst the country participants for business process and management is digital financial services (DFS). DFS comes as an alternative to allow for social distancing, for the public sector to quickly disburse recovery funds and grants to those in need, and for SMEs to rapidly access online payments or even external financing, especially during COVID-19. DFS enables WSMEs to interact with financial services providers, even during times when physical interactions are not possible, and avail existing lines of credit without significant delays. In Indonesia, online payment was found to be popular amongst WSME participants. Most participants utilized a payment gateway system enabled by private fintech firms to help ease the customer journey. They were reported to have been using electronic debit/credit cards and mobile payment such as Go-pay, OVO, and Shopee Pay to support their business transactions. In Myanmar, Wave Money, for example, one of the leading mobile money operators, is only one of many players that have enjoyed popularity amongst its users and attracted foreign investors. Similarly, in Cambodia, mobile payment solutions, such as Wing, Smart, Pay&Go, have transformed the country's payment system through the implementation of check standards, payment clearing processes, and the benefit of being part of ASEAN's financial system.[31]

Digital financial services (DFS) are financial services which rely on digital technologies for their delivery and use by consumers.

Fintech refers to digital technologies that have the potential to transform the provision of financial services, spurring the development of new – or modify existing – business models, applications, processes, and products. In practice, the term "fintech" is also broadly used to denote the ongoing wave of new DFS. Examples of these technologies include web, mobile, cloud services, machine learning, digital identification (ID), and Application Programming Interfaces (APIs).

A Fintech firm is a new entrant in the financial sector that specializes in offering DFS. Examples of fintechs include digital payment providers, digital insurers, digital-only banks, and peer-to-peer lending platforms.

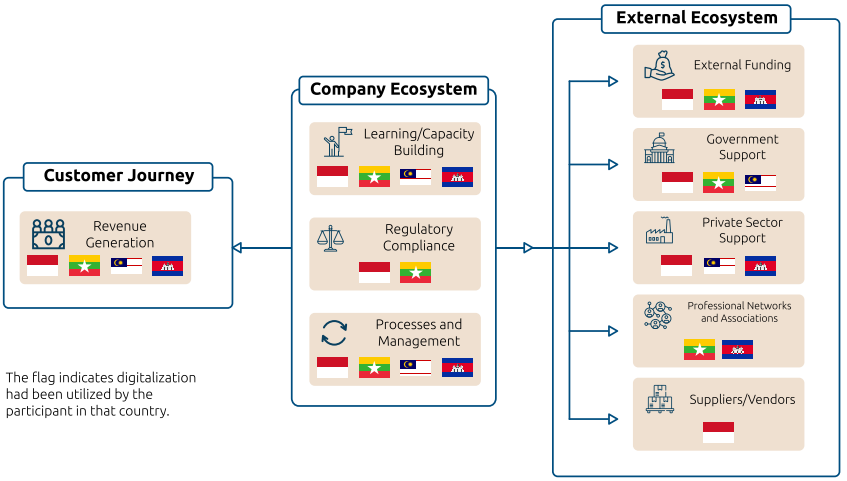
Box 1.1: Definitions Taken from 'World Banks Digital Financial Services' Report (p.1)[32]

Moreover, digitalization is transforming the way enterprises comply with regulations, such as incorporation, licensing, trademarking, and even tax payment. SMEs' typical reluctance towards legal compliance can be caused by the historical tradition of legal services that are grounded in both localized legal cultures and governance systems. However, once logic programming and machine learning entered the market, digital solutions to automate "legal documentation and assembly" have become available for SMEs to adopt.[33] Legal matters can be handled in a more efficient and cost-effective manner when digital technology is brought in to ease legalization of business entities.

Pillar 4: Crisis Management (COVID-19)

COVID-19 has accelerated digital technology adoption in SMEs. The pandemic has forced enterprises, including those dealing in raw materials, manufacturing, and service providers, to reevaluate their business models where the more conventional "face-to-face" social interaction setting is the norm. As a result, SMEs have begun to realize the need to incorporate a bigger portion of their business processes with an innovative "contactless" method of product and service management and delivery. Otherwise, they would be faced with no option but to shut down operations until the crisis ended, which can be equal to a death sentence for many SMEs.

Digital Opportunities Utilized by the Country Participants



Figures 1.3: Areas of Digitalization Adopted by the WSME Participants in Indonesia, Myanmar, Malaysia, and Cambodia

The WSME participants in Indonesia, Myanmar, Malaysia, and Cambodia had already adopted digital tools to some extent, mainly for sales/marketing, teamwork, and learning. However, the uncertainty and complexity of the business environment, including the unprecedented change caused by COVID-19, accelerated the transformation toward digital business models. Some WSME participants, particularly in Indonesia, were found to have experimented with advanced digital technologies such as data analytics, software development tools, and machine learning to suit their specific needs and guide decision-making.[34] However, the heterogeneity of the WSME population in the region and the diversity of their business ecosystems calls for contextualized policy solutions within an overall unified approach. For that purpose, more needs to be learned about WSME challenges in adopting digitalization and the ways in which all the ecosystem stakeholders could support this transformation.

1.4
Challenges Faced by WSMEs in Adopting Digital Technologies

This study shows that many WSME participants experienced difficulties in achieving a balance between exploiting existing business routines and exploring new digitally-enabled business models. However, COVID-19 forced most participants to believe that there was indeed a need for dramatic changes in the way they ran their businesses. Although the long-term impact of COVID-19 is still difficult to foresee, experts have suggested that post-pandemic digital opportunities will be even greater if WSMEs (with the help of the government and other ecosystem stakeholders) can overcome the following challenges.

Challenge 1: Poor Digital Infrastructure

In the last two decades, rapid digital technological development in most parts of the world has opened up new opportunities for businesses and societies. However, the challenges of ensuring digital opportunities are shared fairly and inclusively remain. Table 1.4 is the Network Readiness Index (NRI) 2019[35], which has been used as a tool to evaluate digitalization progress and set the action agenda for more inclusive and sustainable growth globally.

Rank	Country	Score	Technology	Government	Impact
1	Singapore	82.13	78.45	88.19	88.33
2	Malaysia	63.76	59.49	75.92	64.01
3	Thailand	51.54	49.61	61.61	53.8
4	Vietnam	49.57	44.79	56.6	59.2
5	Philippines	47.7	38.93	51.84	57.81
6	Indonesia	46.15	41.56	60.57	47.7
7	Cambodia	32.29	36.24	32.92	38.71
8	Laos	31.88	28.19	26.32	47.82

Table 1.4: Network Readiness Index for Southeast Asian Countries in 2019

Malaysia ranked 63 worldwide and in the upper-middle-income segment, was the top performer, defeating some high-income countries. However, internet access in Malaysia is not uniform, with rural areas and East Malaysia experiencing lower adoption rates and slower connectivity, compared to urban Peninsular Malaysia. A 2018 World Bank report[36] indicated that Malaysia had slower internet download speeds and higher prices than most higher-income countries, including Singapore.

In Indonesia, while digital platforms are abundant, the rapid internet penetration of the last two decades has yet to benefit the majority of the population. Similar to Malaysia, inequitable access to information technology in the country's rural and remote areas is a prominent concern. To tackle this issue the government has started the construction of a massive, nationwide internet network using fibre-optic wires, the Palapa Ring or often called 'Sky Highway' project since 2016.[37] However, Indonesia is still spending less on information and digital technology, compared to its neighboring Southeast Asian countries.[38]

Cambodia has the highest internet connectivity growth in the Asia-Pacific region, with consumer access to the internet has been dominated by young people aged 15 to 25.[39] Internet access has been rising steadily over the years but still remains lower than in Indonesia, Philippines, Vietnam, and Thailand.

It is unfortunate that Myanmar and Brunei Darussalam were not included in the study. In Myanmar, it was reported that electricity outages often interrupted internet connectivity. Nevertheless, the number of smartphone phone users in Myanmar grew exponentially with mobile connections in Myanmar stood at 68.24 million, 126 percent of the total population, in January 2020.[40]

Challenge 2: Lack of Knowledge and Skills

 Indonesia	• The participants noted that they were comfortable with the way things were, and many of them admitted to having having minimal time to reflect or learn effectively from their experiences due to their struggle to juggle between business and family obligations. This issue was most notably present among participants with children. • The overwhelming abundance of information on the internet left WSMEs, unsure of where they should start learning about digitalization for their business. • The majority of WSMEs did not have sufficient awareness of data security and privacy issues.
 Myanmar	• Lack of digital resources delivered in a local language made it difficult for the participants to understand how technology adoption could help their business. • Many WSMEs were unaware of the potential benefits and challenges of adopting digital technologies beyond common tools, However, digital literacy training resulted in an information overload, which overwhelmed WSMEs. This problem was exacerbated by a significant capacity gap between urban and rural SMEs.
 Malaysia	• There existed a lack of understanding about whether digitalization was an investment or liability. Improvement in business processes would almost always be tied to spending and would still be seen primarily as a cost rather than an investment. The cost of digital tools would have to be justified through increased opportunities for sales or highly significant improvements in the speed of business processes.
 Cambodia	• Digital literacy emerged as a major challenge to technology adoption. The complexity of apps and lack of English language proficiency (the English language is frequently used in the business sector) was a prominent constraint. • Lack of technical skills and expertise were considered a major challenge to technology adoption. Some participants indicated that they needed ongoing and regular maintenance and technical support from technology suppliers, as their staff did not have the requisite technical knowledge and skills, such as software for financial management.

Challenge 3: Fear of Alternative Financing

 Indonesia	• Lack of motivation and fear were identified as many participants mentioned that there was no urgency to seek external financing, especially through fintech. They suggested that pursuing alternative financing, particularly through digital means, was not prioritized due to various potential risks. Risks and other constraining factors included limited funding, data privacy and security, higher interest rates, religious beliefs, and lack of knowledge and skills to grow their business further (access to financing, adopting new digital tools). • Participants acknowledged that their risk-averse nature had limited their access to investment opportunities. Due to their more pragmatic and conservative nature, women often seem less confident, putting them at a disadvantage when competing in pitch presentations to gain investments.
 Myanmar	• Alternative financing options were limited and not well-known among SMEs. Quick and easy loans and grants targeted at women-owned SMEs were reported to also be rare in Myanmar. Moreover, the lack of a reliable credit score made it difficult for financial providers to do due diligence.
 Malaysia	• Lack of awareness and growth mindset against alternative financing options prevented WSMEs from capitalizing on new opportunities for funding. There were still doubts over stakeholder protection in the alternative financing sector, especially when compared to established financial institutions.
 Cambodia	• Most participants used their personal funds and property to finance their businesses. While technology adoption was seen as important for funding, resources, and other limitations often prevented WSMEs from adopting alternative financing through fintech.

Challenge 4: Gender-based Issues

 Indonesia	• WSMEs felt that they had a responsibility to care for their families, which was prioritized before their business. This caused them to miss opportunities that may have been beneficial for the growth of their business. However, rather than being a negative factor, it was simply pointed out as a contextual factor, in a matter-of-fact way. • Women's risk-averse nature is thought to be one of the main self-limiting factors for WSMEs in various aspects: such as avoiding avoiding unfamiliar funding options; reaching out for mentoring, networking, and skill-building opportunities only among their existing inner social circles. • Although most laws and policies for SMEs are gender-neutral, women in Indonesia are often faced with discriminating social norms and various forms of violence. Many participants mentioned having to deal with gender-related prejudices and discriminations at business meetings/negotiations.
 Myanmar	• Women have fewer opportunities for informal networking than men. For example, men can go out for drinks in the evening to network with potential clients, government officials, and colleagues whereas it is considered culturally inappropriate for women to join such occasions, especially in small towns or traditional families. • The findings indicate that gender discrimination in bureaucracy is prevalent. Processes at various government agencies are complex and time-consuming.
 Malaysia	• While most interviewees dismissed the idea that gender constrained them, the issue emerged in relation to digital and communication tools masking their gender. Using digital tools allowed them to deal with customers who would otherwise give them a hard time or refuse to deal with women, particularly in male-dominated industries like agriculture.
 Cambodia	• Gender stereotyping was reported to be a major challenge faced by women entrepreneurs. The participants noted that as they undertook cultural roles as mothers and daughters while also operating their enterprise, they faced time constraints that restricted them from participating in skills development, as well as social networks activities and events. • Some participants noted that sometimes their families and male colleagues did not trust their business capabilities, so they had to push themselves to work harder to prove their abilities.

WSME participants faced various types of challenges that hindered their digital technology adoption. Besides poor digital infrastructure, participants often lacked knowledge about digital opportunities, as well as the skills to identify the right technological solutions for their business and to manage change. While some of them had engaged their employees in digital technology training, many continued to face shortages in management, communication, or problem-solving skills that are crucial for innovation. In addition, the participants were reported to also be less proactive in protecting their data and not well prepared to face cybersecurity threats, leaving them at risk of becoming weak nodes in hyper connected digital infrastructure systems.[41]

1.5
Key Recommendations to Create a Gender-fair Digital Ecosystem for SME Development in Southeast Asia

SMEs are critical for emerging economies like Indonesia, Myanmar, Malaysia, and Cambodia, but simultaneously challenging for policymakers looking to support their growth. Southeast Asian national governments have sought to assist WSMEs through programs, such as COVID-19 recovery funds, digital interventions for business regulatory compliance, and government-sponsored training. However, there is little evidence on how effective these programs are, which is crucial to improve government policies aimed at creating a digitally-enabled WSME ecosystem. In the following section, the authors have consolidated findings from Indonesia, Myanmar, Malaysia, and Cambodia to propose practical and policy recommendations targeted at the Southeast Asian nation governments and other stakeholders, focusing on the importance of digitalization for the gender-equality agenda and WSMEs' growth.

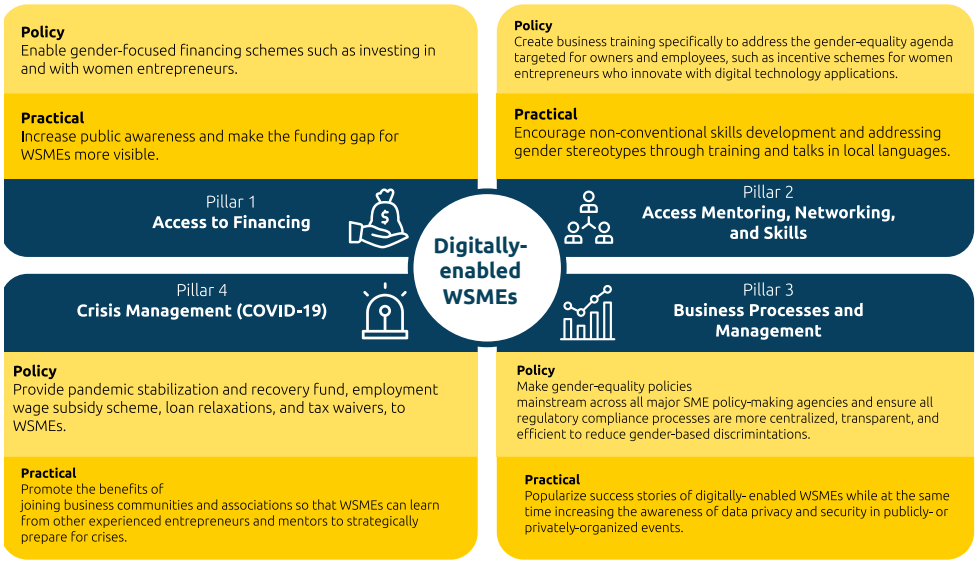


Figure 1.4: Key Recommendations to Create a Gender-fair Digital Ecosystem for SME Development in Southeast Asia

Policy Recommendations Specific to Government Institutions

Pillar 1: Access to Financing
Initiate gender-focused financing schemes, such as investing in and with women entrepreneurs, which can be accessed digitally. As an example, government aid in the form of funds are already available for SMEs in Indonesia and Myanmar, yet they are not specifically targeted at women. Although these funds are already digitally accessible, it is also not balanced with sufficient digital infrastructure and digital literacy, ultimately rendering such funds to be unattainable. The government can regulate and increase the amount of financing flowing to WSMEs, such as loans or equity financing, through funds that invest with a gender lens. Such intervention will ideally be combined with other capacity-building programs for the WSMEs and financial intermediaries.

Pillar 2: Access to Mentoring, Networking, and Skills
Develop business training programs for owners and employees that specifically address the gender-equality agenda. This can include incentive schemes for women entrepreneurs who innovate with digital technology applications. Education and training targeted at WSMEs should take into account societal and cultural contexts, such as using local language and incorporate practical tips for women to thrive in both business and personal life.

Pillar 3: Business Processes and Management
Make gender-equality policies mainstream across all major SME policy-making agencies, and ensure all regulatory compliance processes are more centralized, transparent, and efficient to reduce gender-based discrimination. E-government initiatives are necessary, but they need to be supported with regulations to protect data privacy and security of WSMEs and all ecosystem stakeholders.

Pillar 4: Crisis Management (COVID-19)
Provide pandemic stabilization and recovery funds, employment wage subsidy schemes, loan relaxations, and tax waivers to WSMEs. An example of this has been carried out by the Indonesian government through a stimulus package which included loan relaxations, a six-month tax waiver, and cash transfer. The pandemic aid should be time-limited, targeted, transparent and non-discriminatory to ensure a sustainable recovery. It should be accessible for small and medium enterprises being most negatively affected by COVID-19. In addition, governments can work with the private sector to proactively provide clear requests and guidelines for WSMEs to put measures in place that will prevent the spread of COVID-19 in the workplace while ensuring productivity.

Practical Recommendations Specific to Institutions Providing Assistance to WSMEs

Pillar 1: Access to Financing

Increase public awareness and make the funding gap for WSMEs more visible by highlighting:

1. the number of SMEs with a woman CEO and/or at least one woman in the founding team;
2. the number of venture capital-backed WSMEs;
3. the number of women investors, grant committees and/or women acting as limited partners in an investment company.

Pillar 2: Access to Mentoring, Networking, and Skills

Encourage non-conventional skills development and address gender stereotypes through training and talks in local languages. As economies are constantly transformed by technologies, soft-skill education, such as a growth mindset and change management, is needed for WSMEs to thrive.

Although training and seminars that are targeted at women entrepreneurs are already available in most of the countries involved in the current research, they need to focus more on delivering the skills and knowledge in such a way that is tailored to the unique position women find themselves in due to various forms of discriminations they have been exposed to.

Pillar 3: Business Processes and Management

Popularize success stories of digitally-enabled WSMEs while simultaneously increasing the awareness of data privacy and security in publicly- or privately-organized events. Success stories provide tangible examples to inspire other WSMEs to adopt digitalization. This can be achieved through events such as webinars and online talks in which successful and digitally-enabled WSMEs are invited to share their experiences with other WSMEs who are still in the early stages of their digitalization journey.

Pillar 4: Crisis Management (COVID-19)

Promote the benefits of joining business communities and associations so that WSMEs can learn from other experienced entrepreneurs and mentors to strategically prepare for crises. The business communities and associations can provide more digital networking, skills building, and mentoring opportunities. This will be an important area for the private and public sectors to innovate, given that digitalization will only increase in the post-pandemic environment. Furthermore, consultation and learning opportunities provided by qualified professionals with a proven track record in relevant fields are needed to develop business continuity plans and prepare for unprecedented changes.

For these recommendations to be effective, there will need to be greater collaboration between government, non-government, and private stakeholders within and across countries. There will also need to be a distinction between immediate, short, and long-term recommendations, and with an eye on the post-pandemic 'new normal' digital environment. Ideally, a pan-ASEAN organization that promotes and supports digitalization among WSMEs should be high on the agenda of national governments. Non-governmental organizations (NGOs) and institutions can also fill their role in providing support for WSMEs from a different angle. At a pan-regional level, a think tank organizations such as the Konrad-Adenauer-Stiftung (KAS) and a women-in business community enabler such as Woomentum[42] could partner with other organizations, such as the ASEAN SME Agencies Working Group (SMEWG), the ASEAN Confederation of Women's Organizations (ACWO), or United Nation (UN) Women with the specific objective of promoting digitalization among WSMEs in Southeast Asia. Be it through already existing programs such as SMEWG's ASEAN Strategic Action Plan for SME Development 2016-2025 or by establishing new initiatives, collaboration is key to expanding outreach to WSMEs across Southeast Asia and providing them with the essential support they need to thrive.

1.6 Conclusion

This introductory chapter establishes the foundation for the overall report and provides an overview of the main findings, and consolidates the recommendations to emerge from the different country reports. The chapter concludes that digitalization for WSMEs in Indonesia, Myanmar, Malaysia, and Cambodia has significantly been enhanced during COVID-19, but still remains challenging for many WSMEs to sustain or improve. Digital solutions can help with women entrepreneurs' typical challenges in terms of time and mobility, as well as with the existence of long-standing social and cultural discriminations. Women entrepreneurs tend to face more challenges in terms of access to information, funding, and operational issues of their businesses to support their enterprise's growth.

In the following chapters, this study provides a more in-depth analysis of the opportunities and challenges women entrepreneurs face in Indonesia, Myanmar, Malaysia, and Cambodia. In particular, chapter 2 (Indonesia) details gender-based issues faced by women participants and presents a model of digital adoption intensity, including the correlation between how much digital technology adoption has occurred and how many challenges have been overcome by the participants. Chapter 3 (Myanmar) describes interesting facts about the country and the relationship between gender and digitalization. It shows that while customer demand and workforce digital readiness were the key decision factors for digitalization, gender was not seen as a barrier. Chapter 4 (Malaysia) suggests the cultural and mindset problems, which were prevalent amongst women participants, could be a gender-related issue that has been perpetuated by society and/or the education system. Lastly, Chapter 5 (Cambodia) explains how digital technology was not considered a top priority until the COVID-19 outbreak and that despite the obvious advantages of digital technologies, awareness and digital literacy skills or avenues for enhancing these skills are reported to be the main challenges.

1.7 Endnotes

1. ASEAN is an intergovernmental organization aimed primarily at promoting economic growth and regional stability among its members. There are currently 10 member states: Indonesia, Malaysia, Philippines, Singapore, Thailand, Brunei, Laos, Myanmar, Cambodia and Vietnam.

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2 Indonesia Case Study

2.1 Summary

The research aims to investigate the current and prospective opportunities that digitalization offers to women-owned small and medium enterprises (WSMEs) in Indonesia, and provides recommendations for mitigating challenges related to digital technology adoption for all ecosystem stakeholders. The methods of analysis included: 1) reviewing publicly available data, 2) conducting in-depth semi-structured interviews with 26 WSMEs and 5 ecosystem experts, and 3) consulting on preliminary findings and co-creating recommendations with 7 key stakeholders. Results of the data analysis were structured around a 4-pillar framework below:

Pillar 1: Access to Financing. Most WSME participants utilized internal financing, while some utilized external financing, such as bank loans. The digital adoption rate in financing was found to be low due to their aversion to taking risks, with tendencies of only pursuing financial options that seem to be 'familiar' and 'safer'.

Pillar 2: Access to Mentoring, Networking, and Skills. All WSME participants expressed the need for offline, face-to-face interaction and long-term engagement with mentors so that the skills and knowledge that they are exposed to become complete and sustainable. Despite concerns related to interaction limit and intermittent internet, the participants were found to be open to explore networking and learning opportunities online.

Pillar 3: Business Processes and Management. Digital technology adoption for business processes was found to be more intense in the medium enterprise (ME) than small enterprise (SE) participants. Findings suggested that entrepreneurial motivation influences the participants' business adaptability, including digital adoption.

Pillar 4: Crisis Management (COVID-19). Digital technology adoption was found to be salient amongst the participants in helping them survive COVID-19. However, findings suggested that the role of digitalization was mostly to keep their business running and not to open up opportunities to optimize the situation.

Findings were discussed by the experts and analyzed to formulate recommendations that include:

1. Encourage WSMEs to comply with government regulations to ease business processes and access to financing. The government can enable the process to be carried out digitally, making it more transparent and efficient. The private sector, especially women-in-business associations and communities, digital transformation actors, and entrepreneurs in the ecosystem can advocate the benefits that can come from complying with the regulations.

2. Continue to develop WSMEs' capacities to manage their enterprises. The government can help to improve this by enhancing public-private partnerships to supply subsidized quality training. The training can be done digitally and targeted for the women who own enterprises themselves or their employees. A method that may prove helpful in erasing doubts and fear from digitalization is to expose WSMEs to success stories of digital tech adoption by other women with the hope that this will inspire them to do the same.
3. Develop risk and crisis management plans in anticipation of future turmoil. The government can help overcome this by promoting existing loan relaxations, tax waivers, and subsidies to WSMEs and not only those at the micro-level to help extend the life of these companies during a crisis. WSMEs should be further encouraged to join in business associations—preferably women-focused ones—to enable knowledge-sharing of risk and crisis management strategies.
4. Increase awareness of data privacy and security. The government can be more firm in monitoring and enforcing electronic system operation and transaction laws. WSME mentors and trainers can take a different approach to the problem by incorporating data privacy and security issues into digital literacy training to provide WSMEs with sufficient knowledge to protect themselves and their customers.

In future research, getting a larger sample size and facilitating deeper observations may yield important information to understand gender-related challenges women might experience and its relation to the enhancement of digitalization amongst WSMEs.

2.2
Country Background

Digitalization and Economic Growth

The growth of Indonesia's economy has been undeniably accelerated by digitalization. In the past few years, large companies all over the world have invested heavily in Indonesian tech startup companies that resulted in the production of four unicorn companies[43] (Gojek, Traveloka, Tokopedia, and Bukalapak), the largest number in Southeast Asia. Although a recent World Bank report suggests that the impacts of COVID-19 provide an unavoidable sobering economic lesson for the region, Indonesia seems to be confident that digitalization can help the country navigate the crisis.[44] This confidence is boosted by the fact that internet penetration in Indonesia has reached 64 percent, an increase of 17 percent compared to the previous year.[45] This trend cannot be separated from the construction of a massive, nationwide internet network using fiber-optic wires called the Palapa Ring launched during President Joko Widodo's first-term administration.[46] However, despite these efforts, Indonesia is still spending less on information and digital technology compared to its neighboring Asian countries.[47] According to Cisco's Digital Readiness Index 2019[48], Indonesia is, in fact, still considered to be at an intermediate stage of digital readiness. While mobile platforms are abundant and app-based services are being rapidly adopted, the country is still focusing on providing reliable connectivity and devices throughout the country.

Digitalization and SMEs

Small enterprise (SE) in Indonesia, can be defined as a company with annual revenue between approximately USD 20,000 - USD 170,000 (IDR 300 million and IDR 2.5 billion), whereas medium enterprise (ME) can be defined as a company with an annual revenue between approximately USD 170,000 - USD 3.4 million (IDR 2.5 billion and IDR 50 billion).[49] The latest data from the the Indonesian Ministry of Cooperatives and Small and Medium Enterprises (MCSME)[50], showed that in 2018, the combined contribution of small and medium enterprises (SMEs) to the Indonesian GDP was 23.3 percent (IDR 3,270,819.7 billion), lower than the contribution of micro-enterprises.

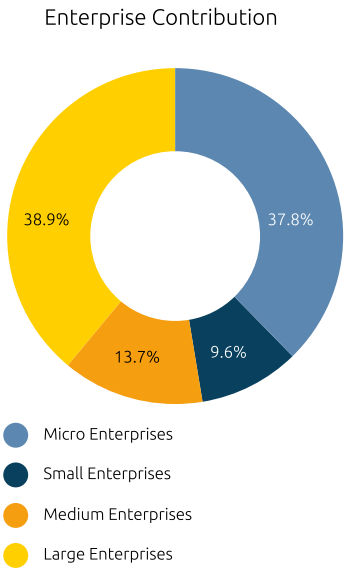


Figure 2.1: Enterprise Contribution to Indonesia's GDP in 2018

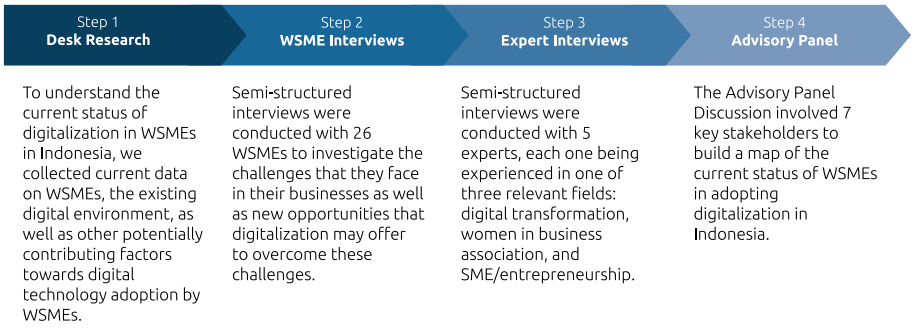
Nevertheless, SMEs are still part of the backbone of Indonesia's economy. The latest Oxford Business Group report[51] listed that Indonesia was home to 2000 technology startups, 150 fintech lending startups, and 75 fintech payment startups. SMEs in Indonesia are showing high enthusiasm for digitalization, having seen an increase of 104.4 percent in marketplace adopters in a one-year period (2017-2018).[52] However, Indonesia still has quite a long way to go in digitalizing SMEs, especially during the COVID-19 pandemic. In June 2020, MCSME stated that only 13 percent (approximately 8 million) of micro, small, and medium enterprises (MSMEs) had adopted online marketplaces despite an 18 percent increase in e-commerce sales in May 2020.[53] Unfortunately, there is no breakdown data about the distribution of micro, small, and medium enterprises that have adopted online marketplaces, or how many WSMEs have adopted online sales through marketplaces.

In the current digitalization and SME ecosystem of Indonesia, the role and contribution that women play are still unclear. Although most laws and policies for SMEs are gender-neutral, women in Indonesia are often faced with discriminating social norms and various forms of violence.[54] In a period of 12 years, violence against women cases in Indonesia have increased by 792 percent (almost 8 times), including domestic violence and various types of cyber crimes against women.[55]

Through this report, the authors aim to clear the fog surrounding the relationship between WSMEs and digitalization, especially during the COVID-19 pandemic. They focused on mapping the current state of digitalization adoption by WSMEs in Indonesia and whether it is enhanced during the COVID-19 pandemic to understand the extent to which the various aspects of their business have or have not been digitilized. Based on these findings, they are also able to highlight the challenges that WSMEs in Indonesia may and do face and shed light on the new opportunities that digitalization may and do bring to overcome these challenges.

2.3 Methodology

Using a qualitative approach, the authors drew upon publicly available data as well as information collected through interviews and panel discussions as the main sources of information. Due to COVID-19 and advised social restriction measures, the entirety of the research was conducted with the aid of online meeting platforms and conventional phone calls. The data collection process in this research was carried out in four procedural steps in the presentation below:



Participant Selection Criteria

WSME Participation

For this research, the authors separated small and medium enterprises solely based on annual revenue, as explained in Section 1. Based on this categorization, interviews were conducted with 26 female entrepreneurs who owned small or medium enterprises. The WSMEs participants were diverse in terms of age (23-72 years old), marital status, and located in 12 different cities throughout Indonesia. These participants represented each of the three main economic sectors (raw materials, manufacturing, and services), and they were further divided into 19 different sub-sectors. A relatively-balanced representation of women-owned SEs and MEs is also apparent in Figure 2.2, with most women have been in the business for less than 6 years.

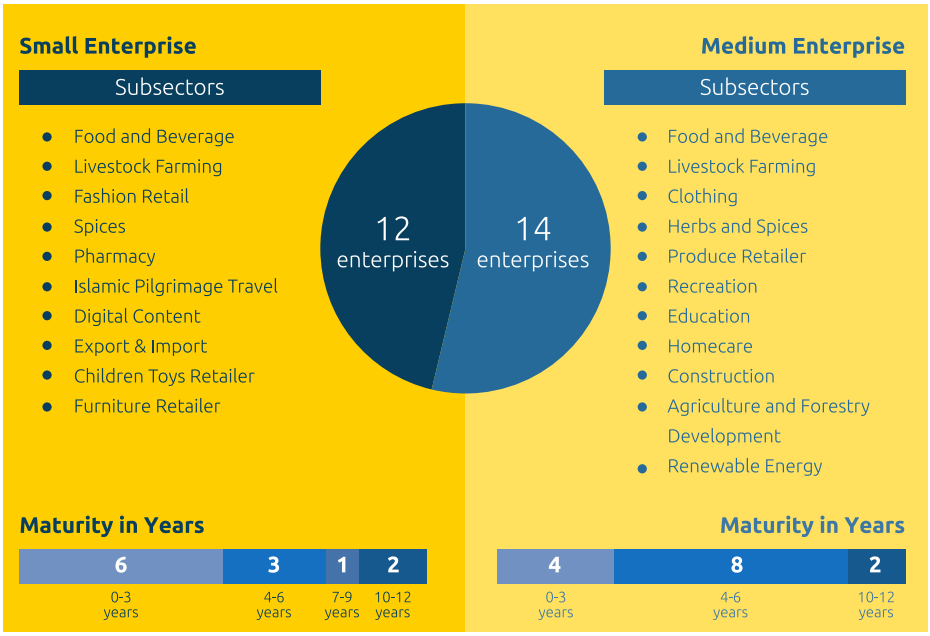


Figure 2.2: Breakdown of Participant Business Sectors

Expert Interviews and Advisory Panel

In the exploratory phase of this research, talking to experts was very important. As Bogner et al.[56] proposed, "conducting expert interviews can serve to shorten time-consuming data gathering processes". Through the interviews with 5 carefully-selected experts from digital transformation, entrepreneurship, and women-in-business association, the authors could get practical insider knowledge of the SME ecosystem and have access to information about a wider circle of players to prepare for the advisory discussion panel.

After analyzing the preliminary findings from WSMEs and expert interviews, the authors then invited more experts to participate in the advisory discussion panel. The panel was designed to reconstruct information gathered from previous interviews and draw benefit from it in the process of creating a set of practical and policy recommendations. The advisory panel consisted of representatives from policymakers, academia, leading female entrepreneurs, digital transformation expert, women-in-business association expert, and business investment expert. See Appendix A for the detailed list of expert participants and advisory panelists.

Data Analysis

The WSME interviews, expert interviews, and advisory panel discussion were structured into four pillars that the authors believe play an important role in the digitalization of businesses for women: 1) access to financing, 2) access to mentoring, networking, and skills, 3) business processes and management, and 4) crisis management (COVID-19). All interviews and discussions were conducted in Bahasa Indonesia (all participants' first language), and digitally recorded. Notes were written during the interviews and discussions were reviewed throughout the analysis. See Appendix B for a detailed elaboration of the data analysis process.

Limitations

While the research design aimed to work within the time constraints, the research is still limited in depth and breadth. The data was collected in just over 4 weeks during the COVID-19 pandemic. To maintain social and physical distancing, the authors relied entirely on mobile and digital technology to maintain communications and collect data.

In future research, getting a larger sample size and facilitating deeper, more personal discussions with female SME owners about digitalization in a planned and considered manner is encouraged. This may yield important information in the understanding of gender-related challenges these women might experience and its relation to the enhancement of digitalization amongst WSMEs.

2.4
Interview Findings

Every interview began by asking the participants whether they were aware of the digital technology that is readily available to them. They all displayed an awareness of digital technologies to some extent. What the authors found most interesting especially at the SE level was that participants often spoke about digitalization as something inevitable. Phrases such as, "I am very open to technology" or "Like it or not, we have to adopt technology" were commonly found during interviews. It struck as being a template answer that they have learned to repeat. In the following sections, the authors discussed the relationship between digitalization and WSMEs to understand whether this awareness translates to the adoption of digital technologies in various aspects of their business.

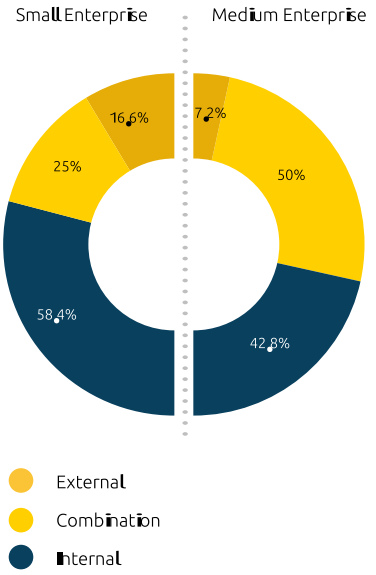


Figure 2.4: Breakdown of Financing Sources in SE & ME

Pillar 1: Access to Financing

The majority of WSME participants used internal financing to run their business, yet a small fraction of the group rely solely on some form of external financing. Of the 50 percent of WSMEs who used external financing for their business, the types of external financing that was most accessed were bank financing (as displayed in Figure 2.3), with 26.9 percent and 15.4 percent have used these two forms of financing, respectively. It was observed that external financing options had been explored by 8 MEs and 5 SEs.

Indonesia's SME ecosystem has various alternative financing options, such as grants, government funding schemes, fintech peer-to-peer lending (P2P lending), and crowdfunding. The authors noticed that the WSME participants were aware of the alternative digital financing options that are available for them.

However, the adoption rate of such financing options especially through digital financial services (DFS) was still low amongst the participants due to various factors. When asked specifically whether they have considered the P2P lending option, most of them had considered it but decided not to pursue it due to concerns related to a limited amount of funding available for them, data privacy and security, and/or higher interest rate. The participants assumed that alternative financing options such as P2P lending is more suitable for micro-enterprises due to the small amount of loans provided.

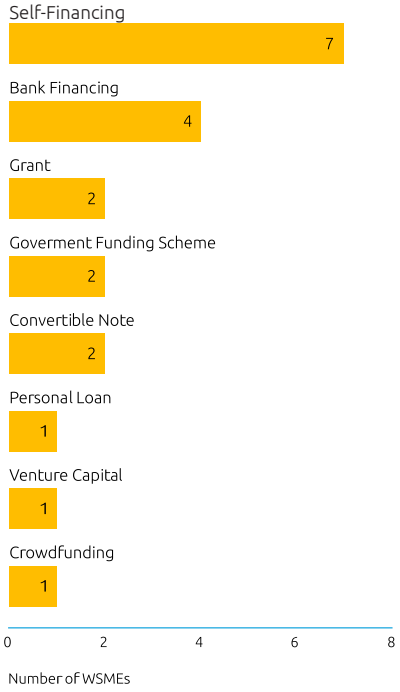


Figure 2.4: Breakdown of External Financing Sources Sought by the WSMEs Participants

There are other various explanations as to why the WSMEs participants were reluctant to seek funding through digital means. The authors tried to investigate further by asking participants about why they did or did not seek funding digitally. After collecting data, participants' responses were grouped into themes that are discussed in the following paragraphs.

Factors Influencing Decision-making in Accessing External Financing

The main contributing factors for not taking alternative financing options revolved around motivation, fear, and knowledge.

First, lack of motivation and fear were identified because many participants mentioned that there was no urgency in getting external funding. They suggested that pursuing alternative financing is not prioritized due to various potential risks. It implies that the influence of the inner circle and their religion has a major effect on how they see various forms of alternative financing. One participant stated, "We consider our Islamic religion, we are trying to survive without alternative financing." (ME4). She further explained that her concern was riba (often called usury) if she borrowed money from the bank or other financing alternatives. In Islam, the concept of riba is forbidden. Riba refers to determining interest or exaggerating the loan amount when repaid based on a certain percentage of the principal amount charged to the borrower.[57] Although there are many banks[58] and financial technology (fintech) companies[59] that claim to obey Islamic rules and regulations, some of the participants were persistent about avoiding external financing.

Second, those who have strongly negative opinions about alternative financing options suggested that they are aware of their lack of knowledge of the topic. This implies that their opinions are based only on statements they have heard from their environment. This unfounded fear is perhaps grounded in women's general tendency of being risk-averse, including in financial decision-making.[60] It was observed that of the WSME participants who were self-financed, many were through their inner circle (close family and friends) or directly from inner circle members. This aligns with the findings of Agussani & Bahri's research[61] that families play an important role in providing both financial and non-financial support to women entrepreneurs in Indonesia. This trend also reflects women's aversive nature to risk-taking[62], with tendencies of only pursuing financial options that seem to be 'safer'.[63] This attitude has been found to be consistent in women throughout the years, evidenced in the abundance of research on gender and entrepreneurship.

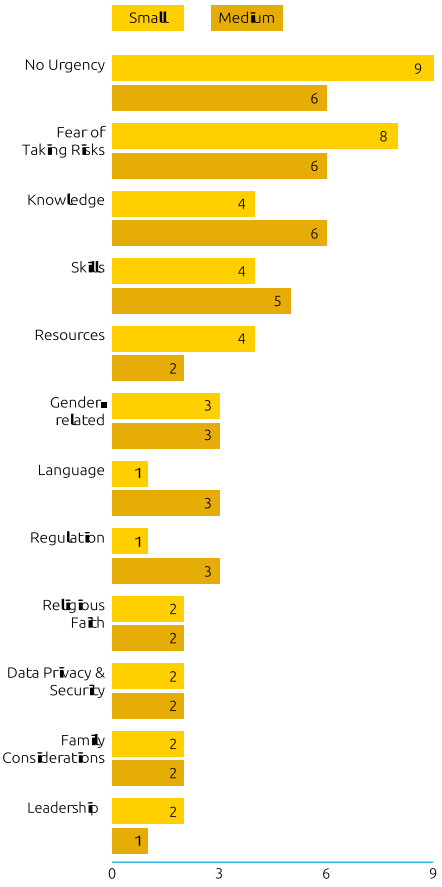


Figure 2.5: The Participants' Reasons for Non-Utilization of Digital Access to Financing

Pillar 2: Access to Mentoring, Networking, and Skills

In this area, there was no separation between the SE and ME participants when it comes to the expectations of what they can gain from mentoring and networking activities. In Indonesia, there is a diversity of formal and informal mentorship programs available for women entrepreneurs, both publicly or privately sponsored. However, the participants expressed the need for face-to-face interaction and long-term engagement so that the skills and knowledge that they are exposed to become complete and sustainable. An SE participant shared her concern about her short-term engagement with a mentor below.

> "I joined a 3-month mentorship program, and we met biweekly when I was just starting my business. I didn't have many experiences then. So, when I got feedback, I still had problems with how to implement it. And then, after the program was done, the mentor and I stopped keeping in touch.
>
> (SE11)

The participants mentioned that in order to learn and expand their network, they need to commit a decent amount of time and effort. This is often set as a lower priority as many of the participants believe that family responsibilities fall on their shoulders and should come first, even when their husbands or parents do not exert any such pressure on them. Therefore, many times they missed the opportunities to attend mentoring, networking, or skill-building programs run by the government or private sector even if they are held online.

Moreover, many participants have joined business communities and associations, but not specific for women-in-business. When asked why they did not join gendered associations, most of them were surprised that they had not thought about the reasons before. One participant with a differing opinion was quite vocal about this,

> “I am not so concerned about joining women-in-business associations such as IWAPI. Being in the same forum with middle-aged women who like to talk about their personal lives is not interesting for me. I utilise the sharing session culture that I have in my family. We have a weekly Zoom[64] sharing session where each of us takes a turn to share new knowledge. So far, for me, that’s very effective.
>
> (ME10)

The authors investigated further why those that used mentoring decided to use it and how they found it. The authors also discussed the awareness and understanding that the participants had towards digitalization in relation to mentoring, networking, and skill-building in the following section.

Factors Influencing Digital Adoption in Accessing Mentoring, Networking, and Skills

Mentoring

The study suggested that there is a strong need for face-to-face and long-term engagement with mentors who women entrepreneurs can trust and respect to discuss business-related challenges. To secure accessibility and reliability of their mentors, many participants seek guidance and mentorship through family and their inner social circles such as internal team members or investors. “My father is my mentor,” said SE4. Furthermore, a ME owner expressed a desire to find a reliable mentor in product development that she can engage for a long period of time, but she just did not know how to find mentors outside her inner circle. These situations had made the participants refrain from searching for mentorship online.

Networking

Many participants were more likely to explore the opportunities through both offline and online channels. Based on their experience attending virtual events organized by the public and private sector on Zoom, Facebook-owned networking sites[65], Youtube, or other virtual conference platforms, lack of direct interaction with speakers and other attendees have become a major issue. The common motivation to attend online networking events was COVID-19. Some participants admitted that because of COVID-19, they were forced to join online events. An SE owner mentioned she only attended online networking events twice during the COVID-19 pandemic because she usually knows of and attends offline networking sessions.

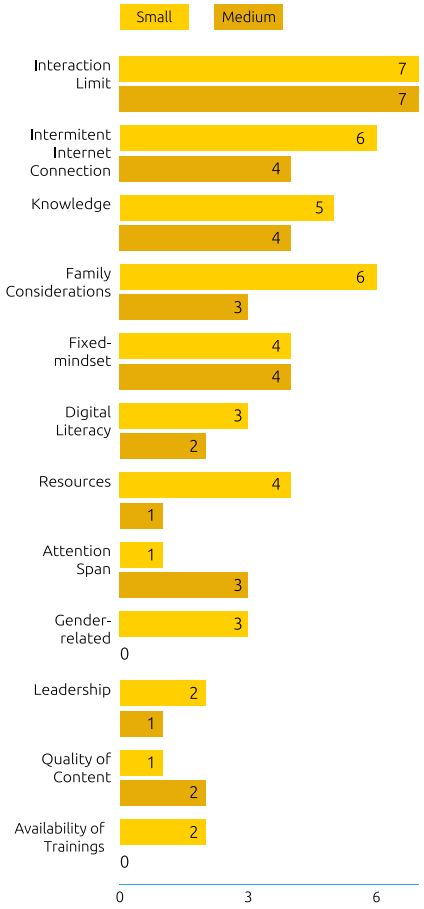


Figure 2.6: Factors Affecting Digital Technology Adoption in Access to Mentoring, Networking, and Skills

"Due to the pandemic, I definitely join the online ones now," (SE10).

Moreover, most interviewees suggested that virtual networking is not ideal in a situation where access to stable broadband is unpredictable. Intermittent internet made it difficult for the participants to get accurate information from the speakers. This problem was encountered by the participant and perpetuated by the current situation where all participants had to work from home during the COVID-19 pandemic. To attend online networking events from home was challenging. "The challenge is the connection. There's a limit to how effective we can get all the information. Another thing is that the environment needs to be conducive for a webinar." (SE7).

Skill-building

Despite the interaction limit and intermittent internet connection, all the participants showed eagerness in learning. Many had mentioned finding sources of information through electronic books (e-books), podcasts[66], online sharing sessions done through video conferencing tools, and other online learning platforms. Interestingly, most participants utilized instant messaging applications such as WhatsApp to connect and learn from their peers.

Additionally, the participants mentioned that they found it tricky to access information about mentoring, networking, and skills online due to the abundant information provided on the internet. They often felt unsure of where and how to start. That is why they had opted for a strategy of using inner circle connections for advice on how to find the right information online. Some participants followed social media accounts that they admire in the hopes of being updated about opportunities for virtual events. The most frequently mentioned social media in the interviews were Instagram and Facebook.

Through observation and interviews, the authors are positive that digital networking events and learning had started to become more popular in Indonesia during COVID-19. However, there are perhaps many female SMEs owners that might need a little help in understanding why this can be done online, where to find information, and how to do it.

> I haven't searched for mentors online, but I usually go to the MSME agency[67] in my city. So, whenever we have a problem, we can go and talk to them. For example, to obtain a Halal certificate for my product,[68] I utilized a Whatsapp group created by the MSME agency so I can learn from my peers. So, fellow MSMEs feel 'we are in this together'. We feel optimistic and confident that we could go through this time to obtain a Halal certificate.
>
> (ME2)

WSME Highlight 1: Rasha Nusantara

Ayu Budiyanti, Co-founder of Rasha Nusantara

Ayu Budiyanti is the co-founder and Chief Marketing Officer of Rahsa Nusantara (https://www.rahsa.id/), a medium enterprise providing traditional herbal concoctions. Together with her husband, Hatta Kresna, she started the business on a small scale in 2016 with the goal to preserve the culture and local wisdom, encourage conscious living, and nurture women empowerment by employing marginalized women in urban areas. Rahsa Nusantara manufactures traditional herbs and spices into various natural-based products such as essential oils, seasonings, snacks, and jamu.[69]

Budiyanti explained how digitalization has helped her develop herself into the entrepreneur she is today through the mentors and networks she obtained as one of the grant winners of Investing Women Australia Awards 2017.

With the use of digital technology, Budiyanti continuously seeks to increase her skills and knowledge. She obtained a scholarship for a short course from Wharton School, which also allowed her to further enlarge her network. She most highly values the experience and opportunity that the Australia Awards has given to her, especially with the kind treatment that she was not able to receive in her own turf.

Her openness to digitalization also translates to her continuously growing use of digital tools for her business processes but she wants to ensure that the technology that she uses still has a sense of personal and human touch. Initially beginning with selling her products through online marketplaces, she was unsatisfied that they had no access to customer data and was inspired to then build her own online platform in order to create more data driven decisions.

> At the time, my third child was only 3 months old and was still depending on me for feeding, and since the beginning, we never had a nanny or babysitter. So I asked permission from the Australia Awards team if I could bring my baby along and I promised that my baby would be calm while I pitch. In my arms, my baby was calm the whole time, and they really appreciated what I did. I once requested the same thing in Indonesia to an Indonesian investor and was rejected from the very beginning.
>
> Ayu Budiyanti

Pillar 3: Business Processes and Management

Digital adoption for business processes was higher in the ME than SE participants. However, the process of adoption was not linear amongst SEs and MEs. In addition to adopting sales/marketing and accounting tools, many participants had adopted collaboration tools, or experimented with integrating digital technology into their product/service development. In the following discussion, the authors identify the most and least commonly used applications for business processes amongst the participants.

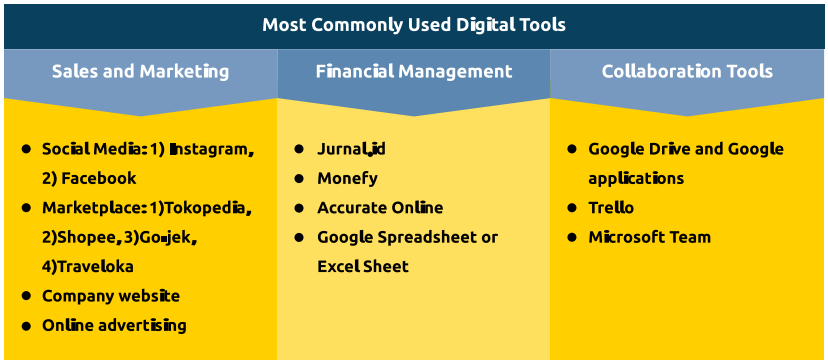


Figure 2.7: Most Commonly Used Digital Tools by WSME Participants

All participants had at least, adopted one or two digital sales/marketing tools, with Instagram as the most popular. However, not all of the participants found social media to be the most effective means, depending on the types of business they are running. For example, an ME in the renewable energy business expressed her concern about her digital sales/marketing strategy.

> Because we are in the renewable energy sector, we use technology a lot in product development. But, to be honest, I feel I'm just a bit ignorant. Although my team is now developing our website for branding and marketing, I still feel that using social media or websites for my business is not that important. I think our challenge now is marketing and sales. If I think about it, lots of companies develop a website to help engage customers. I questioned myself, why didn't I think about website development before? At the moment, we are still stuck in using WhatsApp to contact or communicate with our business clients.
>
> (ME8)

As experts suggested, in SMEs, most of the business process decisions were handled by the owner. In addition to resource and skill constraints, the delegation process can also be limited due to the small team size. These issues were found to be more present in SEs and may indicate that the owner needs to understand digital technology herself. For example, an SE participant shared her experience in choosing the right accounting tool for her business.

> I checked various local accounting applications such as Jurnal.id before I ended up choosing Accurate Online. I compared the pricing as well. I chose cloud-based software because I have children. I mean with cloud-base tools, I don't have to go to the office to check my finances. I can check it from home, from my smartphone. And I can see everything, including taxes, inventory, sales. It's easy.
>
> (SE5)

Although many participants have adopted digital technology for business processes, the authors observed the adoption could be further optimized. Many participants wished to adopt more technologies into their business. Conversations around the Internet of Things (IoT), Artificial Intelligence (AI), and blockchain were present in the research. Interestingly, a few participants had mentioned putting more digital technology adoption in their business pipeline. "We are trying to experiment with utilising AI to improve our new product, and it's in the pipeline this year." (ME1). With many opportunities yet to be utilized, the contributing factors influencing the digital adoption for business processes are discussed in the following section.

Factors Influencing Digital Adoption for Business Processes and Management

Although markets are changing rapidly, change is still something that is quite tricky to achieve in business. Faced with the requirement for speed, uncertainty, complex information, technology, competition and unpredicted global crisis (COVID-19), not all WSMEs can adapt well to change. Given the constraints associated with limited resources, talent, and skills, the problem with optimal technology adoption amongst the participants is not surprising.

Another important factor for the lack of optimal digital adoption in the business process is change management. Change management refers to the organizational process of continually renewing directions, strategies, and capabilities to serve the customers' needs.[70] Expert interviews suggested that too often, SMEs are stuck in old patterns of seeing and acting. Similarly, the participants noted that they were comfortable with the way things were, and many of them admitted to having very limited time to reflect or learn effectively from their experiences.

With regard to retrospective activities, the participants mentioned they were struggling to juggle between business and family obligations. This issue is most notably present amongst the participants who have children. An SE owner explained that she prioritized family and therefore set a low bar for her business.

> "I need to be transparent with my team, especially now that I am pregnant. I have the lowest energy ever. I need to lower my expectations, take it one day at a time. My eldest is still a toddler and now I am pregnant. I need to remind myself that I am doing enough. If I'm stressed, my baby's health and my wellbeing at home will be affected.
>
> (SE5)

Another explanation to this is perhaps related to women's motivations for starting their business. Wulandari et al.[71] stated that entrepreneurial motivation strongly influences women's business performance. When the enterprise is driven by less ambitious motivations such as fear of unemployment or to support the family, women are less likely to share knowledge with one another.[72] Ultimately, this results in low capability of growing their business and adopting relatively new concepts such as digitalization. This is likely to reinforce their reluctance to introduce change until circumstances force them to. One interesting case came from an ME owner who was forced to adopt a digital sales and marketing approach when she found that her brand had been pirated by counterfeiters.

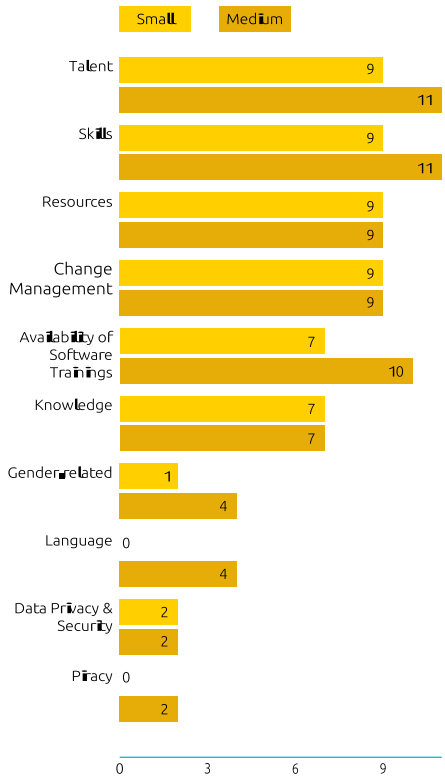


Figure 2.8: Factors Affecting Digital Technology Adoption in Business Processes and Management

> I didn't plan to create an online shop initially, because many (counterfeiters) sold fake t-shirts online, that's when I realized. The funny thing was that I was once interviewed by a radio station, the radio wrote a piece of article as a result of the interview, and the pictures of my "products" were published. When I read it, I said, 'Wait a second, this is a fake product! Where did you get it from?' and apparently, the radio team took the pictures from Google image.
>
> (ME3)

Moreover, many participants mentioned having to deal with gender-related prejudices and discriminations at business meetings/ negotiations.

> I feel so strongly about being discriminated against because I'm a young woman. People think I am just an assistant to my partner. I mean, I am lucky that my partner respects my skill-set, so he often defends and protects me during meetings and business negotiations. You know, when I introduced myself first, people would doubt me. But, when I was introduced by my co-founder, people would respect me.
>
> (ME9)

Other examples of discrimination experienced by the participants included:

1. being rejected by the Indonesian investors or potential clients because of her gender;
2. difficult to access financing from the banks because some banks required her husband's signature to process loans or other financing services;
3. being treated in an unfriendly way when delivering samples to retail stores;
4. feeling responsible for adjusting her position around men;
5. feeling uncomfortable traveling alone for business reasons.

To conclude, the participants agreed that, in reality, women have a lot more responsibilities to juggle between family and business compared to men. It was hard for them to reflect on their experiences and plan organizational change in business. Many participants also argued that women do not have as much access to various aspects of business compared to men. As a result, many participants considered hard work as the only solution to avoid discrimination. They felt an obligation to prove to society that they are capable of running successful enterprises.

Pillar 4: Crisis Management (COVID-19)

In April 2020, MCSME prepared a stimulus package after receiving reports from 37,000 MSMEs severely hit by the COVID-19 pandemic.[74] The stimulus included loan relaxations, a six-month tax waiver, and cash transfer for micro-scaled businesses. The government prioritized the aid to be delivered to micro-scaled businesses because they were assumed to be most impacted by the crisis. From the total complaints about the impact of COVID-19 on businesses that MCSME received, only 12.6 percent came from SMEs, suggesting that SMEs are more able to survive during the crisis than micro-scaled businesses.

Interestingly, most WSME participants stated to have increased sales in April and May despite problems related to operations and productions. The increase in sales was salient in WSMEs who optimized digital sales/marketing strategies such as messengers, social media, marketplace, and website. They further explained that lockdown measures might have contributed to the increasing number of customers' screen time. "My sales have increased since COVID-19, because people prefer to shop online now," said SE4, who sold cakes online. The 88.5 percent of WSME participants stated that digital adoption in their business was also enhanced during COVID-19 for survival, and this trend was seen in both the small and medium enterprise groups.

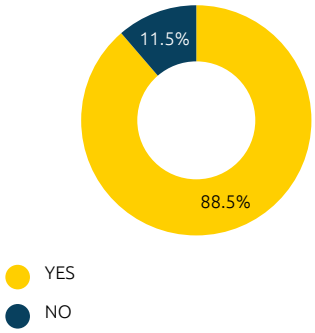


Figure 2.9: The Enhancement of Digital Technology during COVID-19

Due to limitations in physical contact, many SMEs began to build their online presence and conduct sales through online marketplaces. However, some increased their online sales activity because they have had an online presence since before the pandemic. Explored usage of online meeting platforms was also often mentioned by participants as a means of collaborating with the team or communicating with external parties. Additionally, many WSME participants utilized digital technology to transform their product/service delivery method to their customers. "I use the Gosend (in Gojek app)[75] a lot now to deliver the chickens." (SE12).

Most WSME participants were found to be resilient in the face of the pandemic crisis, having been able to sustain their businesses despite the drastic changes in the conditions of the market, even though some enterprises had to take dire measures and pivot their business in order to survive.

> "I am now running a souvenir business from the Middle East. I had to change direction in February 2020 because of the pandemic. Previously, I was running a religious travel company specialising in Umrah and Hajj to Saudi Arabia but then the Middle East experienced lockdown measures before Indonesia was officially COVID-19 positive, so I had no work then. Because of that, I had to lay off 4 people in my travel company, and the remaining 3 people are now still working to sell souvenirs. We started selling on social media from then on.
>
> (SE7)

Constraints regarding digitalization in business appeared in both SE and ME. What are the biggest challenges at the front of the mind for female decision-makers in these businesses? How is their variety reflected in the concerns they have about their operations? In the following section, challenges that the participants encountered in relation to digitalization is further discussed.

Challenges to Digital Technology Adoption

Although WSMEs showed interest in digitalization, the participants with lower levels of digital awareness and literacy may not fully grasp the potential opportunities and impact. The authors combined all the contributing factors appearing in all pillars discussed previously to find the major challenges to digitalization (Figure 2.10). Generally, the participants were concerned with their knowledge of digitalization and ability to keep up, the need to have resources to recruit and retain highly skilled staff with digital expertise, and change management. To fully understand if the business size reflects the type of challenges the participants encountered, the analysis into challenges faced by SEs and MEs are broken down in the following section.

Figure 2.10: Top 5 Challenges in Digital Technology Adoption Found amongst WSME Participants

Challenges Faced by SEs

SE participants mentioned having adopted a few types of digital tools, particularly to increase sales. When asked if they are going to adopt more tools, most mentioned to having limited resources, skills, and talent. A SE owner shared her struggle with digital adoption, In addition to the aforementioned limitations, the participants mentioned a lack of knowledge of the opportunities that digital technology can provide. This is even more difficult to realize for those who are not immensely ambitious in running their business. "Now, I just wanted to make sure of our production routine. No need for big ambitions. Our business has been profitable already. We just need to enjoy it." (SE12).

> "I did some research before subscribing to Kite (an inventory tool) for IDR 39.000 (approx. USD 2.65). So far among the others, this is the best and cost-efficient tool for inventory. Even after I found the cheap one, I still failed to use it because I am using my personal phone to do business. I need a new tablet to use this tool. Need to find a way to do it. The team doesn't have time and is not very disciplined to use it either.
>
> (SE1)

Challenges Faced by MEs

The top challenges faced by medium enterprises do not differ much from those faced by small enterprises, but the topmost challenge for WMEs is knowledge, instead of resources. According to the interviews, ME participants already have better access to resources which allows them to explore different types of digital tools to integrate into their business. With the abundance of information about digitalization, some ME participants suggested having been struggling to keep up with the current trends. Some participants had limited knowledge of the existence of various digital tools for their business. Moreover, there was a case where the participant had inaccurate comprehension about what a digital tool can do. *"I* used to use excel sheets for accounting, but we returned to using hand-written notes. The reason is that we cannot put our signature on an excel sheet, so we don't know if the expenses are true and who is responsible for that*"* (ME14). This participant insisted that she could not use a digital tool for accounting because there is no feature to track entry history.

Skills and talent within the team were found to be a challenge in MEs, as it is for SEs, because participants themselves implied an underlying belief that for women to have difficulties with technology is a given. Some cases suggest that they were open to tool propositions made by male teammates and open to being taught how to use it. However, without any such support, it would be difficult for them to adopt digital technology on their own due to their limited knowledge.

> "
>
> The perception is that Moms like me don't understand technology. So, I rely on my general manager who is male to teach us how to integrate tech into the business.
>
> (SE1)

Opportunities for Digital Transformation

Digital transformation has become a buzzword in business. It essentially refers to a process where the integration of digital technologies triggers a disruption in the way the organization operates and delivers values to customers.[76] After investigating contributing factors and challenges associated with the use of digital technology amongst WSMEs participants, the authors modeled the patterns in digital adoption intensity to identify opportunities for digital transformation.

Digital Adoption Intensity

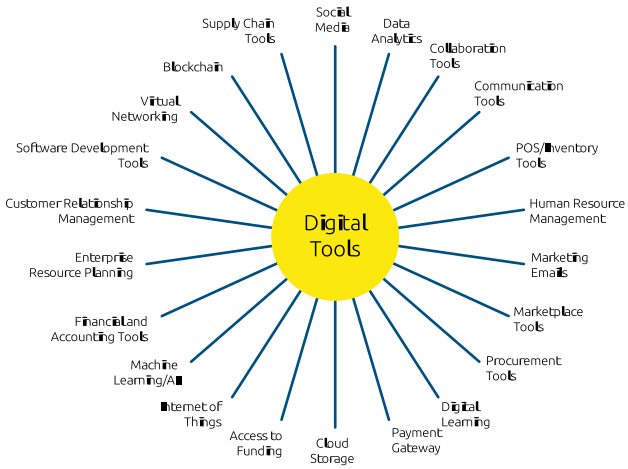


Figure 2.11: List of Digital Technology Tools Based on the Interview Findings

Digital adoption intensity was modeled by asking the participants if they had adopted digital tools for their business. The list of tools used to create the model is based on the interview findings presented in Figure 2.11. After that, the authors mapped the adoption by scoring how many tools the participants used to determine the digital intensity level from a low, medium, to high by using a simple calculation below:

$$Intensity = n / 22$$
$$0\% < Low\ Intensity <= 33\%$$
$$33\% < Medium\ Intensity <= 66\%$$
$$66\% < High\ Intensity <= 100\%$$

Equation 2.1: Digital Intensity Level Formula

The authors then matched the results against the number of challenges that the participants had mentioned in the earlier discussion. The results are presented in Figure 2.12.

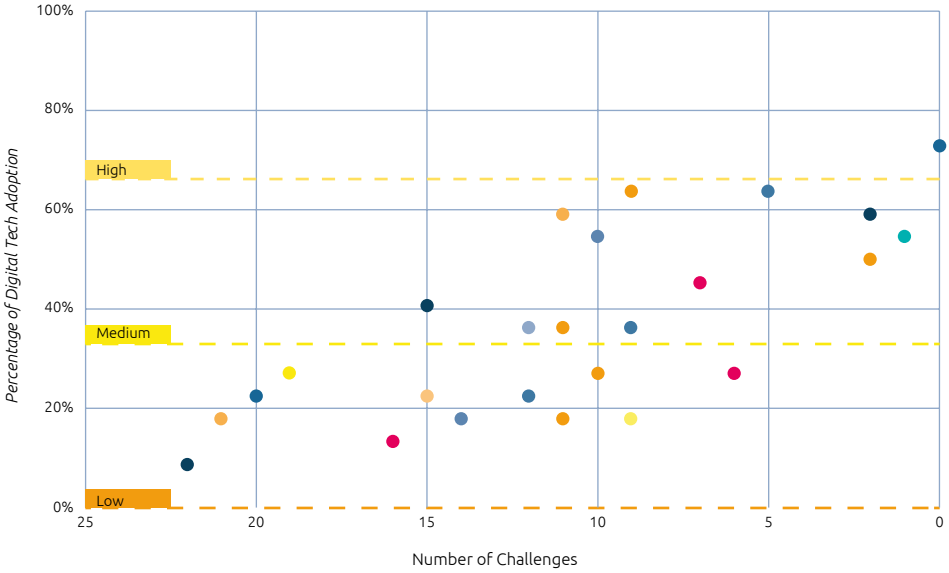


Figure 2.12: Model of Digital Adoption Intensity amongst WSME Participants

The model of digital intensity above shows the correlation between how much digital technology adoption had occurred and how many challenges had been overcome by the participants. The vertical axis represents the percentage of digital technology adoption, and the horizontal axis represents the number of challenges faced by the participants. The 25 colorful dots represent the 26 individual participants because there are two participants whose scores both in digital technology adoption and challenges are the same.

The figure above shows that 12 WSMEs being in the low level, 12 in the medium level, and 1 in the high level. Generally, it indicates that the more challenges WSMEs are able to overcome, the easier digital adoption happens. Participants in the low level were still faced with quite a number of challenges that hinder their adoption rate. Interestingly, these enterprises at the low level collectively mentioned change management, knowledge, skills, and talent (100 percent average) as the main barriers for their technology adoption. Companies at this level mostly depend on their founder to make decisions. So, when the founder does not buy into the idea of digitalization, the company is highly unlikely to adopt digital technology.

Based on the findings, WSMEs take different paths to digital adoption. There were no patterns that show what tools were used exclusively by companies at low, medium, or high level. However, the participants in the upper-medium to high level started the transformation journey by creating vision, governance, and IT capabilities to become a company that is ready to grow with technology. According to the interviews, their intentions were clear: 1) they want to secure a larger amount of funding, and 2) they are confident to expand their business. These companies repeatedly built on their capabilities to transform its customer engagement, internal operations, and business models.

Growth vs. Profit Orientation

There were 7 WSME participants who claimed to focus on growth over profit. Interestingly, as suggested by some experts that we interviewed, SMEs that focused on growth tend to adopt technology more intensely than those that only focus on profit.

> Based on my observations, startup founders tend to adopt more advanced digital technologies compared to conventional SMEs whose focus is profit only. But I think if I'm not mistaken, there aren't many female startup founders in Indonesia.
>
> (Digital Transformation Expert)

Startups or growth-oriented entrepreneurs focus on the scalability of their business. With digital technology, they prepare their business to become ready for Venture Capital investment. All companies which are at the upper-medium and high level are growth-oriented and when explaining the opportunities that digital technology has for their business, they implied that digital technology is at the center of what they do. *"*We will continue to push ourselves to adopt new technologies as long that it's aligned with our needs and goals. *"*(SE2).

Small vs. Medium Enterprises

The research revealed that ME participants adopted more technologies compared to SE participants. MEs with the highest adoption rate implied that because they now have more resources, they are able to explore different digital tools for their business. At this stage, many of them stated to have a stronger drive to scale up that include: 1) the drive to take care of their staff, 2) responsibilities to investors, and 3) ambition to compete because they have seen and experienced tangible impacts that tech has for their business. In other words, every sub-sector — from raw materials, manufacturing, to service — have benefits of digital transformation.

Exploring New Opportunities

The data shows there are emerging opportunities for digital transformation among the WSMEs participants. However, the opportunities that are available would understandably be different in different contexts, as they would also depend on environmental factors that may enable or hinder the availability of these opportunities, such as social and political conditions, culture, and of course, digital infrastructure. Based on the findings, the authors were able to map the areas in which digital technology has provided opportunities for the WSME participants in Indonesia and what other new opportunities they can explore.

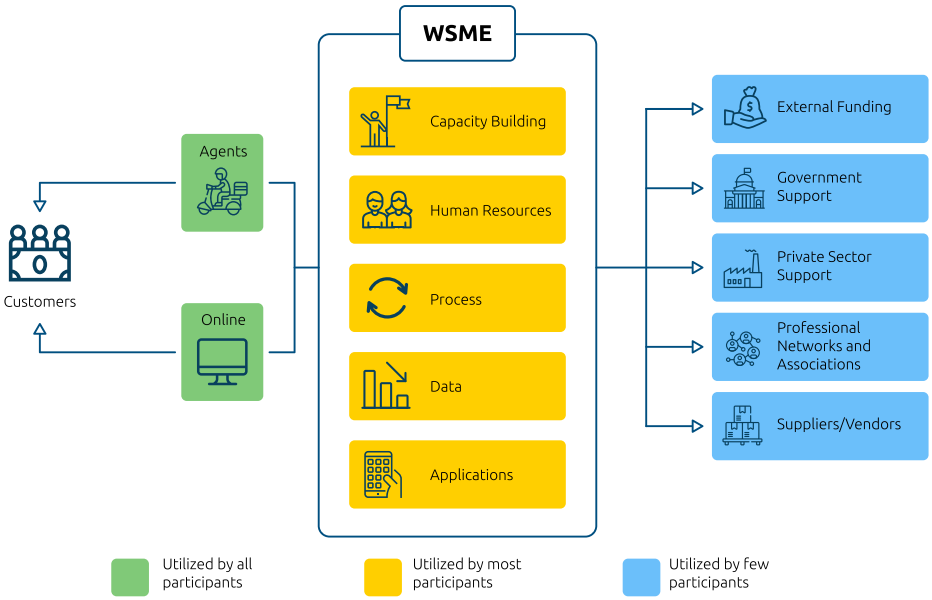


Figure 2.13: Map of Opportunities in Business Enabled by Digitalization

The digital opportunities that were seen implemented in all WSME participants (green boxes) were used to increase sales and customer outreach. Social media and online marketplaces were frequently mentioned for this purpose and had been enhanced during COVID-19. As a country with the fifth-highest number of hours spent on social media daily[77], it comes as no surprise that this particular digital technology is the first stepping stone for WSMEs to digitalize their businesses.

Ideally, WSMEs should have a plan mapped out in order to grow their business. However, many participants stated that their businesses were started organically without any prior planning and with profit at the front and center. They optimized resources that were already available and accessible to them and made decisions as they went along. Nonetheless, even the fact that they took a dive into business and have tried digitalization in small portions already opens the opportunity to grow the motivation to adopt tech even further in the future. Examples are in the form of the development of websites and mobile applications to suit WSMEs' own specific needs and the use of data analytics to guide decision-making for the business.

As displayed in the diagram above, the integration of digital technology to aid external relations and support the company (excluding connecting to customers) have not been optimally utilized. Yet, there already exist so many digital technologies that can help in these areas. In order to help WSMEs understand these new opportunities, they need to be exposed to inspiring stories of other women who have succeeded in growing their businesses with the aid of technology, for example, Olva Patriani, one of the WSME participants that is featured as a case study in the next section.

WSME Highlight 2: Botanina

Olva Patriani, Co-founder of BOTANINA

Olva Patriani is the Chief Marketing Officer of Botanina (https://botanina.com/), a medium enterprise focusing on providing essential-oil-based products made from natural organic ingredients. Botanina was founded on February 15, 2014, with her friend, Agustina Ciptarahayu, after going through a long research and development (R&D) process since 2011. The two co-founders were first drawn to the idea of homecare products after reading a journal article from the United States Environmental Protection Agency (US EPA), which stated that indoor pollution levels were 2-5 times higher than outdoor air pollution levels due to various sources including household cleaning products, skincare products, air fresheners, etc. They also noticed that many of the natural homecare products available in Indonesia were imported at quite expensive prices. So, she started making products that can be used at home. Botanina has developed 5 product categories: homecare, personal care, baby care, health care, and aromatherapy.

Starting the business in the age of digitalization, Patriani stated that her company has been well-adapted to change and always prepares to adapt consistently to ongoing digital technology inventions and crises (COVID-19).

Patriani further explained that using digital technology has been helping her manage her time for work and family better. From only adopting social media as a marketing tool, Botanina has now upgraded their digital adoption to using HR, financial management, collaboration, and software development tools as well as cloud storage and data analytics. She felt more efficient running her business and she hoped that she could continue making the company's working culture become more conducive for women. Patriana said she is excited with how far digital technology can take her business to scale. The company now is actively engaged by potential individual investors and venture capital ("VC").

> "I've had clients question my capability as a female leader before. They associate women with being emotional, but I think men are emotional too. I've seen that they also bring their emotions and their families into consideration during negotiations. Despite all this, I still try my best to stay professional. No doubt, digitalization definitely helped a lot with our business. First, it began by helping us increase our sales and now it's helping keep our work at the office tidy and organized. Communicating with the team and with clients is also easier now. We try to integrate technology as much as we can into the business to achieve our goals and I think this has helped bring us to where we are today, where we're confident enough to start thinking about growth and investments and prepare to move even farther ahead.
>
> (Olva Patriana)

2.5
The Future of Digital Transformation for WSMEs

Expert Interview Findings

Interviews with 5 experts who specialize in gender-lensed investment, women in business associations, and digital transformation were also conducted (See Appendix A for a list of experts). The interviews were carried out to better understand the relationship between the role of public and private sector support in the WSMEs ecosystem and how that relates to digitalization. This process was also designed to inform the advisory discussion panel later to create recommendations.

Pillar 1: Access to Financing

As digital means of obtaining financing are already relatively available in Indonesia, the experts mostly highlighted the existing challenges that hinder women from digitally accessing financing. Many sources of government aid in the form of funds are already available for SMEs, yet the requirements to apply for such support are often unattainable due to limited digital infrastructure and poor digital literacy. An example provided by an expert in women's associations was that somewhere this year, WSMEs were required to send digital documents to a government website that is not mobile-friendly, yet many WSMEs did not have access to laptops/computers and did not know about mobile scanning applications. As mentioned in the WSME findings, some participants admitted to preferring smartphones for work.

Scientifically, women are known to be more risk-averse and therefore are less likely to explore technologies that are unfamiliar to them, including for financing purposes.[78] This attitude in women has also affected their chances of gaining investment opportunities. Due to their more realistic and conservative nature, women often seem less confident compared to their male counterparts, putting them at a disadvantage when competing in pitch presentations to gain investments.

> Oftentimes, I hear people saying that female entrepreneurs tend to be more risk-averse. For example, when female founders pitched about their business growth projection, they could sound rather realistic compared to their male counterparts. Men tend to be very confident and energetic. Male founders have this ability to make their growth projections sound so 'wow' and that is what draws investors' attention.
>
> (Gender-lensed Investment Expert)

Pillar 2: Mentoring, Networking, and Skills

Poor digital infrastructure was repeatedly mentioned by experts as an obstacle for WSMEs and this also applies to accessing mentoring, networking, and skills. Low broadband reliability means that access to mentors and especially seminars and training are not received optimally. However, even if digital infrastructure were not a problem, WSMEs would still be faced with other obstacles discussed earlier. According to experts, organizations have experimented holding online networking events for SMEs especially during the COVID-19 pandemic, yet they are deemed to be ineffective as it cannot facilitate organic interaction amongst participants as offline events do.

Pillar 3: Business Processes and Management

According to the experts, many WSMEs need hard evidence of the benefits that digital technologies can bring for their business to be motivated and take the first step to adopt digital technologies. However, the most interesting statement provided by one of the experts was that digitalization of their enterprise could help empower women not only in their businesses but also their daily lives. They stated that by helping to increase business growth and revenue, digitalization ultimately gives women more power and puts them in a better bargaining position towards their families and most of all, their husbands.

Pillar 4: Crisis Management (COVID-19)

Consistent with the findings from the WSME interviews, the experts also stated that digital adoption had played a crucial role in helping WSMEs survive the pandemic. The experts put emphasis on the word 'survive', meaning that the role of digitalization was merely to keep their business running and not to open up opportunities to optimize the situation. Moreover, another expert also mentioned that having a positive cashflow allowed profit-oriented enterprises to adapt to crises better than growth-oriented enterprises due to the fact that they need to constantly raise funds to grow their business.

> "I have seen this in SEs. They are more empowered and have bargaining power, especially when they have better financial management, have employees, or employ relatives, neighbors to help the business. Their confidence level increases [...] Technology helps, especially during the pandemic. We push our members to attend digital literacy programs such as 'Womenwill' program by Google.
>
> (Women-in-business Associations Expert)

Data Privacy and Security

Data privacy and security was a serendipitous discovery in this research. A few WSME participants that were interviewed had already displayed a good sense of digital awareness along with its advantages and disadvantages, have expressed concerns about online data privacy and security. However, only 4 SE participants articulately expressed these concerns, whereas the other majority of WSMEs did not have such awareness. Throughout the research, both SE and ME participants implied that they do not have enough knowledge to be able to give a credible opinion to explain their fear of data or when they were explaining data security concerns that have affected their digital technology adoption."I just heard more negatives than positives" (SE8). This is an alarming finding, as data breach occurrences have continuously increased with each year. [79, 80 & 81] In fact, one expert implied that security breaches have become common in the online marketplace ecosystem.

A digital transformation expert suggested that fintech companies are able to access merchant data through e-commerce. As many marketplace/e-commerce companies host a massive number of merchants, it is possible that fintech companies have access to an equally immense volume of valuable data. However, the authors could not uncover what agreements exist between fintech and marketplace companies, as the three leading companies we had approached refused to be interviewed.

Advisory Panel

The advisory panel started with the discussion around challenges encountered in the WMSEs ecosystem based on insights from the WSME and expert interviews. It was followed by proposing practical and policy recommendations presented after the following analysis.

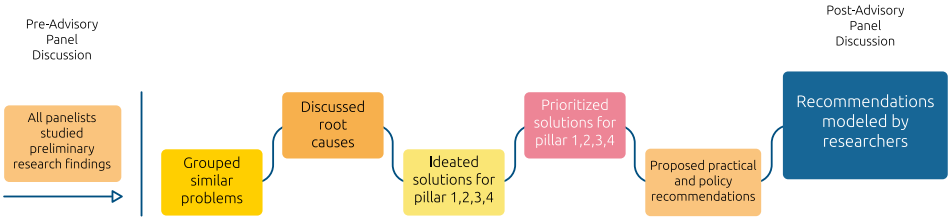


Figure 2.14: Advisory Panel Method

Lack of Capacity and Motivation amongst WSMEs

During the panel discussion, panelists agreed that all these challenges-lack of knowledge & skills (capacity) and motivation-were the ultimate result of gender-based cultural violence[82], indirectly affecting digital technology adoption by WSMEs. Johan Galtung explained that cultural violence represents the existence of prevailing social norms that make direct and structural violence seem "natural" or "acceptable". For example, the belief that women in Indonesia can be paid lower than men because they are considered to be less capable is still prevalent. In 2019, 78.26 percent of women in Indonesia received lower pay than men.[83] Moreover, gender-based domestic violence is still an issue that most women victims are still reluctant to speak up about in public.[84] This was made worse with the House of Representative officially declining the Elimination of Sexual Violence Bill proposal in July 2020 after the 8-year long effort done by the National Commission on Violence Against Women to propose the bill.[85] Such deeply rooted violence, in combination with women's risk-averse nature, creates an unfounded fear of technology in women. This is exacerbated by the fact that without tangible evidence of success, it is unlikely for WSMEs to optimize digital adoption in their businesses and worsened by unfamiliar and seemingly alien terminologies used in the field.

Lack of Change Management amongst WSMEs

The authors observed that many of the participants did not follow a well-prepared plan in digitalizing their business, for those who have already adopted digital technology. In line with expert findings, the advisory panel believed that this might be due to the lack of aspiration amongst WSMEs.

Panelists assumed many WSMEs to not have high ambitions for their business, as for many of them, the reason they started their businesses was only as a side project or something to fill their time, and not intended to be an entrepreneur. However, it is possible that the issue is not that WSMEs lack ambition, but have just never thought that being ambitious was an option at all due to pressures from their family or society that impose the idea that women cannot be too focused on business.

WSMEs' Resilience in the Face of COVID-19 as a Reactive Response

Although the participants were found to be resilient during COVID-19, crisis planning management was not part of many of the WSMEs business processes. When presented with this statement, the advisory panelists suggested that this may be due to the limited availability of benchmarking studies around crisis management, and as a result, WSMEs do not have any examples that they can refer to. It was also mentioned during the discussion that crisis management studies are plentiful in other countries, but the panelists assumed that these are not made accessible by the government.

Lack of Information about Government Programs

Mainly through the expert interviews, the authors realized that government programs to support SMEs in adopting digital technology are plenty in Indonesia. However, many WSMEs have no idea of the existence of these programs or have no access to such programs. When presented with this problem statement, the panelists stated that there is currently no integrated one-stop information center where SMEs can access information about programs, training, access to funding, or general WSME-relevant knowledge. The SME policy expert explained that the government, through MCSME has taken a step forward to support SMEs in Indonesia by building an integrated website for all things SME-related.[86]

> "Digitalization is needed, and that is why MCMSE partnered with LPEM UI to develop https://www.ukmindonesia.id/ .MSMEs can access this platform to search for information about brand certificates, mentorship, and incentives.
>
> (Policy Expert)

The website has been in indefinite moratorium since the authors last checked in September 2020, not allowing SMEs to register their businesses. Therefore, it blocks access to any information that WSMEs should be able to access otherwise. The authors believe that this is ultimately a reflection of how government programs are not developed scalably. Programs and training development seemed to lack prior research on which audience can take the most benefit from each program and how they can reach out to this specific group.

Problems with the Distribution of Government Aids

The authors found that government aid, in financial and non-financial form, is plentiful in Indonesia. However, they are not distributed fairly. An example of this was provided by one of the experts who stated that double aid was delivered to the same SME whereas other SMEs were not able to attain the support at all. This was caused by the fact that some SMEs were registered twice in two different databases while the presence of some SMEs was not even recorded at all. This signals a data synchronisation issue between different sources, causing an imbalance of aid delivery by the government.

With deeper analysis, the authors believe that the issue may run deeper than merely a synchronisation issue. The issues that were raised about the government during the panel discussion were perhaps merely symptoms of more serious fundamental issues. Data mismanagement and uneven aid distribution seem to be hinting at a lack of coordination between governmental organizations and failure to understand the real conditions in the field. Having fallen victim to these errors, it is understandable if WSMEs develop distrust towards the government. During the advisory panel discussion, one panelist contacted the authors privately to provide an opinion about the government that they preferred not to state publicly to the other panelists. It is possible that this small action was a sign of distrust or perhaps fear of the government.

Apart from having huge opportunities brought about by digitalization, Indonesian WSMEs are likely to continue to face challenges. This calls for the urgent need to build better pro-WSME policies and effective interventions.

Practical and Policy Recommendations

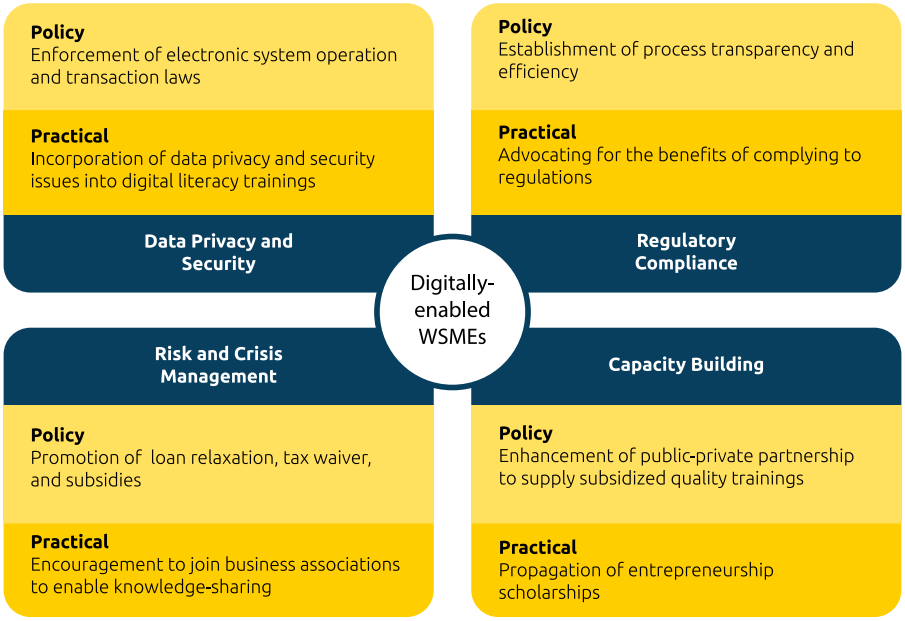


Figure 2.15: Practical and Policy Recommendations

Regulatory Compliance

These recommendations are to address challenges in Pillar 1: Access to financing and Pillar 3: Business Processes and Management

Indonesia's regulatory and legal frameworks lack information about relevant regulations and coordination between government agencies. For example, the authors observed that 27 percent out of all WSME participants (4 SEs and 3 MEs) have not complied with laws to regulate SMEs, leaving their enterprises unincorporated. They did not see any benefits in following the regulations; in fact, they saw it as a detriment as it would mean they would be obliged to pay taxes. The fact that the process to incorporate their enterprises is hazy and complicated also does not motivate them to be legally compliant. The advisory panelists believe the incorporation issue is still prevalent in the larger WSME ecosystem. If WSMEs choose not to comply with regulations, it will be challenging for them to obtain external funding, be involved in public bid opportunities, and to conduct export-import activities.

Policy recommendations: The panelists proposed that the government should make all regulatory compliance processes more transparent and efficient. The process can be made digitally accessible and scalable, allowing WSMEs to not only search for relevant information but also to register their business, apply for opportunities, and submit documents. Ensuring the scalability of the digital platform is important so that it can serve a large number of WSMEs at the same time. The panelists believe that this can be done if the government optimizes public-private partnerships in the execution of this initiative.

Practical recommendations: The panelists proposed that the private sector, especially women-in-business associations and communities, digital transformation actors, and entrepreneurs in the ecosystem advocate the benefits that can come from complying with the regulations. This can be done by highlighting the stories of other WSMEs who have benefited from being compliant with regulations such as getting prioritized to apply for the government grant scheme, loan relaxation, or tax waiver.

Capacity Building

These recommendations are to address challenges in Pillar 2: Mentoring, Networking, and Skills

Opportunities for WSMEs to improve their skills and knowledge are not scarce in Indonesia, yet because of the abundant information, the participants often felt confused about where to start and needed help in understanding why this can be done digitally and how to do it. Lack of affordable quality training was often mentioned during the panel discussion.

Policy recommendations: The panelists proposed that the government can help to improve this by enhancing public-private partnerships in order to supply subsidized quality training done digitally specifically for women entrepreneurs or their employees.

Practical recommendations: Non-governmental bodies including international agencies, multinational companies, or even women-in-business associations and communities can further support WSMEs by providing short term and long term entrepreneurship scholarships for women to obtain focused knowledge that can help them develop even further. The panelists added, a method that may prove helpful in erasing doubts and fear from digitalization is to expose WSMEs to success stories of digital tech adoption by other women with the hope that this will inspire them to do the same.

Risk and Crisis Management

These recommendations are to address challenges in Pillar 1: Access to Financing and Pillar 4: Crisis Management (COVID-19)

As WSMEs currently do not have any references to benchmark, one way to start may be to experiment with including risk and crisis management education into SME training as a first exposure. Presenting WSMEs with studies on crisis management could be a good next step once they have been introduced to the concept, yet the delivery of such research needs to be communicated in a more simple manner.

Many research and academic findings are written in a way that is not easily understandable for the general public, and there is a need to bridge this gap by reframing the research results into perhaps more easily digestible decks that can be accessed digitally.

Policy recommendations: At the policy level, governments can help overcome this by promoting existing loan relaxations, tax waivers, and subsidies to WSMEs and not only those at the micro-level to help extend the life of these companies during a crisis.

Practical recommendations: As a more preventive measure, WSMEs should be further encouraged to join in business associations—preferably women-focused ones—to enable knowledge-sharing of risk and crisis management strategies.

Data Privacy and Security

These recommendations are to address challenges in all pillars

Many WSME participants were unaware of the risks that come with digitalization, especially with regard to data privacy and security. Indonesia already has laws regulating communication and information in electronic systems and the protection of personal data in electronic systems (see Appendix C). However, the consequences of violating these laws are not strongly enforced. For example, digital business actors or Electronic System Operators (ESOs) that conduct digital services and activities in Indonesia are required to register and get a legal operating certificate.[87] However, since the law was enacted in 2014, only less than 3,000 digital platforms were registered.[88] According to the laws, ESOs who do not register will be imposed with administrative sanctions in the form of a temporary suspension, written warning via email, and eventually termination of access.

Policy recommendations: The panelists proposed for enforcement of electronic system operation and transaction laws. The government's role in this is, of course, to be more firm in enforcing, monitoring, and evaluating the electronic system operation and transaction laws.

Practical recommendations: WSMEs mentors and trainers can take a different approach to the problem by incorporating data privacy and security issues into digital literacy training to provide WSMEs with sufficient knowledge to protect themselves and their customers.

Substantially, the advisory panel discussion was crucial in analysing problems, identifying opportunities, and proposing both practical and policy recommendations to the WSMEs ecosystem in Indonesia.

2.6 Conclusion

The pace of change is speeding up, and technology is improving at an exponentially faster rate. Undoubtedly, technological growth is changing the economic environment in Indonesia, and consequently affecting WSMEs, whether they like it or not. Although digital technology was adopted by all of the WSME participants to different extents, the authors found that they were still faced with challenges in integrating digital tools into their business. Lack of knowledge, resources, and skills were the top three challenges that hindered WSME participants from accessing opportunities provided by digitalization.

Some digitalization opportunities have already been utilized by the participants, such as the use of social media and online marketplaces to increase their sales and revenue. However, many other opportunities are still waiting to be utilized. We've seen that several, but not all, WSMEs have begun to adopt digitalization into their business processes. However, we've seen very few cases of digital adoption to help them obtain external funding, connect with mentors, or gain support from the private or public sector.

Having understood the problems and unexplored opportunities for WSMEs to adopt digitalization, the authors were able to form recommendations together with experts and leading female entrepreneurs to support WSMEs in their digitalization journey. They were able to boil down the main issues that WSMEs need support into four areas: 1) regulatory compliance, 2) capacity building, 3) risk and crisis management, 4) data privacy and security, and provide practical and policy recommendations for each one.

Note should be taken that these recommendations will go in vain without the cooperation of various parties with authority to nurture an environment where WSMEs are able to thrive. Collaborations between the government, private sector, and researchers will allow us to deeper understand the gender-related challenges that WSMEs in Indonesia are confronted with and provide targeted solutions to overcome them, especially in the face of the current pandemic.

2.7
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3
Myanmar Case Study

3.1 Summary

This research seeks to shed light on the present and future opportunities that digitalization brings for women-owned small and medium enterprises (WSMEs) in Myanmar and provide recommendations to overcome key challenges faced in relation to digital adoption. Data was gathered through 1) review of publicly available data and relevant literature, 2) in-depth interviews with 20 WSMEs and 5 subject matter experts, and 3) an advisory panel discussion to co-create recommendations with 6 key stakeholders. Findings for this research was analyzed and organized according to a 4-pillar framework, as discussed below:

Pillar 1: Access to Financing.

Majority of the WSME participants utilized personal savings and loans from family and friends as a key source of financing. While many were aware of bank loans, only a few resorted to such means, while others were unsuccessful in their attempts to obtain loans. Most participants were not aware of alternative financing options such as peer-to-peer lending and grants, which are also limited and are not catered specifically to WSMEs. Half of the participants needed more help with preparing business plans, financial statements and documenting transactions correctly and properly to apply for loans. Access to financing was thus found to be the most challenging hurdle faced by the participants, with regulation, awareness, and skills as the highest-ranked barriers.

Pillar 2: Access to Mentoring, Networking, and Skills.

All WSME participants had people to turn to for help with business challenges. Half of them relied on advisors/mentors, while others relied on family members—where trust and aspiration determined from whom participants sought advice. Few opined that women had limited informal networking opportunities due to persisting discriminatory social and cultural norms, as well as struggles of managing the dual demands of work and household responsibilities. Industry-specific technical mentorship was also desired by WSMEs, yet they lacked the opportunity to avail these mechanisms. Nonetheless, digitalization in the form of digital tools such as online forums and Facebook groups offered new opportunities for women to network, acquire/share knowledge and learn new skills.

Pillar 3: Business Processes and Management.

The WSME participants were generally optimistic of digitalization and were already using basic digital tools, with social media, communication, and online banking as the most commonly adopted. Customer demand was the most important driver towards digitalization, while workforce digital readiness determined the speed and extent of digitalization. Many, however, found it challenging to look for the best suited tools and information for their business as there is limited digital content on digital technologies and tools in local languages. Language and awareness were thus the highest-ranked barriers to digitalization along with skills and resources to digitalize more advanced organization-wide processes. Additionally, over-reliance on Facebook and low digital literacy posed a unique challenge, and electricity and internet connectivity coverage remained an obstacle for WSMEs in Myanmar.

Pillar 4: Crisis Management (COVID-19).

Many WSME participants did not have prior experience and sufficient knowledge to deal with the shock of COVID-19. However, all participants interviewed were able to quickly adjust their operations with short-term fixes to survive. The majority of them did so by changing the types of product offerings based on consumer behavior change and industry trends. The pandemic also forced most of the WSMEs to embrace digitalization for their businesses, including adoption of digital technologies for productivity and collaboration while working remotely, and even expanding their customer base with the use of social media and digital marketing.

Findings from the WSME interviews were then reviewed and analyzed by the different stakeholders to co-create recommendations, which include: (1) aligning cross-cutting regulations, procedures, and initiatives between the SME Department and related government agencies to streamline registering, applying for licenses, and obtaining paperwork; (2) incentivizing SMEs to register officially to comply with government regulations by providing endorsement, protection, tax credits and other socio-economic benefits by the government; (3) providing gender-focused grants and loans for WSMEs; (4) promoting digital content creation in local languages, especially on digitalization and technology; and (5) differentiating needs of small enterprises from medium and large enterprises when designing and localizing financial services and digital products for the Myanmar market.

3.2
Country Background

Digitalization and Economic Growth

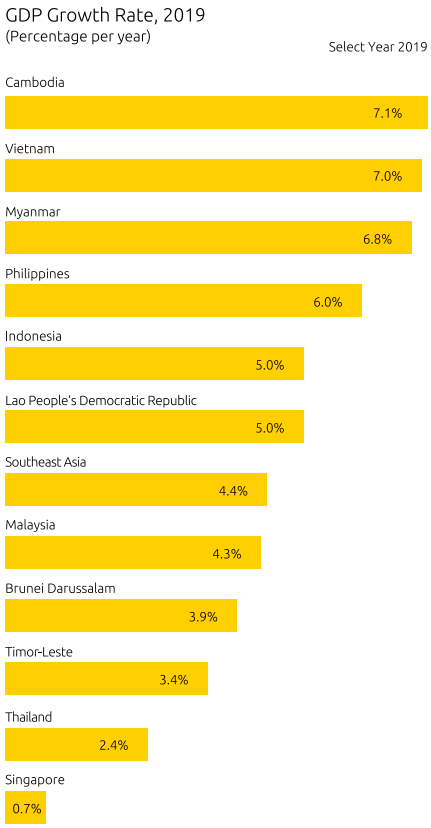


Figure 3.1: Myanmar's GDP Growth Rate 2019, Taken from Asian Development Bank Outlook 2020 Update[89]

With less than a decade of sustained political and economic transformation, Myanmar has emerged as one of the fastest-growing economies in Southeast Asia, with 6.8 percent GDP growth rate in 2019.[90] With the liberalization of its telecommunication sector as part of the reform, the number of mobile phone users grew exponentially from 13 percent of the population in 2013 to 108 percent in 2017.[91] Due to the falling SIM card prices from an exorbitant USD 350 per SIM card before Myanmar opened up in 2010 to just over a dollar, mobile connections in Myanmar stood at 68.24 million, connecting 126 percent of the total population, in January 2020.[92]

One of the benefits of being a latecomer to the digital age is that Myanmar could leapfrog dramatically to adopt and use mobile and digital technologies while bypassing outdated legacy technologies. For example, more than 80 percent of mobile phone users use smartphones instead of feature phones, as the Myanmar market is flooded with affordable smartphones imported from China.[93] While Myanmar has done well on smartphone adoption and broadband internet coverage, it is still one of the least developed countries in terms of digitalization and networked readiness.

Digital Transformation and Digital Trade: 133 out of 139 in the World Economic Forum's Networked Readiness Index (NRI) 2016

Digital Government: 157 out of 193 member states in the 2018 United Nations E-Government Development Index

Digital Connectivity: 135 out of 176 countries in the International Telecommunication (ITU) ICT Development Index 2017

Digital Skills and Inclusion: 148 out of 189 countries in the United Nations Development Programme Human Development Index 2017

Digital Security: 100 out of 165 in the International Telecommunication Union (ITU) Global Cybersecurity Index, 2017

Digital Innovation: 171 out of 190 in the World Bank Ease of Doing Business Index 2019

Box 3.1: Myanmar's Current Status of Digitalization

Digitalization and SMEs

In parallel with digitalization, the Myanmar government has placed SME development at the core of its economic development initiatives. The 85 percent of Myanmar's registered businesses are SMEs[94] and the Department of SME Development states that there are 75,452 registered SMEs in Myanmar as of March 2020.[95] Understanding the challenges of these SMEs, the Thein Sein administration founded the SMEs Development Center and its more than 50 branches in States and Regions between 2012 to 2014.[96] As soon as the National League for Democracy (NLD) government came into power, SMEs Development Law[97] was enacted, and the rules following the law were approved within a year.

The strong initiative from the government in promoting SMEs received both technical and financial support from international donors and organizations. Donors like the Japan International Cooperation Agency (JICA) and the government of Denmark ensure that loans for SMEs are distributed through state-owned banks. Technical support, such as research, policy recommendations, capacity building and business-related training, are given by international NGOs (INGOs), international development actors like the United Nations Development Program (UNDP), and the United States Agency for International Development (USAID), which has contributed significantly to bringing transparency to government processes.[98] Despite the reform efforts, Myanmar's SMEs are not yet ready to compete with foreign competitors and have relied more on the domestic market than the export market because of tenuous and complex government requirements and processes on export licenses.[99]

SMEs in Myanmar face various challenges, and women-owned SMEs face more formidable hurdles than those owned by their male counterparts. In Myanmar, 35 percent of SMEs are women-owned[100], which is slightly higher than that of low-middle-income countries (34 percent) and 12 percent less than East Asia and Pacific Countries (47 percent).[101] The 2020 International Labor Organization (ILO) report[102] on women entrepreneurs pointed out that women-owned SMEs found it difficult to export their products due to language barriers and lack of access to information on foreign markets. In addition, mobile phone ownership is one of the prominent gender digital divides, revealing the difference in tech-savviness between men and women. According to the Dalberg Global Development Advisors' 2017 report[103], the gap was 20 percent in 2016: only 52 percent of women in Myanmar owned mobile phones compared to 72 percent of men. The fact that women are falling behind is evident in the fact that only 19 percent of the total female population use the internet, according to 2018 data from the Central Statistical Organization.[88] Moreover, the large majority of respondents from Women Entrepreneurs Survey from ILO[96] reported that they used simple mobile internet subscription and smartphones for their business operation, only 25 percent used computers, and only 15 percent had landline broadband internet connections.

3.3 Methodology

The objectives of the research are to shed light on the present and new future opportunities of digitalization and to provide insights to all stakeholders to address the challenges. A literature review was undertaken as a starting point, allowing the authors to become familiar with the historical, political, and economic context, and current trends around digitalization and WSMEs in Myanmar. Then, qualitative research was conducted, focusing on the WSMEs' perspectives on how they approached digitalization and why they did or did not adopt digital technologies.

After the authors conducted 20 in-depth interviews with female SME owners, the findings were complemented with insights from 5 subject matter experts. The discussion guide for the interviews was developed based on the four pillars that the authors believe are important for WSMEs:

Pillar 1: Access to Financing

Pillar 2: Access to Mentoring, Networking and Skills

Pillar 3: Business Processes and Management

Pillar 4: Crisis Management (COVID-19)

Finally, an advisory panel discussion with 6 key stakeholders was organized to review the findings and produce recommendations.

Data Collection and Synthesis Process

Digital technologies allowed the authors to execute fieldwork amidst the COVID-19 pandemic, while the lead author was semi-quarantined at home in Yangon, and another author was stranded in Budapest, waiting for a relief flight to Yangon after completing her graduate degree at Central European University. The data collection and synthesis process were as follows:

- Step 1: Majority of interviews were conducted virtually over Zoom or Messenger.
- Step 2: Interview notes were recorded in Google Docs.
- Step 3: Mural, a cloud-based collaboration tool for researchers and designers, was used for sense-making of the qualitative findings. It is a virtual replacement of physical sticky notes and scribbling on whiteboards.
- Step 4: Data points from the interview notes were also keyed into Google Sheets and were later coded to gather quantitative insights of key themes found across the participants' answers for each pillar.
- Step 5: The 2-hour long advisory panel discussion was conducted virtually on Microsoft Teams.
- Step 6: Notes from the advisory panel were recorded into Google Docs for the research teams to summarize key points and prioritize recommendations.

About the Respondents

The authors carefully recruited respondents based on the estimated age of owners, sector, the maturity of the business, location of the business, and use of digital technologies in order to get a diverse representation of WSMEs within the limited time, information, and resources available amid the COVID-19 crisis.

Age & Experience

While the age of the respondents ranged from 20s to 60s , the majority were in their 30s and early 40s. With varying ages, their professional and personal backgrounds were also different. Some had strong professional experience in the corporate sector, including banking, IT, telecommunication, procurement, counselling, consulting, teaching, and venture capital. The pursuit of their passion led some of them to build business ventures around social causes.

Size & Sector

The authors strived to balance the number of small enterprises (SEs) and medium enterprises (MEs) as well as sectors in each category. The definition of SME described in the Small and Medium Enterprise Development Law[104] was used as criteria to differentiate and recruit participants. (See Appendix D: SME Definition)

Out of 20 interview participants, 50 percent represented women-owned SEs while the remaining 50 percent were women-owned MEs. As the difficulty level of digitalization tends to vary across sectors, the authors ensured sectoral diversity among WSMEs owners by interviewing across manufacturing, production, services, and agriculture-related businesses.

The WSMEs interviewed were from the following sectors:

Small Enterprise Participants	Medium Enterprise Participants
• Organic Dyed Textile • Bags Production • Online TV Channel • Wood Working • HR Consultancy • Upskilling Platform for Women • Youth Training Services • Women's Clothing • Food Production • Ice Production	• Cheroot Production • Bird's Nest Production • FMCG Distribution • Creativity School for Kids • Wood Working • Organic Food E-Commerce • Boarding School • Silkscreen Printing • Private Primary School • Medicine Distribution

Table 3.1: Interviewees' SME Sectors

Maturity of Business

As the maturity of business may affect the level of digital adoption, the maturity of WSMEs in the sample varied from less than one year to over sixty-year-old businesses.

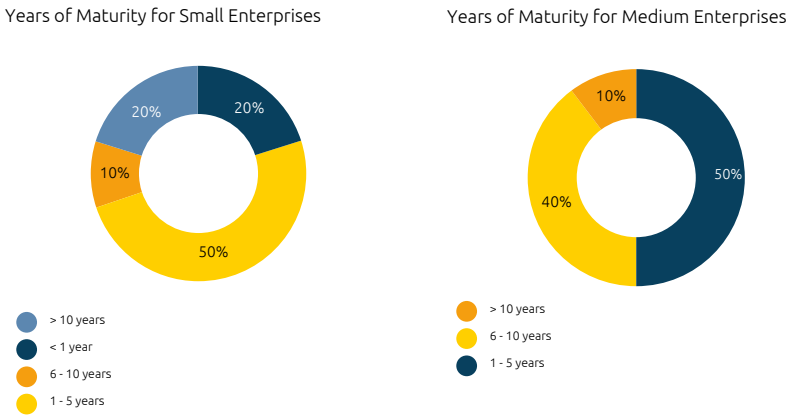


Figure 3.2: Years of Maturity for WSME Participants

Location

The WSMEs in the sample operated across the country, although many of them are based in Yangon. Their production and distribution ranged from the ethnic regions like Shan and Mon States to the Burmese Regions like Dry Zone and the southern part of the country.

Challenges and Limitation

1. As this research was executed during the COVID-19 outbreak in August 2020, the authors had to conduct most of the interviews virtually. It was a new experience for both authors and participants to conduct and participate in in-depth interviews via video conferencing applications. Although the authors were able to establish rapport with participants and gather necessary information, virtual meetings lacked the contextual ambience, including visuals and sound, of in-person interviews, which help researchers to empathize and bond with interviewees.
2. Participants were more conscious about the interviewing time spent virtually, compared to in-person interviews. Therefore, the authors had to shorten some interviews if requested by the participants, from a typical 60 minute interview to a 30-45 minute one.

3. Electricity outages often interrupted the research's workflow and internet connectivity. However, the authors managed to plan ahead and navigate those challenges.
4. The sample selection technique was slightly biased towards those who were more likely to use technologies because the authors wanted to learn about how digital technologies were used by WSMEs and why it was important for them.
5. Due to limited time available and travel restrictions, the authors were unable to recruit small-scale industries in the agriculture value chain from suburban areas, such as rice mills, peanut oil mills, and animal feed production etc.

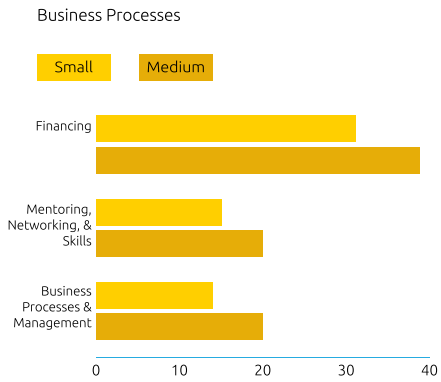
3.4
Interview Findings

In the following sections, the authors explore the four pillars that affected WSMEs' journey toward digitalization: (1) access to financing, (2) access to mentoring, networking and skills, (3) business processes and management (4) crisis management (COVID-19).

Access to Financing

During the interviews, the authors uncovered financing issues faced by women entrepreneurs when they started their businesses, how they grew, and fundraised for business expansion.

Access to financing emerged as the most challenging issue for WSMEs. Out of 20 women-led SMEs interviewed, only 2 MEs had received bank loans, 2 MEs applied but failed, and 1 SE attempted unsuccessfully to apply. When the authors interpreted the findings by ranking, participants' responses as "high, medium, low"[105] challenges in terms of pillar-wise barriers, access to financing appeared as the most challenging one for both SEs and MEs. (See Figure 3.3). Although the sample size was too small to be statistically significant for the whole population, this finding on credit shortage is in line with the World Bank's ease of doing business ranking 2020, which indicates that Myanmar ranks the worst in terms of getting credit among East Asia and Pacific Economies.[106]



Comparison of total counts on high and medium challenges for awareness, skills, languages, regulations, gender-bias, and leadership on each pillar.

Figure 3.3: Comparison of Challenges for Financing, Mentoring/Networking/Skills and Business Processes and Management[107]

Myanmar ranks 165 out of 190 world economies according to the World Bank. Out of the ten metrics being measured, Myanmar ranks one of the bottom five among East Asia & Pacific economics in six areas:

- Getting credit: worst in all 25 East Asia & Pacific Economies
- Trading across borders: worst in all 25 East Asia & Pacific Economies
- Enforcing contracts: 2nd worst
- Getting electricity: 4th worst
- Paying taxes: 4th worst
- Resolving insolvency: 5th worst

Source: https://www.doingbusiness.org/en/rankings?region=east-asia-and-pacific

Box 3.2: World Bank's Ease of Doing Business Ranking 2020

Key Insights on Access to Financing

There are seven key insights on how the WSMEs were tackled financing challenges and the reasons for doing so:

(1) Personal saving is a key source of financing for WSMEs

All interviewees used the personal saving to start their businesses and continued to grow slowly, using sales revenues or income from secondary sources of income. When they faced cash-flow shortage, they relied on family and friends or informal money lenders with a high-interest rate (typically around 3 percent per month) to obtain the loans. Although the informal loans are more costly, they can be accessed quickly and conveniently without paperwork requirements. All interviewees were aware that bank loans have more preferable terms but cited key barriers to access bank loans, such as information requirements about taxes, profit and loss statements, business plans, and collateral, in addition to the time-consuming application process.

(2) Grants targeted at women-owned SMEs are rare in Myanmar

The authors observed that grants are instrumental in helping women entrepreneurs grow and make positive contributions to their communities. Among the 20 WSME participants, four received grants for their businesses from various international donor organizations, and the grants helped them to significantly expand their teams or grow their reach.

Some interviewees were aware of grant opportunities yet lacked know-how on grant proposal writing, while a few of them, especially non-Yangon based ones, did not have information about those grant opportunities. The professional and personal network, fluency in English, and proposal writing skill of the owner determined the likelihood of winning the grants. Nonetheless, the limited availability of such grants was insufficient for the financial needs of the vast SME sector across Myanmar. From the interviews and desk research, the authors also learned that gender-focused grants for WSMEs are almost non-existent. All 20 interviewees confirmed that they were not aware of the grants specifically targeted at WSMEs.

(3) Alternative financing options are limited and not well-known among SMEs

In Myanmar, alternative financing options such as peer-to-peer lending and crowdfunding do not exist, while the private equity, venture capital, angel investing markets are quite nascent.[108] In recent years, there has been innovation around digital financing by both banks and non-bank financial institutions such as Yoma Bank's smart credit[109], KBZ Pay loans[110], Mother Finance SME loans[111] and KyoPay Invoice Financing[112] for SMEs. Of the 20 interviewees, less than half were aware of the alternative financing options in Myanmar, but none of them had used those services.

WSME Highlight 1: MYEO

Htet Thiri Shwe, Founder of MYEO

About the Company:

MYEO is a youth development social enterprise based in Yangon using digital technology to reach out to youth, create a social learning community, and provide employability skills training. Out of all the WSMEs participants interviewed, MYEO was the most tech-advanced business. As a believer of big data, Htet diligently gathers customer data and utilizes it to create customized training content.

The Struggle:

Htet's path toward current success was not always smooth. In the beginning, she bootstrapped[113] to lay the foundation for MYEO. While working full-time, she collaborated with like-minded volunteers to launch and run it. It was a struggle, as many people were quick to judge and question her credibility based on her youthful looks and small stature, but she did not give up. She talked to countless advisors, potential mentors, and peers to come up with a strong business model, better training content, and more funding sources. She participated actively in start-up challenges to receive feedback on her venture.

The Growth:

Her diligence, perseverance and passion eventually paid off. After five years of struggling and hustling, she received USD50,000 seed investment from Facebook, which enabled her to hire full-time team members. Her business is now thriving with subscription fees from over 1000 subscribers. With additional grants from other donors, MYEO has trained over 15,000 youth.

(4) Financing needs in the near future are enormous

While Myanmar has seen significant improvement in its financial sectors in recent years, the financing needs of many SMEs are still unmet. Ten women-owned SEs did not have any bank loans, and 50 percent of them wished to get financing for their businesses in the near future. Of the 10 women-led MEs, 90 percent needed financing for their business expansion while 20 percent currently had bank loans.

While both small and medium enterprises needed financing, the type of financing is quite different. SEs needed smaller sized short-term loans (approximately USD1,500 to USD12,000) to smooth out cash flow, especially when there was a sudden change in customer demand or market condition, as they did not have large cash reserves like medium and large enterprises. MEs preferred larger sized longer-term loans for business expansion, in addition to access to a credit line at banks.

(5) Small enterprises are the missing middle

The authors found that while micro-enterprises could get loans from micro-finance institutions, MEs were also more likely to get bank loans than SEs. The reason is that the loan amounts offered by most micro-finance are too small for SEs while their informal and fragile nature is not ideal for banks' risk appetite, unlike MEs.

(6) COVID-19 Stimulus Loans attract SMEs to register formally

When COVID-19 hit, the Myanmar government stepped up and provided stimulus packages and loans for SMEs nationwide.[114] This was the first time that the government intervened to provide an economic stimulus due to a natural disaster or emergency. However, it was a wake-up call for SMEs who hadn't registered and were thus ineligible to apply for loans. The COVID-19 loans thus provided an incentive for SMEs to register legally. Yet, this also created opportunities for bribery to expedite the registration procedures; three participants said they heard about other SME owners who used bribes to get SME cards for expedited issuance so that they could apply for the loans.

(7) Regulation, awareness, and skills are the highest-ranked barriers to access to financing

Regulation, awareness, and skills are the highest-ranked barriers for access to financing among the WSME participants interviewed.

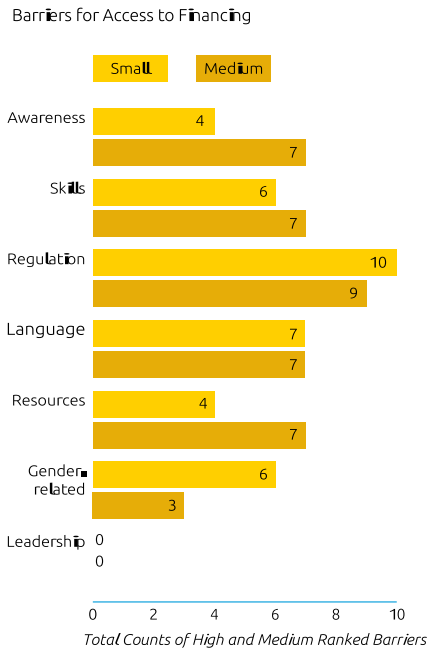


Figure 3.4: Comparison of Barriers for Access to Financing Between Small and Medium Enterprises

As the Myanmar Credit Bureau was set up recently[115], the lack of credit scores made it harder for financial institutions to assess creditworthiness of borrowers, especially if they were in the informal sector.

Thus, most loans are collateral-based. In recent years, financial institutions have begun to offer unsecured loans to businesses without requiring collateral, but borrowers need to submit documentation of their business ownership, licenses, operations, and financial statements. About half of our interviewees mentioned that they needed help with preparing business plans, financial statements, and documenting transactions correctly and properly to apply for loans.

In terms of awareness and skills, WMEs ranked them as higher challenges than that of their SE counterparts. The data might be skewed because many participants selected for SEs tended to be younger, more educated (some with foreign degrees), and active networkers for grant opportunities. In contrast, ME participants were older, more experienced in their businesses, and more interested in larger financing options rather than small grants.

Myanmar Credit Bureau, the first of its kind in Myanmar, is expected to commence operations in 2020. It received the license from the Central Bank of Myanmar in May, 2018. MB Investment, a consortium of local banks, owns 60% of the credit bureau while Singapore-based Asia Credit Bureau Holding Company holds the remaining. Data from the credit bureau will strengthen risk management of financial institutions and make the banking and financing ecosystem more robust.

Source: Myanmar Credit Bureau to commence operations in April, https://consult-myanmar.com/2020/02/25/myanmar-credit-bureau-to-commence-operations-in-april/

Box 3.3: Myanmar Credit Bureau to Commence Operations in 2020

Access to Mentorship, Networking & Skills

Out of 20 WSMEs, 11 had advisors/mentors to help with the challenges they faced in their businesses. Two out of those 11 were extremely active networkers who attended networking events and had a database of potential local and international mentors to track areas of their expertise and seek advice systematically. The other five used their former professional networks to seek mentorship, while the rest found mentors through networking at associations and innovation hubs such as Myanmar Women Entrepreneurs Association[116], Myanmar Young Entrepreneurs Association[117], Phandeeyar Innovation Hub[118], and Impact Hub.[119] Those who did not have mentors turned to their family members for help.

Areas of Expertise Where WSMEs Need Help

Digital marketing, social media strategy, business development and expansion strategy were highlighted as areas of expertise that about half of the WSME participants wanted mentorship on. More SE owners (6 out of 10 SEs), indicated business management as an area that they needed mentorship in, compared to MEs (2 out 10 MEs).

The interview findings indicated that while industry-specific technical mentorship was desired by WSMEs, it lacked in Myanmar. Nine out of 20 women entrepreneurs interviewed stated that mentorship on technical expertise would be really valuable for them, yet it had been challenging to find.

The areas they mentioned included: latest know-how on organic farming, woodworking, food processing, printing, bird's nest production, designing bags, designing print patterns, weaving techniques and patterns, chemical-free textiles, and manufacturing and expansion into the export market.

The authors also observed from the interviews that MEs were more concerned with obtaining advice on financial management and financing to stabilize and expand their businesses, whereas SEs were more interested in seeking mentorship for grant opportunities.

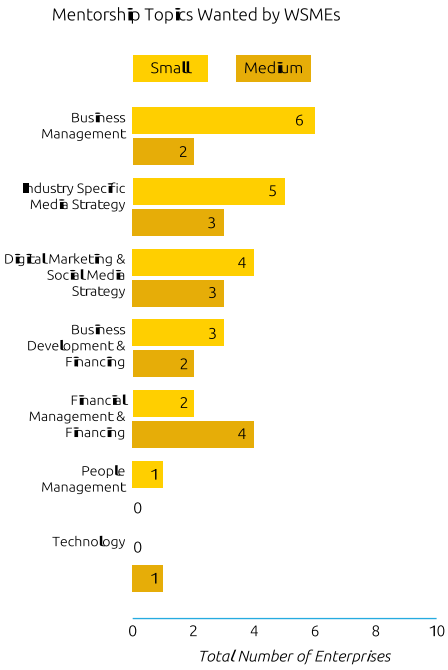


Figure 3.5: Comparison of Mentorship Topics Wanted by WSMEs

Key Insights on Mentorship, Networking and Skills

Three key insights on mentorship, networking and skills emerged from the interviews:

(1) Trust and aspiration determine who WSMEs seek advice from

While all interview participants wanted advisors with relevant experience and skills, the majority of them preferred to open up and seek advice from those with whom they trusted, respected, and were familiar with. Networking events sponsored by business associations and donors were attractive for younger and socially outgoing startup founders, whereas older interviewees mentioned that they preferred one-on-one opportunities to interact with people they admired and aspired to build long-lasting relationships with.

(2) Less informal networking opportunities are available for women than men

A few of the interview participants mentioned that women have fewer opportunities for informal networking than men for a variety of reasons. The first reason participants mentioned was that men could go out for drinks in the evening to network with potential clients, government officials, and colleagues, whereas it is considered culturally inappropriate for women to join such occasions, especially in small towns or traditional families. In addition, some interviewees with small children noted that they missed out on evening networking receptions as they needed to be home after work and take care of their children. They opined that for women entrepreneurs with small children, networking events during the daytime were more suitable.

(3) Online forums and Facebook groups offer opportunities for women to network, acquire knowledge and learn new skills

All participants used Facebook for acquiring information, while only five used online forums to learn new skills. For local networking and knowledge sharing, Facebook was a go-to platform for all because the information is localized and in Myanmar language. Many government departments have official Facebook Pages to communicate policy updates and announcements. For example, the SME Development Department communicates with SME owners very actively on its Facebook Page, comprising more than 71,000 followers, about policy changes, procedures updates and training opportunities.[120] The Union of Myanmar Chambers of Commerce and Industry (UMFCCI)'s Facebook Page, with more than 160,000 followers, offers daily updates about business news, webinars and event information.[121] Other business community groups organized by private sector players are active on Facebook as well. One of the interviewees said she enjoyed learning from social influencers who share their business and personal development knowledge, such as Martin (over 1 million followers)[122], Pyay Khaing (over 1 million followers)[123], and Phyo Phyo Aung (over 1.6 million followers)[124], to name a few.

Digitalization for Business Processes and Management

How Digital are WSMEs in Myanmar?

When the authors asked whether any digital technologies are used, all 20 WSMEs said "yes" enthusiastically. It was obvious that the women entrepreneurs believed in the potential of digital technologies to enhance their business outcomes. However, most of them were only at the beginning stage of digital maturity: the digital solutions they adopted were only transactional and piecemeal (See Figure 3.7 and 3.8).

Only 3 SEs and 3 MEs were "digitally engaged": using digital solutions in organization-wide processes such as supply chain management or inventory control. The majority of WSME participants interviewed, 13 out of 20 were only at the first stage of digital maturity[125] while one SE had not undertaken any digital adoption for her business. (See Figure 3.6)

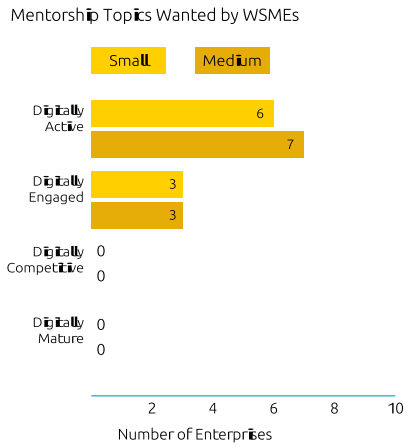


Figure 3.6: Comparison of Digital Maturity of WSMEs in Myanmar

What Digital Tools are WSMEs using?

The following two tables (Figure 3.7 and 3.8) describe the types of digital tools used by the participants arranged in descending order from most active users to the least active users. All respondents, except two, were active on social media and in using digital communicative and collaborative tools. Regarding the financial segment of the business, the WSMEs were very familiar with digital banking, with 19 out of 20 using the tools. In addition, WSMEs used the cloud-based accounting tool and inventory/ POS tools relatively more than digital HR and supply chain management tools.

The authors found that 8 WSMEs (40 percent) and 6 WSEs (30 percent) were using digital accounting and POS/inventory tools respectively, while only 4 WSMEs (20 percent) used HR management tools, while not a single SE could afford to use the digital supply chain management tools.

As a consequence of active social media use and increasing digital awareness, half of the respondents produced digital content and used e-commerce as their digital marketplace. Among SEs in production, the authors found that those utilizing digital tools more actively earned a higher income than those who did not; average USD 71,000 in revenue compared to only USD 28,000 annual revenue of less digital-savvy small enterprises. One caveat is that the authors did not find such a pattern in MEs, and this finding applied only to the production sector.

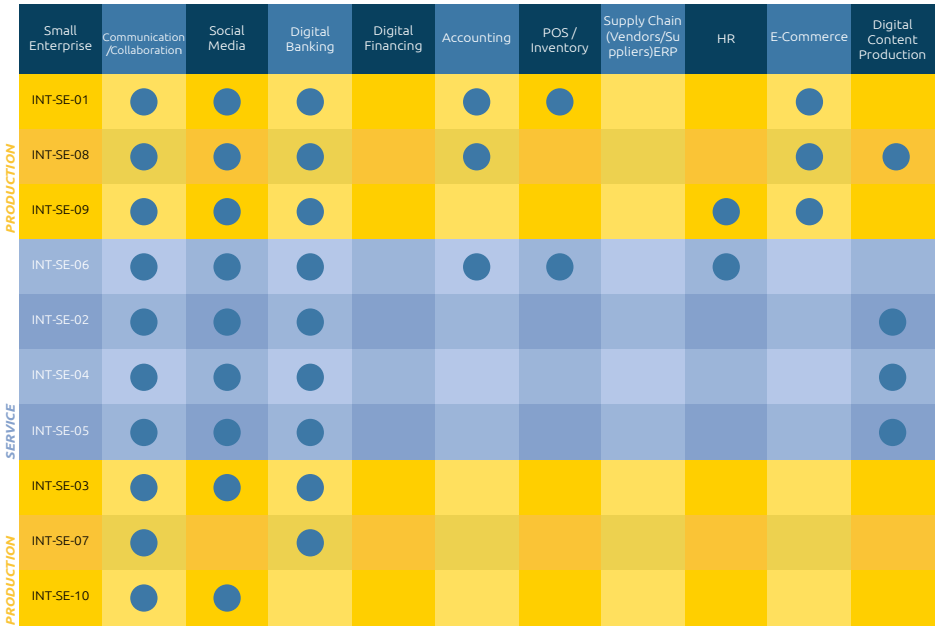


Figure 3.7: Types of Digital Tools Used by SE Participants

Medium Enterprise	Communication /Collaboration	Social Media	Digital Banking	Digital Financing	Accounting	POS / Inventory	Supply Chain (Vendors/Suppliers)ERP	HR	E-Commerce	Digital Content Production
INT-ME-01	●	●	●		●	●	●		●	●
INT-ME-02	●	●	●		●	●	●			●
INT-ME-03	●	●	●		●	●			●	
INT-ME-04	●	●	●		●			●	●	
INT-ME-05	●	●	●			●		●		
INT-ME-06	●	●	●						●	●
INT-ME-07	●	●	●						●	●
INT-ME-08	●	●	●							●
INT-ME-09	●	●	●						●	
INT-ME-10	●	●	●							

Figure 3.8: Types of Digital Tools Used by ME Participants

Key Insights on Digitalization for Business Processes and Management

There are 10 key insights on WSME business processes that the authors identified from the interview findings:

1. Social Media, communication, and digital banking are the most common types of digital tools adopted by WSMEs

The most common types of digital tools adopted by WSMEs were social media such as Facebook, Instagram, YouTube communication tools such as Messenger, WeChat, WhatsApp, Zoom and Viber; and digital banking applications from local banks. Nineteen out of twenty WSMEs used Facebook and digital banking, while all interviewees used digital communication tools actively.

2. Customers' demand is the most important decision-making factor for digitalization

Being pragmatic businesswomen, the interviewees considered customer demand as the most important decision-making factor for digitalization. Most would not adopt new technology just for the sake of being 'modern'. For example, a professional clothing line owner believed that although Messenger Chatbot is increasingly popular in Myanmar, building a chatbot for auto-reply may not be an appropriate solution for her business because her customers preferred interacting with a human: they ask not only questions about product and place orders but also send her photos of them wearing her products to get compliments.

She was convinced that the chatbot technology would neither increase her sales nor customer satisfaction until the customers in Myanmar get accustomed to receiving automated customer service. Likewise, her financial transactions with most B2B clients were not digital because company bank accounts cannot do digital transactions, unlike personal accounts. Therefore, most B2B payments are in check, which has to be collected and deposited in person.

3. Workforce digital readiness determines the speed and extent of digitalization

Another important consideration for WSMEs was whether their workforce could readily adopt digital technology. For example, one WSME participant mentioned that digitalization could bring efficiency and transparency in recording the attendance and working hours of security guards, for a security service firm that her family-owned. However, she decided not to pursue it because most of the guards were not tech-savvy and would have a hard time using the mobile application. While it was possible to train them, it would take a tremendous amount of time and patience to bring them up to speed. The authors heard similar stories from other women entrepreneurs with blue-collar workers in their workforce. Four WSME participants interviewed were able to quickly switch to digital tools because they mostly worked with younger and educated team members.

4. Mobile-first applications/software are more suitable for small enterprises

While the majority of the workforce have smartphones, laptops and desktop computers are too expensive to be used widely and are often not necessary, especially for small enterprises in non-service industries, such as small-scale manufacturing and production. A wooden accessories producer interviewed said that while she worked in the Yangon office with a computer for marketing and customer service, the rest of the team worked at their production facility in Mon State, where it was noisy, dusty and had no place for a laptop, as the workers do not know how to use computers. A small ice-factory owner had used Viber[126] for daily reporting, which kept her up-to-date while she was away. However, the first challenge she faced was teaching the factory workers how to take clear photos, because initially, they kept sending her crooked and blurry photos of written sales and expenses records.

5. Facebook is used for e-commerce, customer engagement and as a source of information

There are about 22 million Facebook users in Myanmar. Facebook reported that 50 percent of the total population aged 13+ in Myanmar could be reached via Facebook ads.[127] Consequently, it has become a primary tool for shopping and searching for information in the country.[128] Due to the vast number of Facebook users, digital content in Myanmar language has concentrated on Facebook, which consequently attracts the users to search for information on the platform, rather than looking elsewhere on the internet using search engines.

Out of 20 WSME participants, 19 of them actively used Facebook to promote their business and engage with customers. The platform provides an effective digital communication channel for women entrepreneurs who want to start a new business venture with minimal startup capital, or engage with their existing customers directly and frequently. There have been several stories about how women entrepreneurs created and launched successful small businesses via Facebook in recent years. However, the majority of businesses on Facebook do not focus on value-added activities; instead, the emphasis is on importing and reselling Chinese products, exploiting the proximity with vast Chinese e-commerce markets via Alibaba and Taobao. WSMEs got more sales orders from their Facebook pages than local e-commerce platforms.

Three SEs and 5 MEs had used e-commerce platforms such as Shop.com.mm[129] and Spree[130] to sell their products. However, they received more sales orders through Facebook because Myanmar consumers prefer to engage directly with sellers, ask questions and expect to receive answers right away,

while it is difficult for large e-commerce platforms to provide such high-touch customer service. In addition, most consumers are familiar with Facebook's interface and reluctant to switch to a new application, especially if they are less tech-savvy.

6. Over-reliance on Facebook and low digital literacy pose a unique challenge for Myanmar

The rapid exposure to digitalization did not give enough time for the people to properly develop their digital knowledge. Digital skill development training is neither sufficiently provided by private institutions nor properly embedded in the public education system, despite government efforts to introduce digital literacy training in 2015-2016.[131] As a result, 78 percent of the internet users have poor digital literacy.[122] There were incidents of false information being spread purposefully via Facebook to incite violence between ethnic and religious communities in 2019. The lower the digital literacy levels, the easier it is for people to be manipulated and cheated.[132] The number of frauds using Facebook fake accounts to solicit money transfer through mobile money services has increased significantly in recent years, which has negatively affected the speed of mobile wallets adoption, as it raised security concerns among potential users.[126]

7. Few WSMEs have a proactive long term digital strategy

All WSME participants have adopted digital technologies on a need-basis, depending on the changing trends in Myanmar. COVID-19 had been the latest pressure for such digital trends. While they were adapting to change reactively, few have a long term digital vision and strategy that would help them future-proof in the digital economy.

8. WSMEs have self-confidence in adopting digital tools and do not see gender as a limitation

Regardless of age, digital savviness and experience, the 20 women entrepreneurs exhibited self-confidence about their abilities to adopt new digital tools. Being self-made women, they had a strong belief that anything can be learnt and done if necessary. When the authors asked if there were any gender barriers for them to pursue digitalization, 18 out of 20 said they did not see gender as a limitation.

> "Technology is a painkiller for businesses. Be confident in using it.
>
> (Participant IND-ME-01)

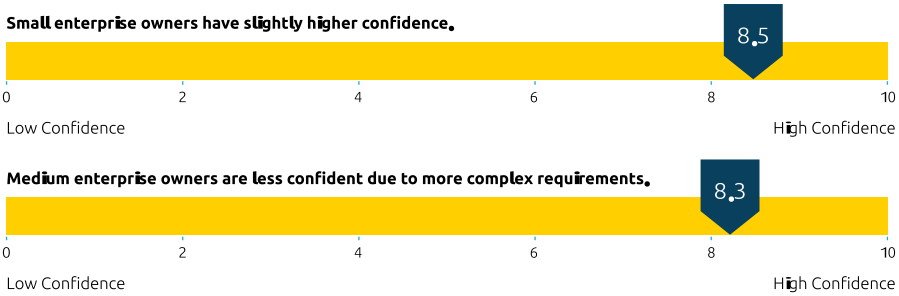


Figure 3.9: Self-confidence Level of WSMEs on Digital Technologies Adoption

9. Language, awareness, skills and resources are indicated as key barriers for digitalization

Language, awareness, skills and resources appeared as the highest barriers for digitalization among WSMEs. As there is limited digital content on digital technologies and tools in local languages, many WSMEs found it challenging to look for trustworthy and appropriate information. Many of them relied on friends, family and Facebook. Also, there are only a handful of SME consultants giving impartial third-party points of view.

The language barrier and awareness problems go hand-in-hand. Nine participants with good English proficiency used search engines, such as Google, and social media platforms, like YouTube and LinkedIn, to gather information and knowledge for their business and to observe global trends. YouTube is described as a Just-In-Time learning tool when they wish to learn a specific skill quickly, such as Excel shortcuts and Photoshop tips. When acquiring knowledge and skills for new digital tools, this group of WSMEs was overwhelmed with information overload. Those without English proficiency had the opposite issue - they had to rely on limited local content sources in Myanmar language.

In terms of skills and resources, both SEs and MEs needed support if they were to go beyond basic digital tools to more advanced organization-wide processes.

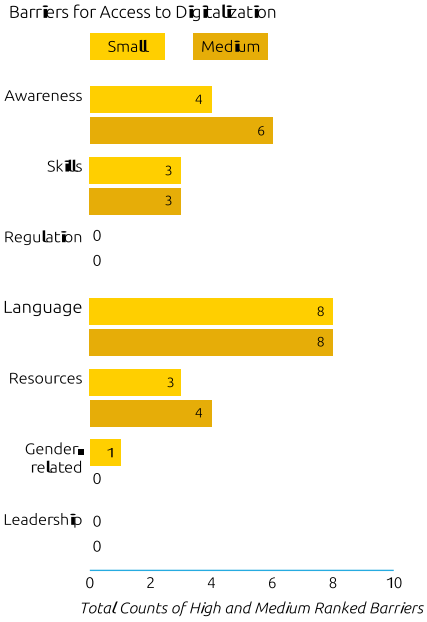


Figure 3.10: Barriers for Access to Digitalization by WSMEs

10. Electricity and internet connectivity coverage remains a challenge

On the one hand, Myanmar has the lowest electrification rate in Southeast Asia, with only 50 percent of households connected to the public grid. The country needs to double its current installed power generation capacity over the next five to seven years to achieve universal electricity access by 2030. The Government adopted the National Electrification Plan in 2014 to achieve that goal.[133]

On the other hand, broadband access has risen from one percent in 2010 to 56 percent in 2017, while fiber optic lines have grown at least 440 percent in the same period.[134] Although the number of internet users has increased by 1 million (+4.8 percent) between 2019 and 2020, internet penetration in Myanmar stood at 41 percent, which is 25 percent lower than the regional average of Southeast Asian countries.[128] Despite the progress made, 4G internet service is still limited to only 20 percent of Myanmar's population, which is concentrated in urban areas. Myanmar ranks 133rd out of 139 countries in the World Economic Forum's Network Readiness Index (NRI) and it is the lowest in terms of businesses, government and individual usage under the NRI.

Crisis Management (COVID-19)

The World Bank's Myanmar Economic Monitor report[135] revised Myanmar's GDP growth forecast for FY 2019/20 downwards from 6.4 percent to just 0.5 percent. The report stated that all sectors experienced adverse effects of varying intensity, while tourism-related services and the transportation industry were hit the most. The ICT sector, however, saw a surge in telecommuting and e-commerce. For the WSME participants, the effects of COVID-19 varied depending on their types of business.[136] A small ice-factory owner in Ayeyarwaddy suffered 75 percent decrease in sales volume as fish exports had been interrupted. An FMCG distributor in Mandalay had not been impacted much as her products are basic household necessities. WSMEs in the production sector faced temporary interruption in their production, and sales were reported to be back to pre-COVID level shortly after the first wave of transmission.

On the bright side, COVID 19 forced businesses to adopt digital technologies to maintain productivity and collaborate while working remotely. Telecom operator Telenor reported that usage of video conference tool Zoom increased by 1373 percent between March 1 and April 19, 2020, and internet traffic surged by 27 percent.[137] WSMEs with physical retail shops created their online presence on Facebook. Those in training and education industries pivoted from in-person classroom to online learning quickly. Overall, digital-based businesses experienced growth in sales and customer demand.

Regardless of these challenging circumstances, the women entrepreneurs that were interviewed displayed admirable mental fortitude, resourcefulness and grit to survive. Majority of them changed the types of product offerings based on consumer behavior change and industry trends. For example, a wooden accessories business switched from corporate gifts to kitchen wares for cafes and restaurants. A women-clothing business owner quickly manufactured fashionable reusable masks with adjustable straps and optional PM 2.5 filter and pivoted her business from B2C to B2B.

A primary school founder said, "When I wanted to cry, I cried. Then, I wiped my tears and tried even harder." Another participant said, "We, women, are in fact stronger than men. We can endure stress and hardship well. All of us have abilities; we just need to use them for our advantage." We repeatedly heard similar strong statements from other WSMEs as well.

WSME Highlight 2: MYEO

Kye Mon Lwin, Founder of Organic Valley

About the Company:

Kye Mon's Organic Valley, an online platform for locally and ethically sourced chemical-free fresh produce was established in 2018 with an ambition to bring high-quality local food for local people. While creating market demand for chemical-free producing farmers, she makes sure their livelihoods are well taken care of with reasonable and fair prices. She also educates consumers about choosing healthier food options and reducing plastic waste. Organic Valley has used a new way of packaging that reduces plastic waste up to 90 percent.

Before Digitalization:

Running a platform business, she has to monitor and manage transactions on both sides: suppliers and consumers. In the beginning, she kept track of the records with only a ledger book, a typical way of bookkeeping for SMEs in Myanmar. It was extremely time-consuming, labor-intensive and tiring as the business grew. She said that they struggled just to fulfil orders and to know whether the business was running at a loss or profit.

After Digitalization:

To overcome this hurdle, she searched for a suitable digital solution, and eventually found a free cloud-based POS (Point Of Sales) software and cloud-based accounting software for her business. The new tools allow her to speed up order-fulfilling time, manage inventory more effectively, monitor credit terms, and formalize her business transactions with proper invoices and records. The productivity at Organic Valley increased more than twofold.

Weathering COVID-19:

When the business was picking up, with more and more people interested in organic food and eco-friendly business practices, COVID-19 hit hard. Demand plunged as a large percentage of regular customers were foreigners, who had to go back to their home countries.

On the other hand, her supplier farmers faced the risk of throwing away their produce as market demand got stunted. Driven by her passion and perseverance, Kye invested her energy into attracting a new target customer base through digital marketing, while she looked for ways to turn perishable farm produce into more durable value-added products such as jams, pickles and noodles. Organic Valley now has over 100 new product varieties. As she can take orders online and use door-to-door delivery services, her business revived and thrived while traditional shops for fresh agricultural produce suffered from decreased sales revenues due to market closures or less customer traffic.

Next Step:

According to Kye, COVID-19 also pushed her to launch an e-commerce website sooner than later because taking orders and settling payment manually limited her potential to grow. Although she always knew it was something to get done, she did not have enough time and reason to prioritize it as sales through Facebook were good. Using her past experience and expertise as an IT professional, she is building the website on her own, and exploring ways to embed digital payment options.

Challenges and Opportunities for WSMEs

Based on the above WSME interview findings, the research team summarized nine most prominent challenges faced by WSMEs in their digitalization journey, and identified opportunities associated with them.

Access to Financing	
Challenges	**Opportunities**
Women-led SMEs need a way to borrow quickly and easily to bridge the cash flow gap because they often face cash shortage (low cash reserve to withstand sudden shocks), but there is a shortage of such quick and easy loans (20 lakh - 200 lakh) provided digitally without requiring too much paperwork	Short-term cash flow loans for SMEs with the quick digital application process Customized loan products that differentiate the financing needs of SEs from medium and large enterprises and vice versa
Even though banks increasingly provide unsecured loans backed by credit assurance schemes without requiring collaterals, many SMEs are not eligible to apply for those loans because many of them are running informally without proper licenses, documents, business plan, P&L statements etc. as the processes at various government agencies are complex and time-consuming	Loan assessment processes that use digital transaction records as part of the due diligence Customer education campaign by financial institutions targeted at SMEs about how to use digital technologies to keep track of their Profit and Loss and why it is important for their creditworthiness
Myanmar SMEs need more alternative financing options (e.g., peer-to-peer lending, crowdfunding, angel investing, impact investing, equity investing etc.) like in more developed nations because, currently, the only way for WSMEs to launch new ventures, sustain in the first few years, and expand is by using personal savings and loans from families - which limits their potential and risk appetite	Financing and regulatory ecosystem that encourages entrepreneurship Alternative financing products and services Gender-focused grants and loans for women-led SMEs SME lending platform

Access to Mentorship, Networking, and Skills	
Challenges	**Opportunities**
Women entrepreneurs need advisors whom they can trust and admire to discuss business-related challenges. This is because they do not have time to acquire those skills formally through trainings, and prefer to have a sounding board with a person with relevant experience through dialogues. In this regard, they often turn to people who are close to them rather than reaching out to strangers	More informal and formal networking opportunities for women entrepreneurs so that they can build meaningful relationships with potential advisors
The SME ecosystem in Myanmar needs mentorship programs for women entrepreneurs so that they can acquire the necessary knowledge and skills to be competitive and adopt appropriate digital strategies. However, women have less opportunities for informal networking than men (especially if they are from traditional families and small towns). Also, formal mentorship programs for entrepreneurs tend to be project-based and disappear shortly afterwards	Mentoring programs that are sustainable and convenient for both mentors and mentees for the long run Value-chain-based technical mentorship programs

Digitalization for Business Processes and Management	
Challenges	**Opportunities**
Choosing the right digital tools is often a challenge. Women entrepreneurs are either overwhelmed or deprived of the necessary information to make decisions, depending on their language proficiency and digital knowledge. There exists a lack of easily searchable and trustworthy sources for comparing software, local vendors and service providers that are appropriate for their business size, budget, and unique situations in Myanmar	Digital solutions appropriate for SMEs and the Myanmar context Knowledge platform for helping women entrepreneurs make informed decisions to choose appropriate digital tools for their businesses
Many WSMEs are unaware of the potential benefits and challenges of adopting digital technologies beyond common tools like Facebook, Messenger, Viber, Zoom and Mobile Banking. Without seeing the big picture, they are unable to make a comprehensive digital strategy with short, medium and long term goals that will help serve their customers better, increase revenues, and improve productivity	Consultation and training programs by qualified professionals with a proven track record in digital transformation. This is important to raise awareness about stages of digital maturity, how to plan an effective digital strategy, and how to implement it with appropriate digital tools
Women-led SMEs need to adopt digitalization to stay competitive, but language is the biggest barrier for many of them to find appropriate digital solutions and acquire new digital skills	More digital content on technologies and digital skills in local languages, easily accessible for WSMEs

Crisis Management (COVID-19)	
Challenges	**Opportunities**
Women-led SMEs need business continuity plans to cope with the effects of COVID-19. Many did not have prior experience and sufficient knowledge to deal with such a shock. However, all business owners interviewed were able to quickly adjust their operations with short-term fixes to survive	Consultation and learning opportunities from qualified professionals with a proven track record in relevant fields, to develop business continuity plans and to future-proof. The latter is important for women-owned businesses to thrive in the new normal era and in the age of unprecedented digital revolution

Table 3.2: Challenges and Opportunities for WSMEs

3.5
The Future of Digital Transformation for WSMEs

Expert Interview Findings

The authors interviewed a policy reform implementer, an experienced SME consultant, a fintech entrepreneur, a senior-level bank executive, and a digitalization expert.

While in-depth interviews with WSMEs revealed challenges and opportunities they faced on a daily basis, subject-matter experts helped the authors understand macro-level issues causing those challenges.

The following sections cover overarching insights that the experts shared on policy issues centered around the three pillars: financing, mentoring/networking/skills, and business processes.

Policy Issues for Digitalisation and SMEs

Laws being passed hastily to fulfil ASEAN obligations: Since transitioning from military dictatorship to civilian government, Myanmar has made significant progress in economic policy reforms. On the other hand, the government and lawmakers are overwhelmed with trying to catch up with the rest of the world, because several existing laws, dating back to the British colonial era, are outdated. The pressure to meet ASEAN obligations has caused some laws to be passed hastily, affecting the quality of the legislation.

Digital economy development roadmap & lack of a legal framework for key issues: The Digital Economy Development Committee was established (DEDC) in June 2017, patroned by Vice President, U Henry Van Thio and chaired by the Union Minister of Planning and Finance.[138] According to the digital economy roadmap, there are ten priority sectors: (1) education, (2) healthcare, (3) agriculture, (4) fishery and livestock, (5) tourism and hospitality, (6) manufacturing and SME, (7) financial services, (8) technology sector and startup ecosystem, (9) digital trade, and (10) transportation and logistics.The roadmap is ambitious with concrete, measurable milestones. The key challenge in implementing it is the lack of a legal framework for key issues, such as data privacy and protection, cybersecurity, online consumer protection, open data and data sharing. The government has a tremendous challenge ahead of it to build strong legal frameworks quickly because digitalization is happening worldwide whether Myanmar is ready or not.

Limited coordination among donor-led digitalization efforts: In order to improve transparency and efficiency, the government has undertaken digitalization and implemented e-government initiatives funded by various donor agencies. For example, Online Registration for Companies[139] (ADB: Japan Fund for Poverty Reduction), Online Registration for SMEs (ADB: Japan Fund for Poverty Reduction)[140], National Trade Portal (USAID) [141], Project Bank of Myanmar (German Federal Ministry for Economic Cooperation and Development, BMZ)[142], and e-Government Integrated Data Center (Republic of Korea's Economic Development Cooperation Fund, EDCF).

While progress has been made in terms of converting manual processes to online ones, better coordination among donors, and between donors and the government, is needed for future system integration and streamlining data sharing and processes across various ministries.

Budget allocation often lagged behind the government commitment to help SMEs: The policy expert noted that appropriate budget allocations often lagged behind the government's commitment to promoting certain reforms, which made it difficult for bureaucrats and civil servants to do any meaningful execution of such announced commitments.

Cross-cutting policies and procedures among government ministries are not aligned to promote SMEs: While the SME Agency is promoting SMEs, cross-cutting policies and procedures among different ministries should be aligned. Otherwise, the agency's effort will be futile. Questions must be raised about whether trade policies are favorable for SMEs to participate, whether Central Bank regulations take the needs of SMEs into consideration, whether the tax system favors SMEs' growth, and whether import policies enable SMEs to access technology and advanced machinery easily.

Lack of differentiation between small and medium enterprises: According to the 2015 Small and Medium Enterprise Development Law, the characteristics of SEs and MEs is clearly defined and differentiated (see Appendix D). In practice, little effort has been made to differentiate them according to the size, needs and nature of the operations. For example, a well-known large business competed in a government-sponsored competition for micro and small enterprises and won the award. Such lack of differentiation can also be found in loan terms to restrict the use of funds to only procure machinery upgrade, which might not be appropriate for SEs with limited market potential.

Access to Financing

Lack of reliable credit score makes it difficult for banks to do due diligence: Banks want to lend money to make a profit while SMEs want to obtain loans to finance their business operations. If that is the case, why is financing the most challenging problem for WSMEs? Myanmar financial institutions do not have a reliable credit score database they can access to determine the creditworthiness of borrowers, because the newly established Myanmar Credit Bureau is not yet ready to provide reliable credit data. Consequently, banks need formal documentation of business transactions, business licenses, tax receipts and financial statements from SMEs to do due diligence for the loan approval process. On the other hand, the majority of small enterprises lack proper record keeping and formal documentation and have limited collateral ownership, which makes them ineligible to apply for bank loans automatically.

Banks' preference for medium and large enterprises for loans: For the above reasons, banks prefer to work with medium and large enterprises as the loan process is too time-consuming and troublesome for making such small loan sizes.

Credit guarantee schemes are necessary for banks and microfinance institutions to provide unsecured loans: The credit guarantee schemes help increase the risk appetite of banks to provide non-collateral based unsecured loans for SMEs. Continuation of such schemes will help improve access to financing for SMEs.

Banks are experimenting with new digital credit product offerings: Several local banks are rolling out new digital credit products to test the market opportunities and observe digital behaviors of the users. KBZ Bank provides digital credit through their mobile wallet, KBZ PAY, and Yoma Bank offers "smart credit" via an online application process.

Online fraud cases reduce the credibility of digital financial service providers: There has been an increase in online fraud cases in Myanmar as a large percentage of the population does not have enough digital literacy and cyber-security knowledge. The government's ability to regulate, monitor and punish cybercriminals is lagging behind the rapidly changing digital landscape. As a result, more and more potential users are cautious about the credibility of digital financial service providers.

Access to Mentorship, Networking and Skills

Increase in the number of donor-funded digital skills training for SMEs in 2020: There has been an increase in donor-funded digital skills training in Myanmar in 2020. The two most recent ones are (1) Digital Readiness Program for MSMEs, funded by Friedrich Naumann Stiftung (FNS) and implemented by Impact Hub Yangon in collaboration with the SME Development Department. This was inaugurated in September 2020 to provide training on email and website usage, cloud services, digital analytic tools, digital sales and marketing and digital payment system[143], and (2) Go Digital ASEAN Initiative[144], supported by Google.org across 10 ASEAN countries and recently launched in Myanmar in September 2020. The initiative aims to minimize the negative impacts of the COVID-19 crisis by expanding economic opportunity in the region through customized training and tools, to improve digital literacy and cultivate online safety awareness for 8,000 job seeking youths and small and micro-enterprises.

Business Processes and Management

Incomplete data and lack of formal documentation: Out of 60 SMEs an expert worked with, only 20 percent of them could provide required data and documentation readily, and 40 percent willingly cooperated to gather required documents although they did not have them readily available in the beginning. The remaining 40 percent of SMEs could not provide complete data and documentation. According to the SME consultant, many SMEs, even large ones, do not want to deal with documentation processes.

Digital literacy of SMEs: A fintech entrepreneur, who has provided personal and SME digital loans to over 5,000 active customers via a mobile application, noted that a large number of her customers have limited digital literacy, and struggled initially to use the mobile application to apply for loans. Some customers do not know the basics, such as how to find and download applications on Google Playstore or other applications marketplace. Her team needs to provide step-by-step guidance to onboard customers, although simple instructional How-to videos are readily available on the Facebook Page. She observed that while digital loan application processes may be unfamiliar to many customers in the beginning, 70 percent to 80 percent of them became recurring customers because the loan application process is fast, payment can be made digitally, and they are incentivized with eligibility for increasing loan amounts based on their repayment history.

Awareness of opportunities from formalization: Only a small percentage of SMEs realize that formalizing their businesses with proper licenses and good record-keeping can bring opportunities for them to apply for grants and loans. Majority of the SMEs, especially from non-urban areas, felt reluctant to put efforts into formalization, which they see as a complicated and unnecessary process.

The capacity gap between urban and rural SMEs: The fintech entrepreneur noted that there was a significant capacity gap between urban and rural SMEs she worked with. While urban SMEs tend to be more connected and have more capable employees, the enterprises in rural areas are more likely to have less capacity in business process management, human capital, technology and digitalization.

Advisory Panel Discussion

Advisory Panel Design

The two-hour-long virtual advisory panel discussion was designed to prioritize challenges and opportunities faced by WSMEs and generate as many solutions as possible within the time limit. By design, the panelists did not spend time dwelling over problems, instead, they focused on discussing the root causes of the problems and exploring possible ways to fix them. After the authors presented a summary of problem statements from interview findings (See details in Challenges and Opportunities section), the panelists were asked: "How might we solve this problem?".

Due to time constraint, the authors decided to focus on access to financing and digitalization issues. Furthermore, these two are the most important issues that arose from the findings. Hence, the topics discussed include opportunities offered by digitalization, synchronizing across the regulatory landscape, the need to upgrade the tax system, incentivizing SMEs etc.

Recommendations

The panelists and research team were able to identify fourteen recommendations.

Access to Financing

1. Differentiate the needs of small enterprises from medium and large enterprises when designing and localizing financial services for Myanmar market.
2. Provide gender-focused grants and loans for WSMEs.
3. Build an SME digital lending platform, combining financial know-how with technology backed by credit assurance schemes, to give more SMEs access to the funds they need to sustain, grow and expand.

Access to Mentorship, Networking, and Skills

1. Provide digitalization training targeted at women entrepreneurs with practical tools for both business and personal life, as the two are inseparable in reality.
2. Include a mindset change module in the digital readiness training programs for MSMEs, as educating them about digital tools is insufficient for them to seriously invest in technology adoption.
3. Promote digital content creation in local languages, especially on digitalization and technology for WSMEs.

Business Processes and Management

1. Continue e-government initiatives because digitalization of government processes not only creates transparency but also makes it gender-neutral as less in-person interaction means less opportunity for gender discrimination.
2. Align cross-cutting regulations and policy initiatives between the SME Department and related government agencies. For example, coordinate with the Central Bank to improve access to financing for WSMEs.
3. Move forward with economic policy reforms. When laying out the legal foundation for the digital economy, Myanmar should consider not just what is possible today but should pave pathways ambitiously with an aim to leapfrog cutting-edge technology like robotic process automation (RPA), artificial intelligence (AI), blockchain technology, geospatial technology, 3D optical sensing technology etc.
4. Develop the Standard Operating Procedure (SOP) to streamline registering, applying for licenses, obtaining paperwork for MSMEs across related government agencies to make it easier for MSMEs to enter the formal economy.

5. Incentivize SMEs to register officially to comply with government regulations by providing an endorsement, protection, tax credits and other benefits by the government.
6. Modernize the tax system to reduce opportunities for bribery, be business-friendly, and streamline cross-ministries transactions digitally so that taxpayers can enjoy tax benefits and social security benefits more easily.
7. Put user education and awareness campaigns at the heart of user onboarding strategy for digital products and services.

Crisis Management (COVID-19)

1. Offer consultation and learning opportunities for WSMEs by qualified professionals with a proven track record in relevant fields to develop business continuity plans, and to future-proof their businesses to thrive in the new normal and in the age of unprecedented digital transformation.

3.6 Conclusion

In an attempt to provide pragmatic insights for key stakeholders to address the digitalization challenges facing WSMEs in Myanmar, this report has identified the present and future opportunities of digitalization across the four pillars: access to financing, access to mentorship, business processes and management and crisis management. WSME participants in Myanmar indicated that access to financing was the most challenging issue for them, compared to the other pillars. The authors also learnt that the WSMEs adopted digital tools reactively on a need basis. Social media, communication, and digital banking were the most common types of digital tools adopted by WSMEs. In addition, the analysis showed that while customer demand and workforce digital readiness are the key decision factors for digitalization, gender was not seen as a barrier. Finally, the expert interviews and advisory panel helped to crystalize overarching issues on digitalization for WSMEs and identify fourteen recommendations for key stakeholders. Though the journey ahead is daunting, the research team believes that WSMEs and the key stakeholders will manage to overcome these challenges and uplift digital capabilities of women-owned enterprises in Myanmar.

3.7
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4
Malaysia Case Study

4.1 Summary

This study examines the assumption that digitalization offers new opportunities for women-owned SMEs (WSMEs) to overcome their gender-related challenges in Malaysia. The objective is to provide recommendations to stakeholders, such as policymakers, the private sector, and professional associations, to boost the country's WSME capabilities by maximizing opportunities through digitalization. The research had three components comprising i) 18 in-depth interviews with WSMEs; ii) 4 expert interviews, and iii) an advisory panel workshop with 9 stakeholders.

The study, which took place between June and August 2020, was structured around 4 pillars, i.e. access to i) funding; ii) networking, mentoring and skills; iii) business processes and management, and iv) crisis management (COVID-19). Accordingly, the main pillar-wise findings are presented below:

Pillar 1 - Access to Financing. Majority of the WSME participants funded their businesses internally, with a minority utilizing bank loans and government grants. Non-utilization of equity crowdfunding and peer-to-peer lending was largely due to limited awareness and knowledge of alternative financing on digital platforms, as well as a mindset that was averse to borrowing and relinquishing equity.

Pillar 2 - Access to Networking, Mentoring, and Skills. Trade and business associations were widely credited as being helpful in gaining access to networking, mentoring, and skills. Online learning, while quite common, was mostly limited to Google search, YouTube videos, webinars, live talks and magazine articles. Mentoring remains a largely private affair limited to trusted family members and friends, stemming from lack of trust towards external mentors, and not easily circumvented by digital means.

Pillar 3 - Business Processes and Management. Improvement in business processes (e.g., accounting and human resources) was widely seen as positive, as it could be linked to greater growth opportunities. The cost of such tools, however, was seen as the main challenge. Participants who adopted digital tools also pointed to its role in overcoming gender-related issues, by providing them greater flexibility to work from home as well as masking their gendered identity with social media and online communications.

Pillar 4 - Crisis Management (COVID-19). This is where the opportunities brought by digitalization were the most obvious. The ability to work remotely (remote servers, virtual meetings, e-commerce platforms, online deliveries) was very important in ensuring business continuity. However, the adoption seemed to have accelerated, out of necessity, rather than choice.

Findings from both the WSME participants and experts were brought to a panel of advisors to formulate solutions and recommendations to address challenges surrounding digitalization.

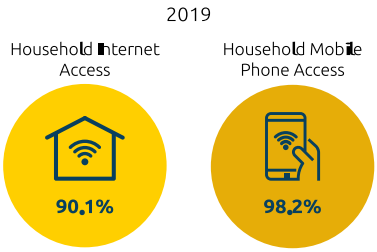
Ultimately, the 'lack of a growth mindset' was singled out as the main challenge hindering participants in optimizing digitalization, as it was observed across all pillars. Recommendations proposed to overcome the mindset barrier were:

- The most practical solution (high impact, medium effort) suggested was to implement more business accelerator programs.
- Organizing talks by successful female entrepreneurs and role models and increasing awareness of digital adoption tools were actions that could be implemented relatively quickly and on a regular basis, through working with business associations.
- Finally, a highly impactful and long-term solution would be to inculcate a 'growth mindset' from an early age through changes in the primary through the tertiary education system. However, this was deemed to be a high effort solution due to challenges in changing national education policies and objectives.

4.2
Country Background

Digitalization and Economic Growth

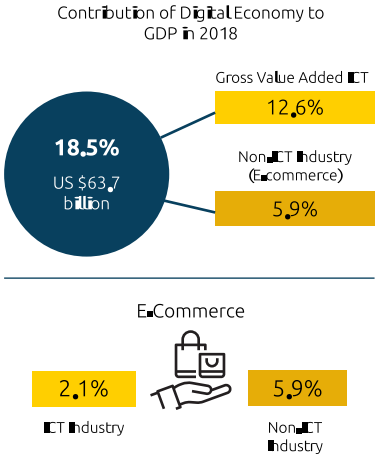
Like its Southeast Asian neighbors, Malaysia has embraced digitalization and continues to plough ahead in its digital technologies adoption. The government has played an important role in developing and implementing policies focused on hastening the digitalization adoption rate and establishing various agencies to promote and drive the digital economy.



Source: ICT Use and Access by Individuals and Households Survey Report 2019, Dept of Statistic Malaysia, April 2020

Figure 4.1: Internet & Mobile Phone Penetration

The resultant high internet and mobile phone access in households— 90.1 percent and 98.2 percent respectively in 2019[145]—has had a positive impact on economic growth. In 2018, 18.5 percent or RM267.7 billion (USD 63.7 billion) of Malaysia's GDP was broadly attributed to the 'digital economy', of which 12.6 percent was from the Information and Communication Technologies (ICT) sector and 5.9 percent from e-commerce for non-ICT industries.[146] The trend since 2017 shows that the digital economy has been growing faster than overall GDP.



Source: Main Findings, Malaysia Digital Economy 2018, Dept of Statistic Malaysia, Oct 2019

Figure 4.2: Contribution of Digital Economy to GDP

The government's thrust on improving and streamlining government and business services and activities through digitalization has not gone unnoticed: in 2019, Malaysia was ranked 5th in Asia and 15th globally by the World Bank for ease of doing business ranking.[147]

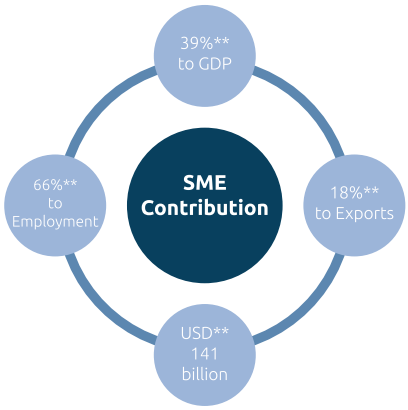
Despite this, internet access is not uniform throughout the country, with rural areas and East Malaysia experiencing lower adoption rates and slower connectivity, compared to urban Peninsular Malaysia. A 2018 World Bank report noted that Malaysia had slower internet download speeds and higher prices than many advanced economies, including neighboring Singapore.[148]

However, progress is being made in this area: in 2019, Malaysia ranked third within the ASEAN region and 34th in the world in fixed broadband speed and the second-lowest-cost per 1GB of mobile data within ASEAN.[149]

The COVID-19 outbreak in early 2020 and the government's subsequent Movement Control Order (MCO) from 18 March accelerated the adoption of digitalization among both consumers and businesses. According to a Business Impact Survey by Ernst & Young in June, over 30 percent of businesses took steps to expand or upgrade their technology capabilities in response to the pandemic.[150] Similarly, a recent study by Facebook and Bain & Company shows that Malaysia recorded the highest percentage of digital consumers in the region in 2020, viz., 83 percent of its population (aged 15 years and above).[151]

Digitalization and SMEs

Small and Medium Enterprises (SMEs) are a critical engine of growth in Malaysia's economy, contributing 38.3 percent to Malaysia's GDP in 2018, and rising to 38.9 percent in 2019.[152] They also accounted for a significant 66.2 percent of the country's employment in 2018.[153]



**Source: SME Corp Malaysia, 2018*
***Source: Dept of Statistics, 2019*

Figure 4.3: SME Contribution to the Economy

Manufacturing

Small
Sales turnover from RM300,000 (USD72,000) to less than RM15 million (USD3,6 million) OR full-tie employees from 5 to less than 75.

Medium
Sales turnover from RM15 million (USD3.6 million) to not exceeding RM50 million (USD12 million) OR full time employees from 75 to not exceeding 200.

Service & Other Sectors

Small
Sales turnover from RM300,000 (USD72,000) to less than RM3 million (USD720,000) OR full-time employees from 5 to less than 30.

Medium
Sales turnover from RM3 million (USD720,000) to not exceeding RM20 million (USD4,8 million) OR full-time employees from 30 to not exceeding 75.

Figure 4.4: Definition of SMEs

The figure above shows the official definition of Small and Medium Enterprises in Malaysia.[154] To qualify as a small enterprise (SE), Malaysia's criteria is higher, at USD72,000 per year, than Indonesia's USD20,400 and Cambodia's USD50,000. The criteria for medium enterprises (ME) is also higher, at USD720,000, vs Indonesia's USD170,000 and Cambodia's USD250,000. Due to the higher revenue criteria, the rate of adoption of digitalization among Malaysia's SMEs may differ, compared to the other countries.

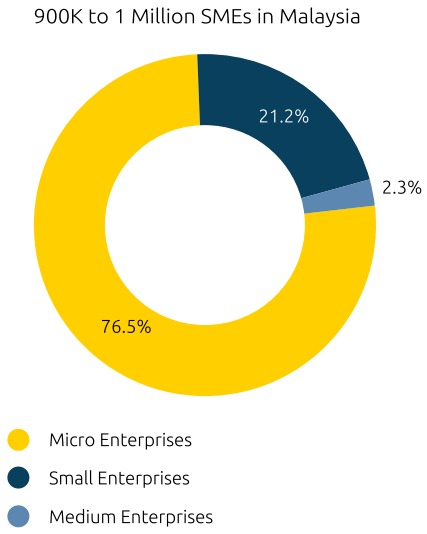


Figure 4.5: Number of SMEs Including Micros

In the last economic census, published in 2017 by DOSM (Department of Statistics Malaysia), the total number of SMEs amounted to 907,065 or 98.5 percent of total establishments in Malaysia. It is important to note that microenterprises are included in the official definition of SMEs in Malaysia. Majority or 76.5 percent of SMEs in Malaysia were microenterprises, while small and medium-sized enterprises made up only 21.2 percent and 2.3 percent respectively. Services were the largest sector, accounting for 89.2 percent or 809,126 enterprises.[146]

The same report found that excluding microenterprises, there were 213,395 small and medium-sized establishments, with small-sized firms accounting for 90.3 percent, with the remaining 9.7 percent being medium-sized establishments.

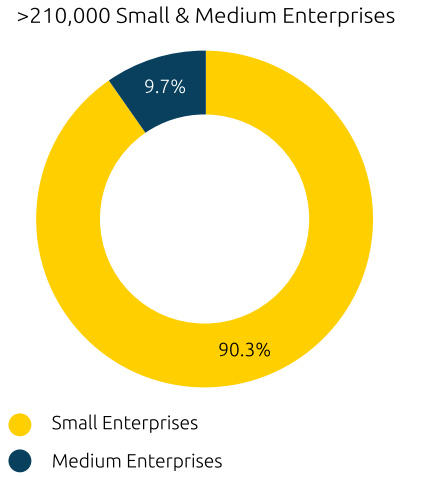


Figure 4.6: Number of SEs and MEs

As of 2015, women-owned SMEs in Malaysia stood at only 20.6 percent or 186,930 firms (including micro enterprises), with the majority (92.7 percent) highly engaged in the services sector.[155] While there are no updated official figures on WSMEs in Malaysia, the authors estimate that there are probably 30,000 to 40,000 women-owned non-micro SMEs in Malaysia.

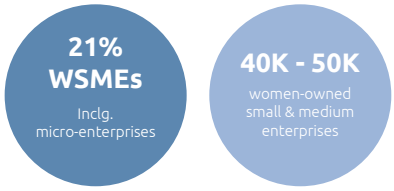


Figure 4.7: Estimated Number of Women-owned SMEs

Source: "Economic Census 2016", Dept of Statistics Malaysia, Dec 2017, Stratos Estimates.

The government has played a role in driving this sector forward, introducing new policies, such as the Dasar Keusahawanan Nasional 2030 (DKN2030) (National Entrepreneurship Policy 2030), and new entities, such as the Small and Medium Enterprise Corporation Malaysia (known as SME Corp. Malaysia) and the SME Bank, to provide infrastructure, advisory, financial and types of support to SMEs.

It is widely acknowledged that COVID-19 spurred digital adoption among SMEs in Malaysia, and made a strong case for digitalization as a key survival skill during the crisis as well as in the post-pandemic 'new normal'.[156] An LSE article notes that prior to the pandemic, businesses in Malaysia had not adopted digital technologies as readily as the government and citizens, and lagged behind the global average.[157] Faced with the closure of non-essential businesses and travel restrictions, businesses were forced to turn to digital technologies and innovate, spurred on by a series of initiatives by the Malaysian government. However, as the LSE article notes, several problems continue to impact the speed and uptake of digitalization, including cash flow.

For WSMEs, who face financial as well as other gender-specific constraints, COVID-19 presented some unique challenges as well as opportunities. Against this background, the authors take a closer look at the efforts of WSMEs in adopting digital technologies in Malaysia, and the constraints and benefits accrued thereof.

4.3 Methodology

Given the importance of SMEs and the digital economy, this study examines how and whether digitalization creates new opportunities for WSMEs in Malaysia. The primary objective of the research was to provide policymakers, the private sector and professional associations with recommendations to optimize the adoption of digital technologies among WSMEs.

Research Belief

Empowered women in business equipped with digitalization and innovation capabilities can: i) build more sustainable and profitable businesses, ii) empower more women and communities, and iii) stimulate greater social and digital economic growth.

Research Assumption

Digitalization offers new opportunities for WSMEs to overcome their gender-related challenges. However, this will occur at varying degrees, depending on WSME maturity and size.

Data Collection

The research adopted a qualitative approach, with 3 main components, as shown below. In-depth interviews (using open-ended questions), were carried out with the WSME participants from June 25 to July 22, 2020. WSME interview findings were then used to guide the Expert Interviews, which were conducted from August 6- 24, 2020. These findings were then synthesized, with key insights presented and discussed at an Advisory Panel discussion on August 25, 2020. Due to confidentiality, the names of respondents and panelists are not disclosed, except for those who provided consent in the Case Study.

Figure 4.8: Research Methodology

Due to the impact of COVID-19, a few of the interviews were conducted online. However, the majority agreed to be interviewed physically. The Advisory Panel discussion was also held offline due to the subsequent easing of government regulations on physical movement.

Research Challenges

It was challenging to recruit respondents from the agricultural sector due to its male-dominated nature.[158] All respondents were based in Kuala Lumpur and Selangor, and there were challenges with getting respondents outside of the region, due to refusals. The research findings are thus based on an urban, educated sample of WSME participants, who are middle income and above.

There were also challenges in obtaining more information on gender-related issues and challenges, as most of the participants dismissed the existence of such problems outright. In a conservative cultural environment,[159] certain gender-related issues might be too personal or sensitive to be revealed. As all the women were educated, and many had supportive family networks (husbands, parents or siblings as business partners), at first glance, they did not appear to face major gender-related challenges.

Data Analysis

These interviews revolved around 4 pillars:

Figure 4.9: Research Pillars

These pillars were chosen as they represent important aspects of business digitalization for WSMEs. Remarks by respondents were coded into the relevant codes and pillars, with codes derived from examining the interview transcripts. Each coded remark was then looked in more detail to distinguish whether it corresponded to Pillar 1, 2, 3 or 4. Top challenges and opportunities were also identified using the code-pillar maps. Findings were then analyzed in relation to the research assumptions. Due to the limited sample of MEs in the study, a more inductive approach was adopted by looking at the characteristics of each WSME, with reference to its digital adoption.

Next, expert interviews were conducted with various stakeholders, to achieve a better understanding of the SME and digitalization ecosystem, as well as to identify steps needed to overcome challenges mentioned by the WSMEs, concerning the 4 pillars. Finally, findings from both the WSMEs and experts were brought to an Advisory Panel to formulate practical and workable recommendations and solutions on how women-led SMEs can achieve the maximum potential of digitalization.

About the Respondents

Brief Profile of WSME Participants

18 WSME participants were interviewed from 3 sectors—services, manufacturing and construction. Altogether, 16 sub-sectors were represented. The diversity in sectors was deliberate, to evaluate differences in digitalization adoption by nature of industry, if any.

Services - 14; Manufacturing - 3; Construction -1

Figure 4.10: Profile (Sectors) of WSMEs Interviewed

Figure 4.11: Profile (Subsectors) of WSMEs Interviewed

16 companies represented SEs, while only 2 were MEs (architecture and 1 F&B company). This is consistent with the national breakdown, where MEs comprise approximately 10 percent of the SME ecosystem. Although two companies had high annual revenues of RM3 million and above, they had to be classified as SEs, rather than MEs, as they had less than 30 workers.

The enterprises had been established from 3 to 31 years and employed 5 to 50 employees. There was a balanced mix in terms of respondents' ages, with 6 in their 30s, 5 in their 40s and 7 in their 50s.

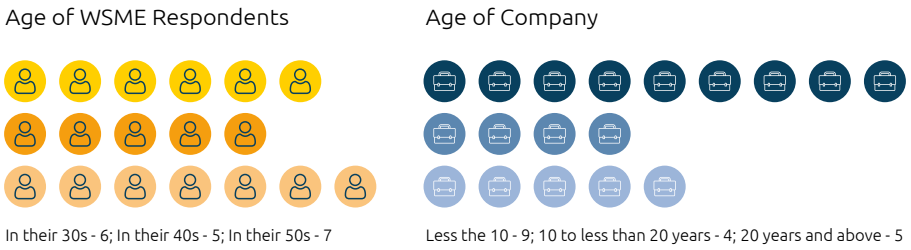


Figure 4.12: Profile of WSMEs Interviewed (continued)

Brief Profile of Experts Interviewed

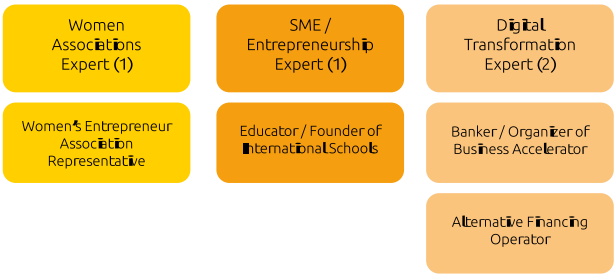


Figure 4.13: Profile of Experts Interviewed

Four experts were selected for the interviews, as shown in the above figure. They were chosen based on their extensive knowledge and experience in the country's digitalization ecosystem. Expert interviews were conducted to achieve a better understanding of the SME ecosystem and trends in digital adoption, as well as challenges faced by SMEs in general. The experts also identified some strategies to overcome these challenges. The respondents were interviewed on various aspects of the 4 pillars, with a focus on the key findings from the WSME interviews.

4.4
Interview Findings

Financing: Self-financing Still the Default Choice

Many WSME participants considered the use of operating profits as the preferred way to finance their businesses. This was seen as the option that could demonstrate self-sustainability and strong businesses fundamentals. Other options for financing explored included bank loans and government grants.

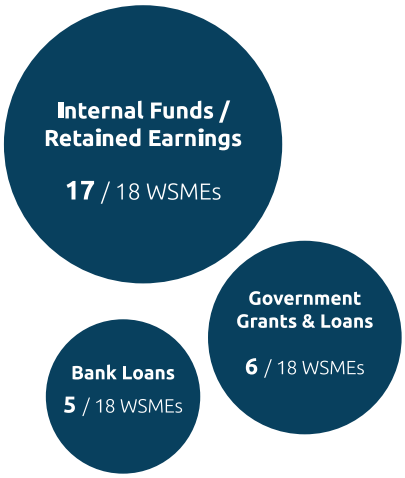


Figure 4.14: Source of Financing

Internal financing was utilized by the majority of the participants (17 out of 18), with only 5 making use of bank loans. Three participants utilized both bank loans and government grants, as part of their financing options. The low rate of bank loan utilization appears to indicate a risk-averse attitude among WSMEs.

It should be noted that the owner of the most mature company in the study, which had been around for more than 30 years and had the highest estimated revenue among participants, was also self-funded and strongly against borrowing.

> My funding is still on my own. I tried to approach the bank for loans because I had customers, and I needed to buy raw materials. Since it's a factory, materials are really expensive. I wrote my business proposal and gave it to the bank, but they said my cash flow was not good. They wanted to see companies with good cash flow then they could lend it to you.
>
> (Owner of Manufacturing SME)

Sufficient internal funds were also cited as one of the reasons for not undertaking other financing options. In cases where external funds were needed, they would rely on family members for assistance. Difficulty in getting bank loans had been a challenge for manufacturing WSMEs as they would need to demonstrate profitability to qualify for a loan. As they tend to invest heavily in machinery, especially in the early years of the business, they may have limited internal financial resources, and hence may not meet the eligibility criteria set by financial institutions.

Bank loans were taken mostly from local banks. However, one participant commented on having to prepare too much documentation prior to loan application submission.

In terms of government grants and loans, participants utilized funding from agencies under various ministries, such as the Ministry of Entrepreneur Development and Cooperatives (MEDAC), Ministry of International Trade and Industry (MITI), and MOSTI.

These are among the ministries that are mandated by the government to provide grants to beneficiaries befitting their respective portfolios. The quantum and type of financial assistance vary by agency.

Pillar 1 - Access to Financing

Innovation Grants Utilized by Manufacturers while New Funding Opportunities Largely Shunned by WSMEs

While digitalization brought many new opportunities in the area of financing, these had not been well utilized by the participants. Apart from the government-administered R&D and digitalization grants, none of the other new funding opportunities, such as equity crowdfunding (ECF), peer-to -peer (P2P) lending, and digital microfinancing, were adopted by the WSME participants.

While two of the three manufacturing participants utilized research and development (R&D) grants and soft loans from the government, as they were developing new biotechnology and chemical products, these grants were not sought by the other participants.

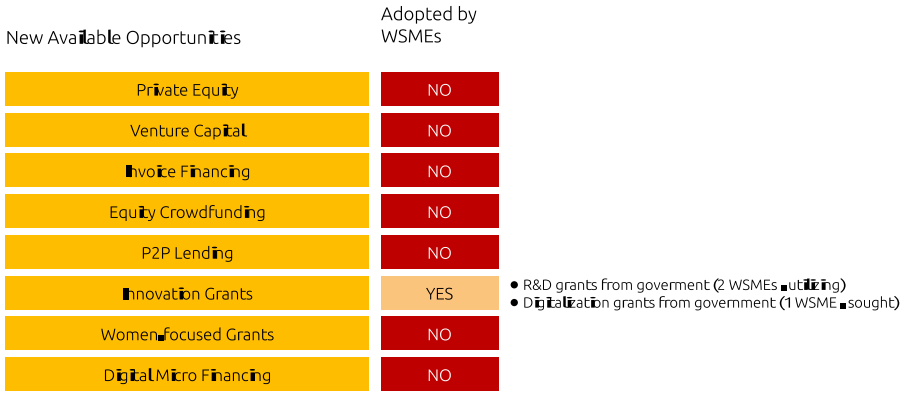


Figure 4.15: New Opportunities in Access to Financing vs Opportunities Adopted by the WSMEs

This may be due to the lack of available innovation grants that were targeted at non-manufacturers and non-tech companies. A quick check on the available government innovation grants in Malaysia, such as MOSTI R&D Fund[160], the MOSTI International Collaboration Fund[161], MDeC Global Tech Fund[162], the Malaysian Technology Development Corporation's (MTDC) Commercialisation of R&D Fund[163], the MTDC Technology Acquisition Fund and the Biotechnology Transformation program Fund,[164] showed that they were largely targeted at technology companies or manufacturers.

This left companies in the non-tech service sectors (e.g. F&B, retail, building management or printing) with potentially lower chances for accessing this valuable opportunity, even if they planned to introduce innovative services or exciting new ways of delivering their services. A participant from the services sector did apply for the MDeC Digitalization grant, which was a matching grant for the adoption of digital tools. However, she endured a troublesome application process (through an appointed bank) due to lack of clarity on the submission channels, and had yet to receive the money at the time of the interview.

As many as 15 out of the 18 participants claimed that they had heard of alternative financing options before, but had not explored such options in a serious manner. Aside from only one or two participants, perception towards alternative financing bordered on the negative, with entrepreneurs commenting on high-interest rates (for P2P financing), dubious investors, and loss of company autonomy.

There were still doubts over stakeholder protection in the alternative financing sector, especially when compared to established financial institutions. This was even after regulatory frameworks on ECF and P2P financing were put in place by the Securities Commission (SC). Concerns were raised by two participants regarding venture capital (VC), specifically its misalignment with their values on organic growth and profitability. These views on alternative financing and VC were some of the key obstacles in the effort to popularize the digital funding ecosystem among Malaysian WSMEs.

Lack of Awareness and a Strong Mindset against Borrowing and Equity Sharing Prevented WSMEs from Capitalizing on New Opportunities for Funding

When it came to accessing funding, there was a notable lack of awareness, as expressed through inaccurate perceptions on the mechanisms of alternative financing, as well as certain financing options from the government.

> "For me, I'm anti-borrowing [for business]. But for property I don't mind. I feel that if you're in a business, your business should be able to sustain [itself]. I'm always against borrowing.
>
> (Owner of Property Management SME)

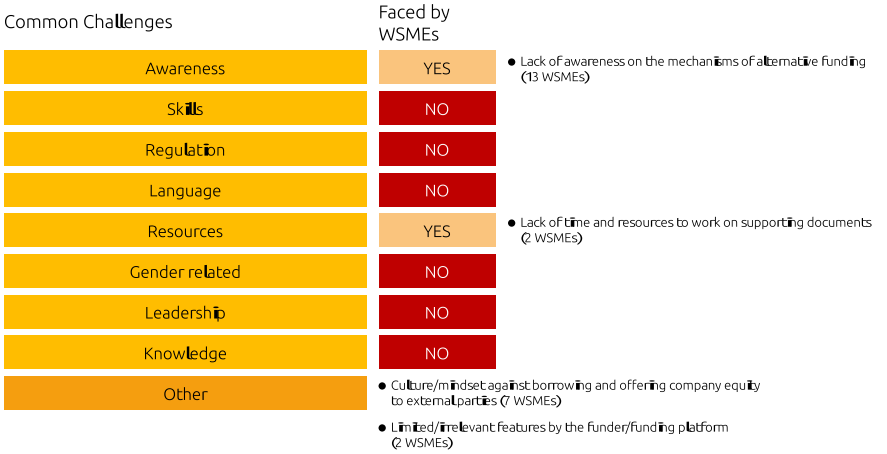


Figure 4.16: Challenges in Access to New Financing Opportunities by the WSMEs

There was also a strong aversion to borrowing money for business, and offering company equity to external investors among a number of the WSME founders. These founders would rather: i) prioritize operational cost management over financing; ii) prioritize internal funding over external financing; iii) prioritize stability over growth; and iv) avoid external funders.

This mindset was seen to have a strong effect on their impressions of new financing methods. The lack of impetus to explore any form of external financing automatically prevented them from seeking out novel methods of funding.

Other challenges faced by participants with regards to access to funding within the digital economy ecosystem included the lack of resources to deal with grant applications and the limited or irrelevant features offered by funding platforms. One of the participants who had explored GoFundMe and Kickstarter a few years ago pointed out that Malaysian bank accounts were not supported on those platforms.

Pillar 2 - Access to Mentoring, Networking, and Skills

Digitalization has Democratized Learning and Networking for WSMEs

With regard to new opportunities in the area of mentoring, networking and learning, it was clear that digital learning was rather well-received. Quite a number of participants leveraged on digital tools to listen to talks and webinars, watch videos on relevant topics and connect with mentors and peers within their industries.

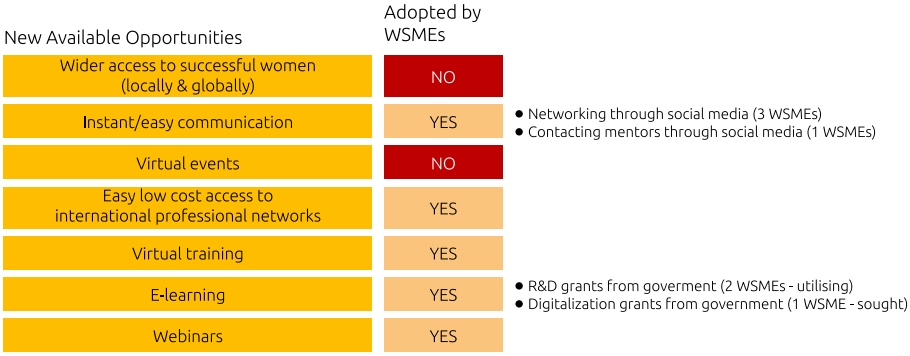


Figure 4.17: New Opportunities in Access to Mentoring, Networking, and Skills vs Opportunities Adopted by the WSMEs

> Go to Google, YouTube... learn things about your business. If you go for formal training, it will cost you money.
>
> (Owner of F&B Retail SME)

The opportunity to easily connect with successful women or professional networks on a global scale had not been widely taken up by the participants. This could be due to their existing reluctance to seriously explore global business opportunities— partly owing to the fear of being on the losing end of business deals, particularly in foreign countries.

Limits of Digital Learning and Skepticism Over External Mentors

While a decent number of WSME participants had been attending webinars on industry-specific topics and on business management in general, a few of them felt that virtual platforms were not interactive enough to provide a more wholesome learning experience.

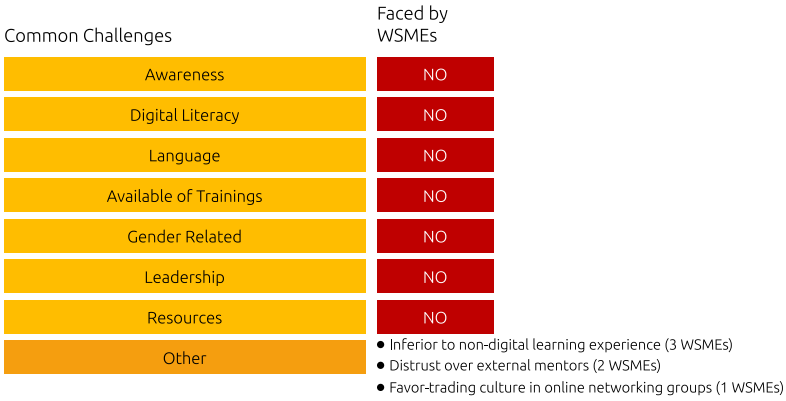


Figure 4.18: Challenges in Accessing New Mentoring, Networking, and Skill Acquisition Opportunities among the WSMEs

For example, a physical classroom setting was seen to be more conducive for interacting with the instructor and for practicing new skills on the spot. Digital learning was also seen to require active self-discipline, whereas discipline could be passively instilled by group dynamics in a physical learning setup.

Participants in the manufacturing sector exhibited a sense of unease with consulting external mentors, as potentially sensitive information could be revealed. This unwillingness to seek advice from third parties had prevented them from seeking mentorship via non-exclusive platforms such as online mentoring networks or social media.

It was also highlighted that certain online business networking groups were only willing to share knowledge in exchange for actual business deals. This had prompted participants to return to the tried and tested ways of networking through formal trade associations.

> “I have attended a lot, but webinars but those were one-way communication. It’s useful but only to a certain extent. You need something like a teacher-student setting to point out your mistakes for you.
>
> (Owner of Cosmetics Retail SME)

> I cannot find anybody who can mentor me. It's not easy to find someone to mentor [you], because you'll be divulging a lot of things.
>
> (Owner of Manufacturing SME)

Pillar 3 - Business Processes and Management

Digitalization of Business Processes and Management Gain Traction—Particularly in Terms of External Processes

With regard to business processes, quite a number of new opportunities were being utilized by the participants, with social media marketing, official websites, and accounting software being the most widely used. The other digitals tools for improving internal business processes, such as procurement systems, supply chain management systems, CRM systems and data analytics were deployed by a smaller group of WSMEs that were serving the mass consumer market.

In general, social media marketing was seen as affordable and effective in terms of reaching out to the masses, which explains its popularity among the participants. Setting up an official website or an online business profile was also seen to be cost-effective, due to the availability of low-cost website building tools such as Wix and free tools such as Google My Business.

Most digital marketing efforts were also seen to be linked to the desirable outcome of customer acquisition, which could in turn lead to sales. In contrast, it was not easy for many participants to draw a direct link from tools such as HR software, project management applications and cloud storage, to better business outcomes. Those who did utilize the new opportunities to improve internal processes were looking to speed up processes, such as approval and monitoring of leave applications, and to reduce errors in data entry and data organization.

> We posted on Facebook about our initiatives in producing hand sanitizers for frontliners and donating them to schools, as well as our move to employ youth interns who were struggling to get jobs. People seemed to like it and that's how we got more people buying from us. It spread very fast.
>
> (Owner of OEM Cosmetics Manufacturing SME)

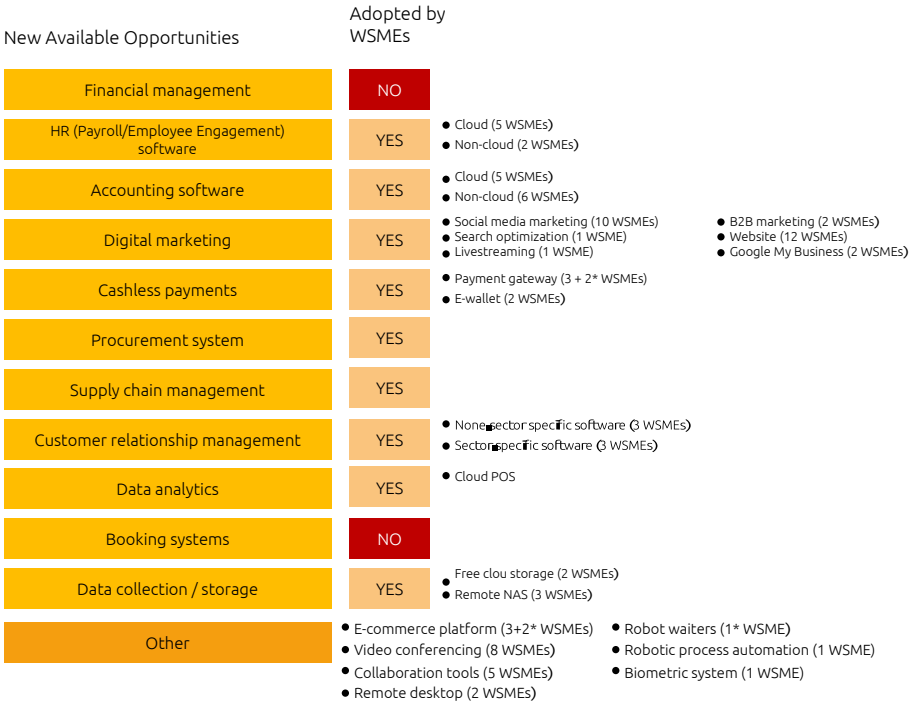


Figure 4.19: New Opportunities in Business Processes and Management Transformation Adopted by the WSMEs

Mismatch of Features with Critical Business Needs and Cost of Tools Discouraged Wider Digitalization of Business Processes and Management

However, improvement in business processes was almost always be tied to spending and was still seen primarily as a cost rather than an investment. It was not uncommon, especially among the smaller companies, to hear complaints about the cost of software and the accompanying hardware. The cost of the tools would have to be justified through increased opportunities for sales or highly significant improvements in the speed of business processes.

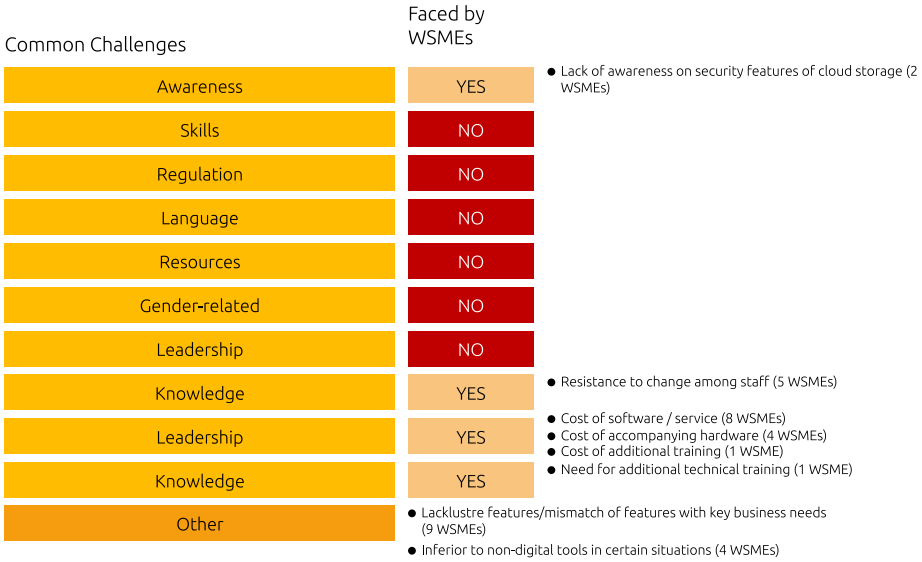


Figure 4.20: Challenges in Accessing New Opportunities in Business Process and Management Transformation Among the WSMEs

The software and services that were seen as costly included specialized software, e-commerce platforms, payment solutions, market intelligence, cloud access, and even basic word processing suites.

It should be noted that tools and software that may seem affordable to large corporations can be seen as a major burden to (W)SMEs. Furthermore, when the tools required certain add-ons to be fully functional or required users to be trained, the additional cost and extra time spent made the participants seriously question their value for money as a whole.

For the more cash-strapped companies, softwares, and online tools that were priced in US dollars were also a deterrent, as they would have to face foreign exchange risks. For example, a Xero Standard subscription might sound very affordable at $30 a month (price as of August 2020), but after conversion and bank charges, it would cost more than RM125 a month (as of August 2020) and more than RM1,500 a year. In comparison, the Standard version of SQL Accounting, a locally developed accounting software that is used by a number of the WSMEs, comes with a one-off fee of RM2,999.

Products that required add-ons (with an additional fee) to be fully functional were a limitation for companies that were watching their spending and created a mismatch between the product's features and WSMEs' more pressing business needs.

There were several examples cited about this mismatch between products and business needs. The owner of a stationery retail SME noted that an inventory management system that they recently adopted did not offer sufficient automation, as it still required certain data to be entered manually. As a result, team members found themselves spending more time setting up their database than they thought they would.

> We made a big investment in building information modelling (BIM) software… [It's] very costly: not only do you have to change the software, but also the hardware… I also have to train the staff to use it, which is time-consuming... After all the time and money spent in training, the company loses out if [employees] leave or are pinched by other firms.
>
> (Owner of Architecture SME)

There were cases in which the digital tools did not cater well enough to the needs of end-users.
There also seemed to be an interesting dismissal of cloud storage among 2 participants based on the view that it would not be as secure as on-premise servers, even if cloud providers had been offering advanced security features and were well equipped to deal with security threats.[165 & 166] These 2 WSMEs were in the field of auditing, which required them to treat clients' data with the highest level of privacy and security.

While it could be argued that there was limited awareness of the security features of cloud computing, these concerns were valid and had to be addressed by the other stakeholders in the digital economy ecosystem. This could be through increased education and awareness efforts as well as the development of products and services that catered to these very concerns.

> During the (COVID-19) movement control period, we gave online classes to kids, but we received feedback that it was not easy for parents because they had to work from home and the kids were still young… [As] the parents couldn't adjust, we stopped online classes after 2 weeks.
>
> (Owner of Education SME)

Pillar 4 - Crisis Management (COVID-19)

Acceleration of Digitalization Undeniable During the COVID-19 Crisis, but Can It Last?

During the height of the COVID-19 outbreak in Malaysia, when strict movement controls were imposed in March and April 2020, many of the WSMEs were forced to accelerate digitalization of certain business operations. This was evident in the increased adoption of remote working, e-commerce platforms, and digital learning among the WSMEs in the study.

As the consideration surrounding the adoption of digital tools shifted from how much one could benefit from using the tool to how much one stood to lose from not using the tool, the choice was rather straightforward, even for the WSMEs that were doubtful of the value of such tools in the past.

For example, the F&B companies had been considering delivery services prior to the crisis but only started offering the services during the crisis. 1 participant who was skeptical of cloud software also started considering it during the crisis, as she found herself without access to certain data while working from home.

Crisis Management Measures Enabled Through Digitalization	No. of WSMEs That Adopted Them During The Crisis
Digital Marketing	10
Remote Work	10
Video Conferencing	6
E-commerce (including online food ordering & delivery)	4
Digital Learning (as receivers)	2
Digital Learning (as providers)	2
Cloud Systems	1+1*

*Started seriously considering during crisis

Figure 4.21:. Crisis Management Measures Adopted

Resistance to Digitalization Weakened During the Crisis, Though Cost and Relevance of Certain Digital Platforms Still Caused Problems

While doubts and complaints about digital tools had reduced during the pandemic as participants were forced to adapt to the situation, there were still a few issues that emerged as the WSMEs implemented new crisis management measures.

Challenges When Implementing New Crisis Management Measures	No. of WSMEs That Faced Such Challenges
Cost	2
Not suitable for clients	2
Lacklustre features / services of newly acquired tools	1
Existing software limitations	1
Clients' software limitations	1

Figure 4.22: Challenges when Implementing Crisis Management Measures

The F&B retailers who turned to delivery platforms to continue serving customers during the crisis saw further strains to their finances due to significant commission charges as well as logistical issues:

> One of our delivery partners charged 30 percent of sales transactions. The ordering platform charges 10 percent, but there are also additional charges for delivery. In the beginning, we had a lot of problems with the delivery—our food disappeared, riders [went] missing. I think the riders took on too many orders, [so] maybe [they] couldn't cope. In terms of the charges – we just needed to swallow [the losses].
>
> (Owner of F&B Retail SME)

The obstacles to a smooth implementation of remote work were tied to software limitations of both the WSMEs' IT infrastructure and their clients' IT infrastructure. One WSME could not access certain important data remotely as its existing software did not run on the cloud. Another WSME could not complete certain tasks as its client did not have remote access to necessary data. The remote working environment brought on by COVID-19 amplified the impact of one organization's lack of digitalization to the wider business value chain.

Opportunities

Looking closer at the new opportunities that had been adopted by the WSMEs across the four pillars, it could be observed that there were two key motivations behind the adoption: i) cost-effectiveness, and ii) revenue growth.

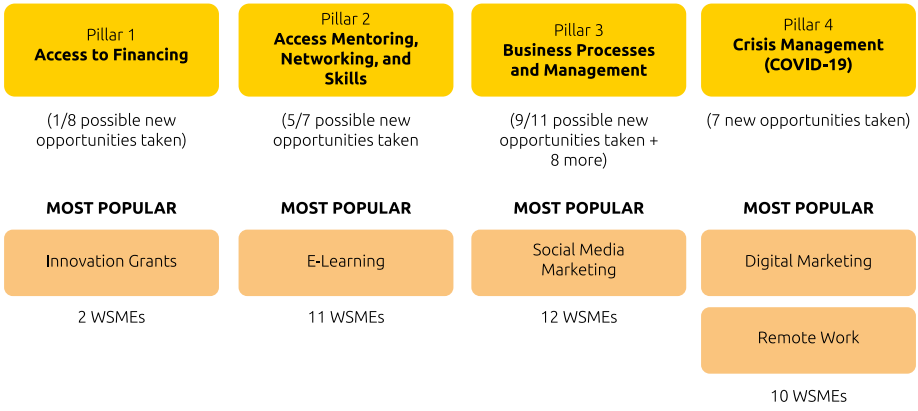


Figure 4.23: Top New Opportunities Adopted by the WSMEs Across Four Pillars

In the area of access to funding, government innovation grants were the only new opportunity being utilized by 2 manufacturing WSMEs. There was no shortage of government support with regards to innovation grants for the information technology (IT), manufacturing, biotechnology, energy and agricultural sectors.[167] These WSMEs took the opportunity to fund the development and commercialization of their products with interest-free grants and soft loans, which served the dual purpose of cutting their investment costs as well as realizing their plans for future revenue generation.
This opportunity was, however, scarce for non-tech service sectors such as F&B retail, auditing, architecture, property management, and childcare.

In the area of access to mentoring, networking and skills, digital learning through online literature was very popular, as it was mostly free or low-cost in nature. With regard to business processes and management, the popularity of social media marketing tools was attributed to their affordable prices. A few WSMEs ran the most basic form of social media marketing by using free Facebook and Instagram pages without running advertisements. The popularity of social media marketing persisted during the height of the COVID-19 crisis, with most of the country stuck at home with very little exposure to outdoor and point-of-sale marketing materials.

Accounting software was also widely used among the participants, which was not surprising due to its long presence in the Malaysian market. For example, the popular UBS accounting software had been available since 1988.[168] There has also been strong institutional support by government agencies, such as the Inland Revenue Board (LHDN) and the Employees Provident Fund (KWSP), in ensuring that the features of locally available HR and payroll softwares were compatible with local tax documents.

WSME highlight 1: Promise Earth (M) Sdn Bhd

Figure 4.24: Jovie Chong (3rd from left)

Company Name: Promise Earth (M) Sdn Bhd
Sector: Manufacturing (fertilizers from organic waste)
Respondent's name: Jovie Chong (daughter of the founder, Mr Jeffrey Chong) - Finance Manager

Promise Earth's story:

Promise Earth (M) Sdn Bhd is a biotechnology company that is involved in the treatment of organic waste through the process of fermentation and composting. Organic materials that are treated here are derived from offcuts of food processing plants, and are fermented using a fermentation technology that digests the waste, by the use of aerobic thermophilic microbes, within 24 to 48 hours. The fermented output is then converted into natural fertilizers and animal feed appetizers, under the brand name 'Bio-Mate'. Apart from 'Bio-Mate', the company is now venturing into selling pet supplements (with a brand name 'Epic Treats'), under Jovie's initiative.

New opportunities:

Pillar 1: Access to Financing. Leveraging on its BioNexus status, the company received government funding from the Ministry of Science, Technology and Innovation (MOSTI) and the then Ministry of Energy, Science, Technology, Environment & Climate Change (MESTECC), respectively. These funds were used to expand the use of biotechnology in its product development.

Pillar 2: Access to Mentoring, Networking, and Skills. Citing proprietary technology, Jovie revealed that the company collaborates with consultants in the agriculture industry and partners with Universiti Putra Malaysia (UPM) on its product development. As for her entrepreneurship journey, Jovie shared that she listens to multiple online (mentoring) webinars.

Pillar 3: Business Processes and Management. Riding on the success of the commercialization of its high-speed fermentation and composting machines, Promise Earth began marketing and selling on a larger-scale, and has been using UBS accounting software 2015 to facilitate smooth transactions with purchasers. The software also enables them to generate profit and loss and balance sheet reports almost instantly, and to monitor their stocks (fertilizers, animal feed appetizers and pet supplement) closely. On the customer front, their product (fertilizers) is promoted digitally to consumers on Facebook and on major online marketplaces, such as Shopee and Lazada.

Note: BioNexus status is awarded to companies undertaking value-added biotechnology and/or life sciences activities.[169]

Challenges:

Pillar 1: Access to Financing. Although Jovie was not fully aware of alternative financing, the company is open to exploring it, as they were seeking funding for other aspects of the business.

Pillar 2: Access to Mentoring, Networking, and Skills. Jovie shared that she would appreciate a mentor in business management and digital marketing. This stemmed from the desire to approach the younger generation of agri-prenuers, who are seen to be more open in embracing digitalization.

Pillar 3: Business Processes and Management. As agriculture is still a rather traditional industry in Malaysia152, the fertilizers are mostly promoted and sold directly to farmers through their salespersons on the ground. Despite having a website and a Facebook page, digital penetration customers is relatively low due to the traditional base, making it harder to conduct sales online. Despite its offline business transactions, customers are receptive to conducting online banking transactions for purchasing matters.

How does digitalization help you as a female entrepreneur?

A significant challenge faced by Jovie is that the farmers are predominantly older males, who prefer dealing with male salespersons. However, digital marketing channels such as Facebook and the website helped to neutralize this gender-specific element, allowing her to connect to customers that would traditionally not want to engage with her. She noted that this culture was slowly changing with a new crop of second-generation younger farmers, who were more open to communicating with women. ,

> “For women, there are limitations. If I go with my husband, customers will usually speak to him and try not to talk or look at me. But the young generation of farmers, they are okay.
>
> Jovie Chong

What is your advice to young female entrepreneurs?

Jovie shared that working digitally was beneficial to women as it allowed them to overcome the gender discrimination they faced when dealing with more traditional or conservative customers, such as those in agriculture. In bypassing this significant physical constraint, digital technologies allowed them direct access to customers who would have ordinarily shied away from communicating with them in person. Further, leveraging digital marketplaces such as Shopee and Lazada also provided WSMEs with a wider customer reach.

WSME Highlight 2: Consumer Products (Anonymous)

Company Name: Consumer Products (Anonymous)
Years in Business: Less than 10 years
Annual Revenue: RM 2 to 3 Million (USD 0.5 to 1 Million)

About the company:

The company features products that are customizable and sold to both local and international markets. Categorized as an SE, the company has less than 20 full-time and part-time employees, but is looking to scale up the business further, riding the wave of digitalization. The company leadership has invested in digital technologies for various business activities, exhibiting a strong growth mindset in relation to digital technologies. The company has managed to keep its costs in check for the digital solutions adopted, and part of its development of a solid digital transformation strategy involves ensuring the existing infrastructure can support the emerging digital transformation.

New opportunities:

Pillar 1: Access to Financing. In addition to internal funding and the reimbursement support received as a member of the Malaysia External Trade Development Corporation (MATRADE), the company leverages on a pre-order sales strategy, inspired by P2P lending and crowdfunding platforms such as GoFundMe and Kickstarter, to finance the development of its products.

Pillar 2: Access to Mentoring, Networking, and Skills. Seeking to scale up the business further, the leadership signed up for a few mentorship programs. Interviewees shared that such programs were beneficial in enhancing knowledge sharing and connecting with successful organizations to learn best practices. In fact, the company's revenue has grown by 20 percent within 9 months, where the success was largely attributed to participation in this type of mentorship programs. The leadership also resourcefully relied on vendors' free webinars to learn new skills, such as the use of newly adopted digital tools, and to transfer that knowledge to their employees.

Pillar 3: Business Processes and Management. Digital technology adoption is a key element of the company's business transformation strategy and growth plan. An e-commerce platform was first launched on Shopify to boost online sales and expand customer reach, which is considered a user-friendly site, for both customers and businesses, and allows cross-software integration. Multiple marketing channels such as Mail Chimp, Instagram, Facebook and YouTube have also been set up to optimize engagement with their customers. The company also moved its operations online, using software such as PayrollPanda for payroll management and employee onboarding; HealthMetrics for employee healthcare and medical receipts management; Trello, Slack and Notion for project management; and, ECount, TradeGecko and Xero for inventory management and accounting purposes.

Challenges:

Pillar 1: Access to Financing. Although aware of other available government grants, the company is not actively seeking such options as they have heard that this can be a tedious process to apply for, with a long wait of up to 5 months and with no guarantee of success.

Pillar 2: Access to Mentoring, Networking, and Skills. The leadership still struggles with employee mindset, due to strong resistance to the use of new digital technologies among staff. This, along with the lack of entrepreneurship and leadership classes for women in Malaysia, has hindered a smooth transition to fully digitalized operations. The woman owner of the company asserts that building a business is like a building puzzle, where leadership skills are needed to overcome the series of obstacles that come one after another.

Pillar 3: Business Processes and Management. While software applications, such as Shopify, Xero and TradeGecko, provide digital solutions to inventory management, accounting and other business processes, the founder noted that it is often not easy to implement and integrate these applications. Part of the process still requires information to be manually keyed in, as the company faces challenges in organizing and synchronizing the data across the different tools into the same system, and streamlining processes efficiently towards full automation.

How does digitalization help you as a female entrepreneur?
The company owner noted that digitalization had helped women by providing more possibilities for work-from-home arrangements for her and her team, which has greatly assisted in the management of work-life obligations.

What is your advice to young female entrepreneurs? As a female entrepreneur, there are instances that will make you doubt yourself, especially in being underestimated or facing differential treatment due to gender discrimination or cultural stereotypes. Therefore, it is essential for young female entrepreneurs to focus on their strengths and direct their energy to build their business.

Challenges

Operational Challenges Dominate the WSMEs' Troubleshooting Itinerary

As the research assumes that new opportunities brought by digitalization can help WSMEs overcome their business challenges, it is also important to examine the challenges faced by these entrepreneurs.

Figure 4.25: Most Significant Challenges Faced by WSMEs

It was found that issues with operational costs were the most common, followed by issues with tools and services by suppliers, service providers and potential funders. Other problems cited by participants related to culture or mindset among team members, clients and other businesses. Interestingly, interviews revealed that while the new opportunities brought by digitalization managed to address previous issues with tools, they could not overcome issues associated with operational cost and mindset.

> The reason why we didn't go for a logistics-specific system is the [high] cost, around RM10k+ to set up everything. A generic one [costs] just a few thousand to set up, and just RM500 monthly to maintain.
>
> (Owner of Logistics SME)

New Opportunities Made Possible By Digitalization VS The WSMEs' Most Significant Challenges

Pillar 1 **Access to Financing**	Pillar 2 **Access Mentoring, Networking, and Skills**	Pillar 3 **Business Processes and Management**	Pillar 4 **Crisis Management (COVID-19)**
Top challenges: • Limited awareness (12 WSMEs) • Culture/mindset (7 WSMEs)	Top challenges: • Product features /services (6 WSMEs) • Culture/mindset (5 WSMEs)	Top challenges: • Product features /services (9 WSMEs) • Cost (8 WSMEs) • Culture/mindset (5 WSMEs)	Top challenges: • Product features /services (4 WSMEs) • Cost (4 WSMEs)
New opportunities adopted to address top challenges: • None	New opportunities adopted to address top challenges: • E- Learning (11 WSMEs) • Webinars (7 WSMEs)	New opportunities adopted to address top challenges: • Online Payment Gateway (1 WSME) • Cloud Software (1 WSME)	New opportunities adopted to address top challenges: • Cloud Software (1 WSME)
• Ability of existing new opportunities to address WSMEs' challenges is limited • Subject to major increase in awareness and change of mindset	• New opportunity (e-learning) managed to address issues with guidance from existing trade associations • Culture/mindset was still a major stumbling block in promoting new mentoring opportunities	• New opportunity (online payment gateway) managed to address issues with product features/services of existing tools • Adoption of new opportunity (cloud software) was prevented or slowed down by issues with cost and culture/mindset	• New opportunity (online payment gateway) managed to address issues with product features/services of existing tools • Adoption of new opportunity (cloud software) was prevented or slowed down by issues with cost and culture/mindset

Figure 4.26: Opportunities vs Challenges

Underlying Culture/ Mindset Problems Prevent Further Advances in Business Processes & Management and Growth

Looking closer at the common challenges faced by the participants across the four key pillars, problems with products, services and vendors, followed by problems with costs were the most common issues faced. However, upon deeper analysis, the authors discovered that mindset problems were more deeply-rooted and were not being sufficiently addressed. While the women founders put in the effort to address resistance to change among staff members through training and encouragement, some fundamental issues related to the founders' mindsets were not addressed.

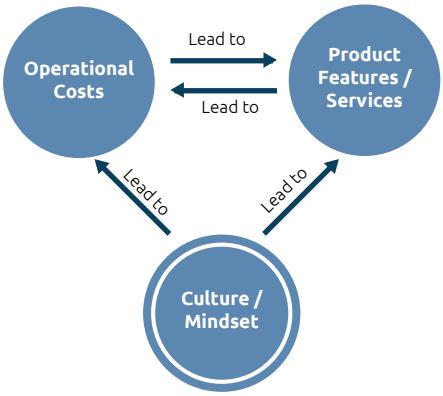


Figure 4.27: Relationship between Challenges

Upon examining the relationship between the top three challenges, the authors identified culture and mindset issues as the root causes of problems around operational costs and frustrations with unsatisfactory tools.

An anti-borrowing mindset limits the options to address operational costs, while resistance to change limits the options for tools and solutions that can in turn address business process challenges. In addition, the unwillingness to seek advice from external experts can further limit one's knowledge on how to address challenges at various fronts, from financing to human resources.

Therefore, issues that emerge in relation to the founders' and the team members' mindsets and culture could lead to the delay in addressing other issues across all pillars.

Factors Affecting Digitalization

Higher Digital Adoption among B2C Companies with Experience in Accelerator Programs

In order to evaluate the level of digital adoption among the WSMEs, the participants' answers to questions regarding the digitalization of business processes were examined to see if and what kinds of tools were utilized. This was confirmed through an examination of the web and social media presence of each WSME.

Emphasis was put on the number of digital tools adopted across different business processes instead of the level of sophistication of the tools. For example, a printing company might be using an expensive and highly advanced software for producing posters and banners for clients, but might not be using digital tools across many internal processes. In this case, this company should not be considered highly digitalized. In contrast, another company might be using affordable web-based and cloud applications across various internal and external business processes, including accounting, HR, marketing, project management and customer management. In this case, this company should be seen as highly digitally-enabled.

With regards to the level of digital adoption, the 18 WSMEs can be placed into three categories: i) very highly and highly digitalized; ii) moderately digitalized; and iii) slightly digitalized, as shown in Figure 4.28.

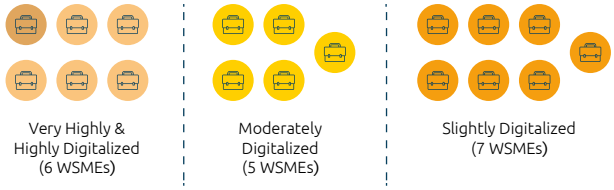


Figure 4.28: Level of Digital Adoption among the 18 WSMEs

Due to the limited number of MEs in this study, a comparison between MEs and SEs could not be made. However, it could be pointed out that among the 2 MEs interviewed, one of them counts as one of the most digitalized while the other counts as one of the least digitalized in terms of the number of tools deployed across various business processes. The most digitalized company in this study by far, which is also the only company that can be labelled as 'very highly digitalized', is an SE.

A clearer indication of the level of digital adoption is the type of clientele that the company serves. It was found that out of six of the 'very highly digitalized and highly digitalized' WSMEs, five of them were business-to-consumer (B2C) businesses. The most digitalized WSME is also in the B2C business. In the 'moderately digitalized' category, there is a mix of B2C, B2B2C and B2B companies. In the 'slightly digitalized' category, however, the majority of the WSMEs are B2B companies.

There is perhaps little surprise that B2C companies dominate the top tier of the digitalization rankings, as they are the ones who have had to digitalize most of their external processes—particularly marketing, sales and customer relationship management.

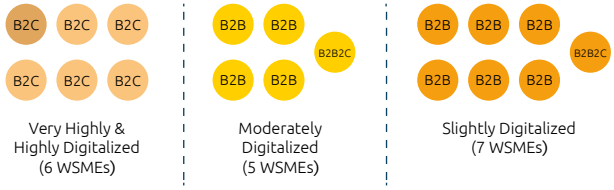


Figure 4.29: Level of Digital Adoption among the 18 WSMEs by Type of Clientele

It is also notable that out of 6 of the 'very highly digitalized and highly digitalized WSMEs, 5 of them had participated in the business accelerator or mentorship programs before. In fact, all 5 participants belong to the most digitalized group of companies.

It could be argued the experience in these programs might have helped this select group of participants to manage their businesses in a more strategic manner and to be more exposed to the myriad digital tools that could improve their business processes.

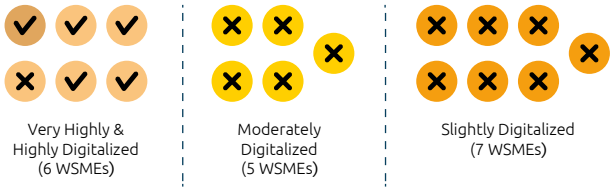


Figure 4.30: Experience in Business Accelerator or Mentoring Programs among the 18 WSMEs

> I bought a robotic automation software [that was introduced to me during an accelerator program]…It helped to automate our container journey documentation… our staff usually need at least 8 minutes to process the document, but the robot can do it in 1 minute.
>
> (Owner of Logistics SME)

4.5
The Future of Digital Transformation for WSMEs

Experts highlight challenges in lack of awareness and wary mindset among SMEs, despite having training and Mentoring programs

Following the SME interviews, the issues raised were brought to four experts for their views and ideas, flowing around strategies that would alleviate challenges raised by the participants.

Pillar 1: Access to Funding

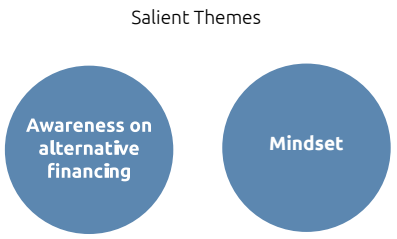


Figure 4.31: Salient Themes on Pillar 1

The alternative financing expert noted that a general wariness towards alternative financing partly stemmed from a preconceived notion that companies resorted to alternative financing due to their inability in obtaining bank loans. This indicated a rather limited understanding of alternative financing among WSMEs.

Recommendation: Although efforts were made to better educate WSMEs on alternative financing, these had met with limited success, leading to a suggestion that success stories of WSMEs benefiting from alternative financing be highlighted on major female-centric media channels. The experts acknowledged that another barrier was that not all SMEs were 'investable', highlighting fundamental knowledge gaps, whereby entrepreneurs may not fully understand the reality of fundraising in a business.

The lack of understanding is also demonstrated in the way SMEs viewed ECF. The alternative financing expert shared that many companies did not realize that they could impose their own terms when deciding how much equity is to be given away in a fundraising exercise. The experts noted that such a lack of understanding of alternative financing undermines government efforts to encourage SMEs to raise capital via digital financial platforms.

Despite the flexibility of imposing their own terms in ECF, many participants were still reluctant to relinquish equity to an external party.

On access to funding, the experts did not observe any gender-related issues. In practice, approvals on loans and grants by traditional financial institutions are executed by vetting the creditworthiness of companies through means such as the Central Credit Reference Information System (CCRIS) reports.

Pillar 2: Access to Mentoring,Networking, and Skills

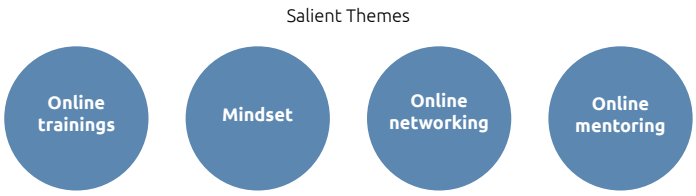


Figure 4.32: Salient Themes on Pillar 2

Prior to the pandemic, experts from the women's association and banking/business accelerator program had been conducting offline training for SMEs. The training revolved around entrepreneurship, financial and HR management, change management, and digital skills. While offline events were still preferred due to better interactions and networking, online training enabled SMEs to connect more easily across geographical boundaries, at a much lower cost.

However, the women association expert noted that attracting participants to webinars in the current climate was challenging, and there needed to be a compelling reason for them to join. The sudden surge in webinars during and after the COVID-19 Movement Control Order (MCO), was overwhelming:

> "To attract people online, it is not that easy; it has to be very compelling. They need to feel what they can get out of it. But a lot of people now will send the recording. Some of them wait for the recordings, and they can listen to the recording when they have time. It is just like Google. There is so much information, and you just don't know where to go.
>
> (Women Association Expert)

Recommendation: The women association expert suggested that online training should be smaller scale and more targeted, to encourage more active participation and interaction. It is crucial to engage participants during webinars, as interactions that often take place in offline settings are harder to replicate online.

Both the women association and banking/ business accelerator experts agreed that physical networking was superior to online networking, the latter was necessary, given the current conditions stemming from the pandemic:

> “In terms of networking opportunities, we are not having members [regular] talks because of COVID-19. We are doing it online now...participants can just log in from their phones. But they will drop out as well – like all of sudden, their screen goes blank. We are missing it [physical networking] and it will take a while before we get back to that. But I think we have to adopt the digital way.
>
> (Women Association Expert)

Based on offline training programs conducted by both experts prior to the pandemic, they agreed that providing support and guidance (or “hand-holding”) to SMEs is an important element of their programs. This is especially true for more established and ‘traditionally-run’ SMEs that are not entirely convinced that digitalization would bring about new opportunities and benefits.

As indicated from the WSME interviews, such perception is attributed to mindset issues. Despite their skepticism, such SME owners would still attend ‘digitalization’ workshops, due to heightened publicity about the subject over the past few years. The banking/business accelerator expert also observed that digital adoption among traditional, family-run businesses was faster if there was a younger, second-generation leadership present.

On mentoring, the women’s association expert noted that they had a mentoring program during the 1990s, in which a group of women mentors were sworn to secrecy. However, this was halted over time due to dwindling interest. The mentoring process required business owners to be vulnerable and forthcoming with their information, hence many hesitated to participate, as they wanted to be seen as successful. This observation was corroborated by the WSME findings. Interviewees said that while they might reach out using digital channels, it was only done where they have established trust through non-digital means.

Pillar 3: Business Processes and Management (Digital Transformation)

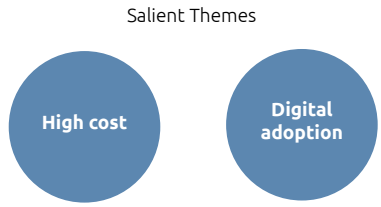


Figure 4.33: Salient Themes on Pillar 3

As high cost is a major issue surrounding digital adoption, the banking/business accelerator expert noted that the organization was working with local technology solution providers to provide a bundle package comprising both back and front-end solutions. Back-end digital solutions include automating internal business processes such as HR management, accounting, inventory and project management, among others, whereas front-end solutions include customer-facing channels, such as marketing and e-commerce. Integrating both will enable companies to optimize customer data for their marketing efforts.

An interesting issue raised was that some of the digitalization grants/incentives provided by the government and accelerator programs necessitate that local software vendors be used, limiting options available to businesses.

Recommendation: One workaround suggested was to encourage foreign vendors to set up local offices, and allow regional cooperation, to accelerate digitalization in the region.

> “For us, we managed to broker a deal [with foreign] tech solution providers, because we ride on the ASEAN footprint, we can actually engage tech solution providers to help the SMEs.
>
> (Owner of logistics SME)

The expert affirmed that digital adoption varied across companies and industries: B2B companies would place more emphasis on automating their internal business processes, whereas B2C companies would invest in customer-facing channels.

Pillar 4: Crisis Management (COVID-19)

Figure 4.34: Salient Theme on Pillar 4

The expert interviews highlighted that many WSMEs did not take digitalization very seriously prior to the pandemic, which inadvertently accelerated their rate of digital adoption. For instance, F&B companies leveraged food delivery platforms such as GrabFood and Foodpanda, only when the MCO was implemented.

Conclusion. The general wariness in wanting to digitalize, citing high costs as the main barrier, coupled with limited awareness on accessing alternative platforms for fundraising, may indicate an underlying problem that needs to be properly addressed. It was also observed that WSME participants associated digitalization with cost, rather than an investment tool to generate higher revenue. This could stem from a fixed mindset among business owners, prohibiting them from growing their business.

Advisory Panel

Findings from the WSME and expert interviews were synthesized and eventually presented for discussion to 9 experienced panelists, representing important stakeholders in the ecosystem. The panelists were selected based on their leadership in key policy-making organizations, technology organizations, and business/women's associations. The main objective of the panel discussion was to come up with practical solutions to address the challenges faced by WSMEs regarding digitalization.

A modified version of the Lightning Decision Jam (LDJ) exercise by AJ&Smart was used to guide the discussion. The panelists were first given a 30-minute presentation of the research findings, including a list of business problems mentioned by the WSME participants. They were asked to prioritize the problems (top three problems). The main problem was then singled out and reframed as a challenge. Finally, the panelists were asked to ideate as many solutions as possible, and to prioritize the solutions.

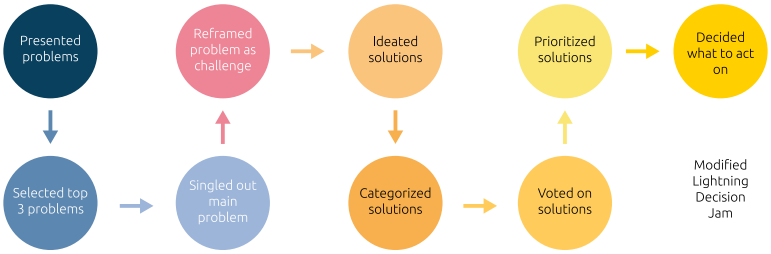


Figure 4.35: Modified LDJ Method

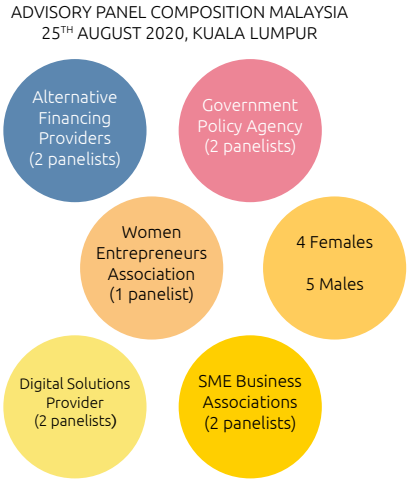


Figure 4.36: Profile of Advisory Panel

The cost of digital tools, resources and services received the most number of votes among panelists as a critical problem for WSMEs. However, a question was raised as to why these digital tools were viewed as a cost, and not as 'investment'. This was linked to a 'mindset' issue, leading some of the panelists to suggest a new problem, viz., 'lack of a growth mindset'.

Meanwhile, the problem of having a mindset that is against borrowing and sharing equity received the 2nd highest number of votes.

Overall, the panelists decided that the main problem facing WSMEs was the 'lack of a growth mindset'. A 'growth mindset' is defined as one which is continually seeking to learn, improve, take risks and not be afraid of failure.

This can be linked to the path-breaking research done by Stanford University psychologist Carol S. Dweck, and described in her book 'Mindset: The New Psychology of Success'.[170] Dweck defined a growth mindset as the belief that abilities can be developed with effort and persistence. People with a growth mindset embrace challenges, persist through obstacles, learn from criticism and seek out inspiration in others' success. To them, the journey is the reward, regardless of the outcome.

Questions were raised as to whether the mindset issue was gender-specific, i.e. experienced more frequently by women compared to men. There were anecdotal observations that women were less adept at networking compared to men, instinctively not as competitive, as well as traditionally and culturally socialized to be more restrained.

Research conducted in the US indicates that a 'confidence gap' exists between males and females, with females consistently rating themselves lower than male counterparts, in self-reported performance reviews.[171] There is insufficient research in Malaysia, however, to understand how this may impact women's mindset when doing business.

The 'lack of a growth mindset' problem was then rephrased into the following challenge: "How might we help more WSMEs to be aware of and adopt a growth mindset?". As many solutions as possible were ideated for this challenge.

These solutions were subsequently grouped into 4 clusters and placed into an impact-effort matrix, as seen in the next charts.

Figure 4.37: Advisory Panel Discussion (Malaysia)

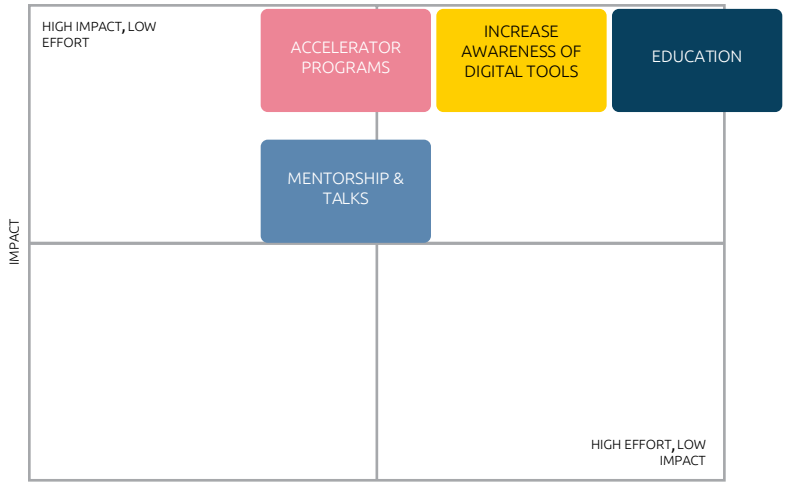


Figure 4.38: Impact & Effort Matrix

"How might we help more WSMEs to be aware of and adopt a growth mindset?"

Reformed challenge based on panelists' choice of most important problem to address

EDUCATION

Strong learning and educational system

Make it part of the primary through teritary education system/lifelong learning

Educate youths and WSMEs not to be afraid of failure

MENTORSHIP AND TALKS

Engage:

Inspiring women mentors for the WSMEs

Key opinion leaders

Role models

Influencers

ACCELERATOR PROGRAMS

Government sponsored training programs, with financial incentives, for WSMEs

Business growth programs (funding + mentorship + training + community)

Recruit WSMEs for mindset-changing accelerator programs

INCREASE AWARENESS OF DIGITAL TOOLS

Help WSMEs see the functional value of these tools

Figure 4.39: Solutions for Adopting a Growth Mindset (from The Impact & Effort Matrix)

Reforming Education

It was opined that a shift in mindset is best effected from young, through the wider education system. This would produce the highest impact, as mindsets are harder to change when one gets older. However, this was also deemed to be the most difficult, as it would require extensive changes in public education policy, the framework of which is influenced by many factors, including national politics. The educational ecosystem (whether formal or informal) should also incorporate lifelong learning, as a 'growth mindset' seeks continual improvement in knowledge.

More/Enhanced Business Accelerator Programs, Organized by Relevant Government Agencies and Private Sector

A high impact solution, but with the only medium effort needed, is the setting up of business accelerator programs that train WSMEs to adopt a 'growth mindset'. This can be done through public and private initiatives, or a collaboration between both sectors, with government funds/incentives provided for WSMEs to participate (see turquoise rectangle). The programs should involve not only training but also mentoring, networking (community) and access to funds/grants.

This ties in with the findings from the WSME interviews that companies that had undergone accelerator programs had the highest digital adoption rates, implying that their mindsets (in terms of viewing digitalization as an investment that would benefit their business, rather than as a cost) were different from the others. There are several business accelerator programs in Malaysia conducted by the private and public sectors. Private sector programs include those by Alliance Bank, UOB Bank (The Finlab), Endeavour, ScaleUp Malaysia and E3 Hubs (MAD).

Some existing accelerator programs (e.g. MAGIC, CRADLE, SITEC, Alliance Bank and ScaleUp Malaysia) are targeted at start-ups or tech companies, which led to the question of whether they should be extended to more mature and other types of companies.

> "We have so many government programs spending millions on entrepreneurship training, even at the state level…but none especially for WSMEs.
>
> (Government Policy Maker)

This is an important recommendation, as established and traditional SMEs account for a large proportion of total SMEs, and are a major contributor to GDP. More mature women were also felt to make good entrepreneurs, given their education, domain knowledge and experience.

There was another opinion, however, that priority should be given to businesses that are aged 10 years and below, as mindsets are easier to change in younger vs. older organizations. The accelerator programs should have a mix of genders, with a minimum quota for WSMEs, as the latter would benefit from cross-learning with male counterparts.

Meanwhile, there was a view that women entrepreneurs need a 'safe space' to be mentored, stemming from reports of sexual harassment in the marketplace. Structured mentorship, such as that provided by accelerator programs, may reduce potential incidents of sexual harassment, as opposed to informal mentoring environments. The key to raising awareness of accelerator programs is regular and consistent communication across media channels. Success stories that arise should also be highlighted and communicated as role models.

Mentorship and Talks Organized by Business Associations

Meanwhile, a medium impact, medium effort solution was engaging successful and inspiring women leaders as speakers, trainers and mentors for WSMEs. Such engagements are not expected to have long-lasting effects unless they are regular and sustained. Herein lies the difference vis-a-vis business accelerator programs, which are more impactful because of their intensity and duration, with some lasting several months. A panelist representing SME associations suggested that a low effort initiative would be to work through the business associations to present case studies (e.g. 'before and after' success stories) to WSMEs.

Increase Awareness of Digital Tools

Lastly, a high impact but relatively high effort solution would be to increase awareness of digital tools and help WSMEs see the value or benefits of such tools to advance their businesses. This requires a shift in mindset that digitalization requires much effort. The digital solutions panelist shared that some companies do not adopt HR cloud solutions even though these are offered free, due to their fixed mindset. The one successful case of adoption was when the GST (government goods and services tax) was implemented in April 2015, and companies were forced to use accounting software to compute and submit the tax regularly. The government provided a subsidy of RM1,000 (on a first-come-first-serve-basis) for companies to purchase the software.[172]

Key Recommendation: More and Enhanced Business Accelerator Programs with Minimum Quotas for WSMEs, and Targeted at Non-Tech Sector

The key recommendation to policymakers and enablers that emerged from this entire exercise would be to focus on conducting more business accelerator/scale-up programs that would help WSMEs adopt a 'growth mindset'. These programs should not be limited to only tech companies and startups, but also to more established WSMEs of various industries.

Quotas should be set to ensure an even representation of women in the programs, which should include substantial prize money in the form of cash or investment as motivation to participate.

The programs should be focused not only on technical training in digital and marketing skills but in leadership, business and growth strategies. It is only when the strategies are clear, that the right digital tools can be adopted and optimized to advance the business. Successful and established entrepreneurs should be invited to provide talks about their life stories during the accelerator programs so that inspiration, insights and wisdom can be drawn and shared.

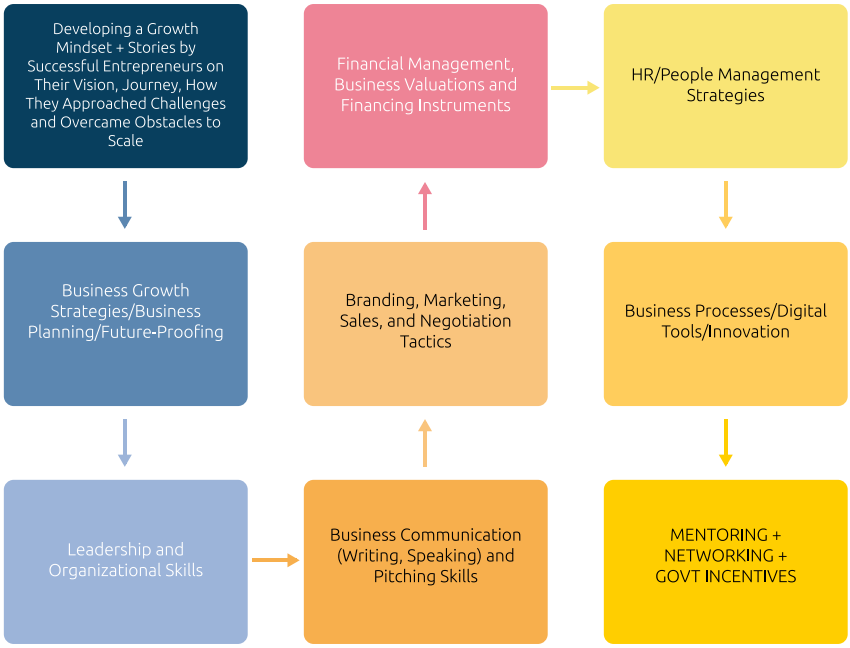


Figure 4.40: Features of Recommended SME Accelerator Program

Overall, the advisory panel discussion was crucial in prioritizing solutions and recommendations to the business and digitalization challenges faced by WSMEs.

4.6 Conclusion

The research began with the following assumption: Digitalization offers new opportunities for WSMEs to overcome their gender-related challenges. However, at varying degrees, depending on maturity (small- or medium-sized) of WSMEs.

Collations of findings (opportunities and challenges) from both the WSMEs and experts, were presented to the advisory panelists to be discussed and to recommend practical solutions. The conclusive issue was the cultural and mindset problem, which is prevalent in all pillars. This raises questions about whether the problem could be a gender-related issue that has been perpetuated by society and/or the education system. Hence both short-and long-term solutions were formulated.

Short-term recommendation: To address the pressing need of transforming existing WSMEs to adopt a growth mindset, the panelists suggested introducing more business accelerator programs. As this has already been discussed in detail in the sections above, the authors will not expand on it further.

Long-term recommendation: As part of a long-term solution, it is suggested that the 'mindset' issue be tackled at its roots, i.e. the education system. The country's education system has not promoted an innovative culture, as it is more geared towards rote-learning, with the lack of emphasis on critical thinking. A better performance tracking system needs to be applied to ensure that accomplishments are not limited to only academic excellence. Hence, methods used to train students need to be changed. To have a complete paradigm shift, societal attitudes about women have to also change, as women are seen as more accommodative and compliant, as opposed to men, who are seen as more competitive.[173]

Hence, in order to fully transform WSMEs to adopt a growth mindset, both short- and long-term solutions are needed to better prepare budding entrepreneurs for their entrepreneurial journey in an age of unprecedented digitalization.

4.7
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5
Cambodia Case Study

5.1 Summary

This report aims to highlight the challenges and opportunities that digitalization offers to women-owned small and medium enterprises (WSMEs) in Cambodia, and provides recommendations to overcome the challenges associated with digital adoption. Data was collected through desktop research, qualitative interviews with 20 female SME owners and 4 experts, and an advisory panel discussion with 7 key stakeholders. The findings were organized according to the 4-pillar framework discussed below.

Pillar 1: Access to Financing.

Most participants used their personal funds and property to finance their businesses, while the rest used external funding sources (e.g. peer lending, bank loans) as alternative choices for business investment and business expansion. While technology adoption was seen as important for funding, resource, and other limitations often prevented WSMEs from adopting digital technologies for financing.

Pillar 2: Access to Mentoring, Networking, and Skills.

Digitalization opened up opportunities for WSME participants in learning and skills development. However, certain barriers remain, particularly for digitally-enabled networking and mentorship. This includes gender roles that limit women's time and energy, resource constraints, as well as the preference for face-to-face mentoring.

Pillar 3: Business Processes and Management.

WSME participants used a variety of digital tools for business management/processes, and technology adoption was seen to improve business operations, overall performance, and in cost reduction. Key factors that inhibited technology adoption for business processes included fixed mindsets, whereby digital technologies were seen as a significant cost (rather than an investment), especially for small enterprises.

Pillar 4: Crisis Management (COVID-19). During the crisis, some WSMEs turned to digital innovation and adopted available technologies to market their products and sustain their businesses. In this way, digitalization played a crucial role in alleviating some of the impacts of COVID-19.

These findings were discussed by the experts and analyzed to formulate recommendations that focused on two key areas of intervention:

1. Create an enabling WSME ecosystem: Through relevant policies and mechanisms to support growth and development of the sector, including the development of a single SME development platform, which would be a one-stop-portal for WSMEs.
2. Promote digital literacy: With programs that fit the needs of WSMEs and keep in mind their specific constraints, while simultaneously enhancing their financial literacy and English skills as part of their overall skills and personal development.

5.2
Country Background

Digitalization and Economic Growth

In the last two decades, Cambodia has become one of the fastest-growing economies in the world, with an average annual GDP growth rate of 7.1 percent in 2019.[174] This also made it the fastest-growing economy in Southeast Asia in 2019, followed by Vietnam (7 percent) and Myanmar (6.8 percent).[175] While growth has been underpinned by exports of goods and services (mainly garments), construction and tourism have also made important contributions.[174]

Over the last 20 years, Cambodia's population increased by 50 percent, reaching just short of 16 million in 2020[176], and is expected to continue growing over the next 35 years, with a projected population of 22.5 million by 2050.[174] This young and growing population is increasingly embracing the internet and suggests a huge potential market for the private sector and the growing digital economy in Cambodia.

The country has made rapid strides in its internet penetration rate. There were 9.7 million internet users in Cambodia in January 2020—an increase of 1.3 million between 2019 and 2020.[177] The same report notes that internet penetration in Cambodia stood at 58 percent in January 2020. Basic digital infrastructure has been growing in Cambodia: mobile broadband as a measure of mobile cellular subscription grew from less than 10 per 100 inhabitants in 2005 to 125 in 2016.[178] The digital uptake has been spurred by low internet subscription price, lack of physical landline infrastructure in the rural areas, and a large increase in smartphone penetration.[174]

Cambodia has placed great emphasis on the development of its digital economy. Digital technology is seen as the additional driver for economic growth that can help overcome the weaknesses of Cambodia's traditional "export-led" growth model. However, Cambodia lags behind its ASEAN neighbors on several fronts and faces several constraints in its transition to the digital economy, notably the low digital literacy rate, technology infrastructure, and regulatory framework.[179] Accordingly, the Royal Government of Cambodia's strategic framework aims to support the digital economy ecosystem through an emphasis on digital inclusion, digital skills development, and institutional regulation, among other things.[180]

Economic growth (accompanied by respectable successes in poverty reduction) has been largely unaffected by the country's regression towards autocracy and crackdown of political dissent, although it is unclear whether the type of growth is sustainable.[181] Two factors, however, that could potentially cause long-term and large-scale damage to Cambodia's rapid economic development are: (1) the withdrawal of the Everything But Arms (EBA) trade preferences from August 2020. It is estimated that the partial withdrawal of EBA, Cambodia's special admission to the European Union (EU) market, over human rights concerns could affect approximately 20 percent of Cambodia's exports to the EU[182], and (2) the unexpected advent of the global COVID-19 pandemic in March 2020.

Although Cambodia didn't experience any surge in infections, the country was initially hard hit by the global economic crisis triggered by COVID-19. At the onset of the pandemic, the World Bank noted that by hitting Cambodia's main drivers of economic growth—tourism, manufacturing exports, and construction—the epidemic posed the greatest threat to Cambodia's development in 30 years.[183] While the nation's economy grew by 7 percent in 2019, the economy was expected to shrink by as much as 5.5 percent in 2020.[184]

This was, however, later revised to a 4 percent contraction, as Cambodia's economic forecast was revised upwards in September 2020, boosted by the government's swift actions and supportive immediate and short-term measures.[185] While this doesn't mean that Cambodia is out of the woods yet, some observers have pointed out that the country is well prepared to deal with the social and economic impacts of COVID-19 and the EBA withdrawal.[186]

Further, COVID-19 also impacted the economy in unexpected but positive ways, including the digitalization of the Cambodian workforce, and the role of digital start-ups in blunting the economic impact of COVID-19. These and other issues related to digitalization and economic activity are investigated further in this report.

Digitalization and SMEs

Cambodian enterprises can be categorized into large, medium, small, and micro-enterprises based on the amount of capital and number of employees (see Table 5.1).[187]

Type of Enterprise	Capital Investment	Number of Employees
Micro	Less than USD 50,000	< 10 employees
Small	USD 50,000-250,000	10-50 employees
Medium	USD 250,000-500,000	51-100 employees
Large or Macro	Over USD 500,000	Over 100 employees

Table 5.1: SME Definitions (Source: Ministry of Industry and Handicraft)

According to the 2018 annual report of the Ministry of Industry and Handicrafts, Small and Medium Enterprises (SMEs) contributed to Cambodia's economy significantly, accounting for 70 percent of employment, 99.8 percent of companies, and 58 percent of GDP.[181] SMEs employed 13 percent of the labor force, micro enterprises accounted for 58 percent, and large enterprises accounted for 28 percent. The report also noted that the rise in the number of SMEs has contributed to poverty alleviation efforts, as they create job opportunities countrywide, generate income for low-income earners and vulnerable communities, and support economic sustainability.

The 2019 IFC report noted that women-owned businesses in Cambodia (much like male-owned enterprises) are largely micro and informal.[188] Given the paucity of data, the most accurate statistics are from the 2014 Cambodia Inter-censal Economic Survey (CIES), according to which, women entrepreneurs owned 62 percent of micro-enterprises and an impressive 26 percent of SMEs in Cambodia.[188]

A majority of WSMEs are not incorporated, and the IFC report[188] points to several factors behind the preference for this 'informality'. Some entrepreneurs did not see the need to be registered; some did not want to pay taxes, while others struggled with the complexity of procedures and high cost. The lack of incentives for formalization is also one of the reasons that WSMEs prefer to stay informal.

This preference for informality does not take away from the notable contribution of WSMEs to private sector development and rapid economic growth in Cambodia.[189] The 2019 IFC report[188] found that 90 percent of WSMEs were profitable in 2018 and that they also represented greater participation by women entrepreneurs in the private sector than in other countries in the region.

Digitalization is rapidly changing the context within which WSMEs in Cambodia operate. Digitalization has the potential to usher in new opportunities for female empowerment and for a more equal female participation in labor markets, financial markets, and entrepreneurship.[190] New information and communication technologies (ICTs) have provided a range of opportunities for women in different types of businesses in Cambodia as well. The 2019 IFC study[188] highlighted the significant role of financial technology (fintech) and ICT solutions in overcoming typical barriers faced by WSMEs.

These include access to basic education, limited employment prospects, access to markets and finance, gender stereotypes, and other limiting social and cultural norms. These norms affect and constrain female entrepreneurs in various ways, such as restricting their business time in dealing with male business workers or customers, including government officials.[191] These norms also influence gender roles, which traditionally push women to focus on household responsibilities.

Juggling between the roles and responsibilities of a businesswoman and homemaker limits much of their time, energy and flexibility, which affects their opportunities to network, up skill, and undergo training. In this report, the authors delve further into these aspects and examine the opportunities and challenges presented by digitalization to women entrepreneurs against the backdrop of the COVID-19 global crisis.

5.3 Methodology

This research employed a qualitative approach through desk-review, in-depth interviews with WSME and expert participants, and an advisory panel discussion. The process of data collection was conducted in four phases:

Phase 1: Desk Review	Desk Review was conducted prior to data collection to understand the status of economic growth, policies and practices of digitalization and SMEs in Cambodia, including the support ecosystems of WSMEs in technology. The review also helped to design the research questions and to set the criteria for selecting participants, key experts, and the advisory group.
Phase 2: WSME Interviews	Semi-structured interviews were conducted with 20 WSME participants via offline and online modes in order to examine challenges and new opportunities experienced and overcome in terms of (1) access to financing, (2) mentoring networking and skills, (3) business management, and (4) crisis management.
Phase 3: Key Expert Interviews	4 Experts were selected for in-depth interviews to understand digital transformation and recommend solutions for SMEs to the relevant stakeholders who are working to support the SMEs ecosystem in Cambodia. These experts have specialization in supporting WSMEs, digital transformation, and with a women-in-business association in Cambodia.
Phase 4: Advisory Panel	7 Advisory Panel members were chosen to provide feedback on the WSME and expert interview findings and to identify gaps and make recommendations to strengthen the support ecosystem for WSMEs in Cambodia.

Impact of COVID-19 on Data Collection

COVID-19 created some challenges for the research team while conducting field data collection, as participants' fears in meeting the authors delayed the interview processes. This also affected the data collection process, as it did not allow for in-depth interviews to be conducted. Once the Ministry of Health's safety and prevention policies were in place, the requisite safe distancing measures were applied for offline interviews. Interviews were conducted via offline channels, such as phone and online meeting applications such as Google Meet, Telegram, and Zoom.

Data Analysis

Data analysis consisted of the process of ordering, categorizing, manipulating, and summarizing data to answer the research questions. Stages included:

1. Transcribing: using the transcript forms to record the answers of WSME participants during the interview;

2. Google Online Survey: to supplement the interview process, with questions developed by using numeric coding under each pillar;

3. Input Data Management: The raw data file was extracted after the responses were filed via a Google Survey form. Thereafter, all responses were put into an excel spreadsheet and double-checked;

4. Charting & Figures: The charts and figures related to data analysis were used to present and describe the summary of responses under the relevant pillars' discussions in the research findings;

5. Data Interpretation: Data analysis and the relevant charts and figures were used to explain the results of the study by generating relevant information in response to research findings and drawing conclusions.

About the Participants

For this research, small enterprises (SEs) and medium enterprises (MEs) were distinguished based on capital investment and the number of employees, as explained in Section 1.

A total of 20 female entrepreneurs were interviewed, of which 12 owned SEs and 8 owned MEs. These enterprises had been in business between 3-15 years, and were located in three provinces: Phnom Penh, Battambang, and Siem Reap. Of the 12 SEs, 8 were located in Phnom Penh, and 2 each in Battambang and Siem Reap provinces.

Of the 8 MEs, 7 were located in Phnom Penh, and 1 was located in Siem Reap.

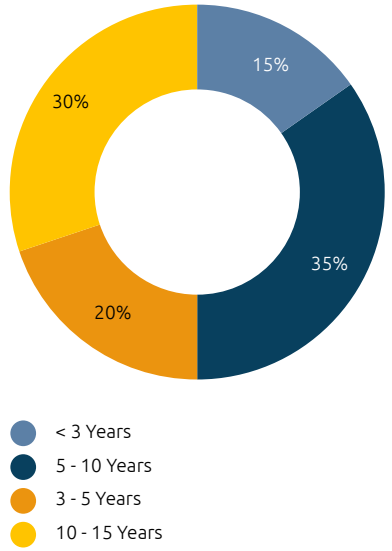

Figure 5.1: Participant Company Age Distribution

12 participants were members of professional associations, of which 3 were solely members of SME associations, and 9 were members of both SME associations as well as the Cambodian Women Entrepreneur Association (CWEA).

The respondents ranged in age from their 20s to their 50s, with the majority being in the 31-40 years old range. Except for 2 respondents, the remainder were married, of which all but 2 had children.

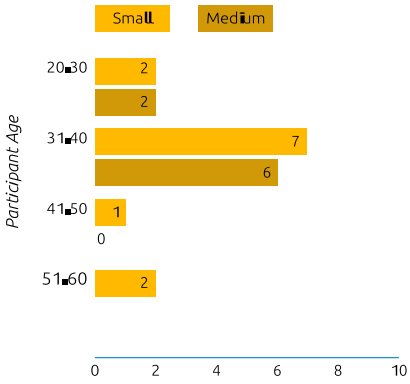

Figure 5.2: Participant Age Distribution

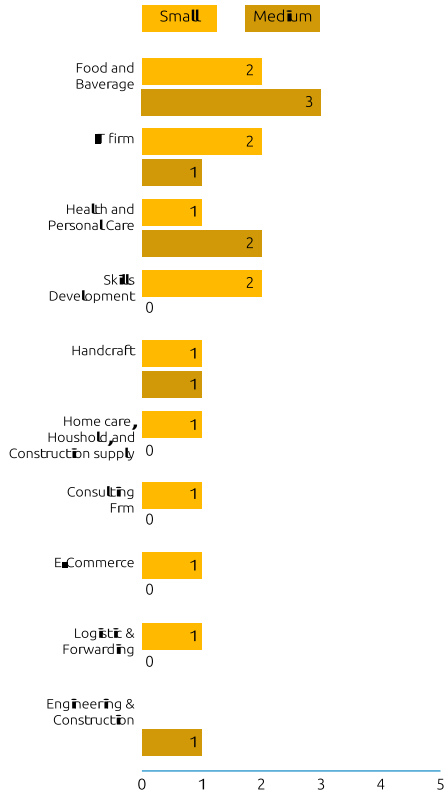

Figure 5.3: Participants' Enterprise Subsectors

The WSMEs participants were representative of a range of manufacturing and services sectors, and were further divided into 10 sectors, viz, Food & Beverage (F&B), Information Technology (IT), construction, health and personal care, skills development, handcraft, consulting, e-commerce, and logistics.

5.4
Interview Findings

Most WSME participants used personal funding to run their enterprise and for business expansion. Few participants were aware of crowdfunding opportunities, and those who were aware never applied due to the time constraints involved in learning about these alternatives. While some WSMEs applied for external funding, collateral requirements, complex procedures, limited financial literacy, and tax compliance were cited as key factors that hindered their adoption of digital technologies to finance their businesses.

Pillar 1: Access to Financing

Interviews pointed to three main ways that WSMEs accessed financing for their operations: (1) personal funds, (2) external funds, and (3) combinations of both.

The interviews revealed that many WSME participants applied to multiple financing sources for their new businesses or to capitalize on market expansion, and to adopt new technologies. Majority of the participants preferred to use personal resources to develop their services and reach through software applications and e-commerce. They also sought loans from different funding sources, such as peer-to-peer lending, bank loans, Tongtin, and grants. Tongtin is a sophisticated form of informal rotating savings and credit association (Rosca) that is prevalent in Cambodia, and is a popular alternative to loans.[192]

> “Using personal resources to start a business is the best option, rather than borrowing from external funds. We don’t know if our revenue for the first two or three- years will be able to keep the enterprise surviving or growing. We should avoid the burden of loan interest payments during this time (sic).
>
> (ME Owner, Phnom Penh)

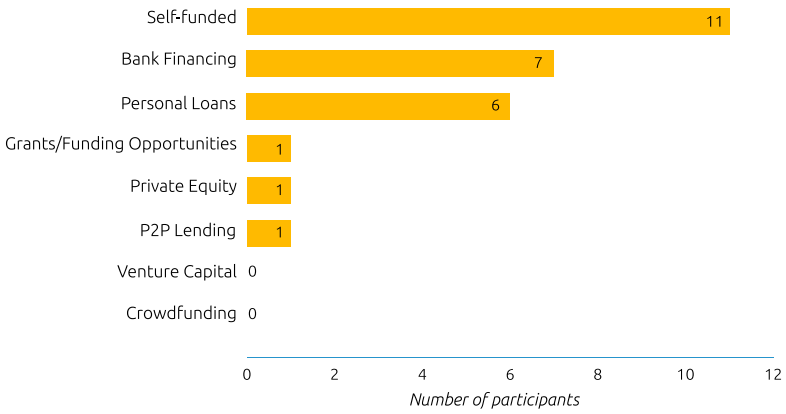

Figure 5.4: Utilized Sources of Funding

11 out of 20 participants used personal funds to fund their business, tapping into available savings, family property, Tongtin, and other sources of income. Majority of the participants used Tongtin as a method of financial support from their relatives and friends. Interviewees noted that while this loan method is culturally well accepted, it requires trust-building of both parties (borrower and lender). This funding method does not require any formal collateral requirements typically found in banks, although it sometimes requires a witness by peer lenders. It is also possible that borrowers will be asked to deposit a valuable item for loan safety.

Bank loans were the second most common source of funding. 7 WSMEs, including both SE and ME participants, accessed bank loans, as it was seen as possibly providing a larger source of capital investment for a business to scale. However, participants also noted many bank loans were associated with mortgages, which resulted in anxiety about losing their assets in case of a business failure.

Participants acknowledged the importance of adopting new technologies for funding but pointed out that it needed some financial investment. While this was a cost, it could help to speed up business operations and save time and costs in the long run.

14 out 20 of participants employed digital technologies for various purposes, including to avail of the opportunity of financing for business expansion. However, many of the respondents were unable to employ new digital technologies due to lack of accessibility to information about these technologies, as well as the burden of collateral requirements.

Pillar 2: Access to Mentoring, Networking, and Skills

The research finding reveals that WSME participants have accumulated experiences in overcoming many barriers in their business journey. The majority recognized that having a mentor could contribute to business development and sustainability.

The majority (just over half) of the WSME participants noted that siblings, spouses, and relatives provided both emotional and mentoring support on business-related matters. This was closely followed by those seeking support from and a business coach or specialist. 13 out of 20 participants recognized that mentoring was very useful, and they would prefer to have a case- or issue-based mentoring individually or in small groups. They noted that such initiatives would help them to develop self-confidence and competencies in business operations, management, and leadership. Associations such as CWEA, Young Entrepreneurs Association of Cambodia (YEAC)[193], and other business networks like CEO Master Club[194] and BNI[195] were seen as spaces for female entrepreneurs to seek mentoring support.

> “Being an entrepreneur needs diverse skills to do the job from ‘A to Z’. Every entrepreneur needs good competencies and skills. To be a good role model and leader is the reason they need to upgrade skills and have a faithful partner or mentor who could share the experiences and knowledge in running a business (sic).
>
> (Ms. Viriya Lim, Managing Director of LM Lima Angkor Food, Co. Ltd.)

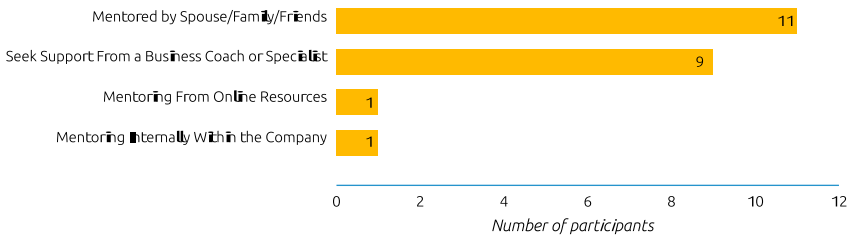

Figure 5.5: Access to Mentoring

Digital platforms played a significant role in facilitating learning and skills development, which participants noted as essential to weather the COVID-19 crisis. Interviews revealed that participants accessed both free, sponsored, and paid e-learning programs or courses, on a wide variety of topics, including business fundamentals, accounting, finance, entrepreneurship, leadership and advocacy, negotiation skills, and coaching.

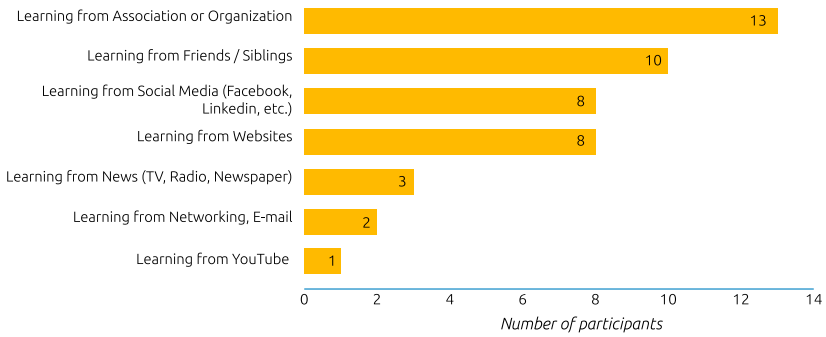

Figure 5.6: Access to skill-building

Several participants indicated that a comprehensive business mentoring program (within or outside the country) would be useful, but that it should be tailored to mentees' individual needs. They also noted that opportunities for networking and traveling locally and internationally would also help WSMEs learn from people from various backgrounds and contexts, particularly with respect to technological innovations that could be applied to their businesses.

However, some participants were unable to access and explore e-learning opportunities due to certain barriers. This included: limited access to information on mentoring programs both inside and outside Cambodia, as well as their limited connections with business networks and associations. 4 out of 20 participants cited the lack of access to quality/ reliable opportunities or programs as a key challenge.

For SE participants, in particular, the relatively high cost of e-learning was a formidable barrier. Many also found it quite challenging to participate in mentoring events or find time for e-learning opportunities, as they were already struggling to juggle their business and family obligations. Moreover, limited English proficiency and limited or lack of digital skills were also shared concerns for many SE founders.

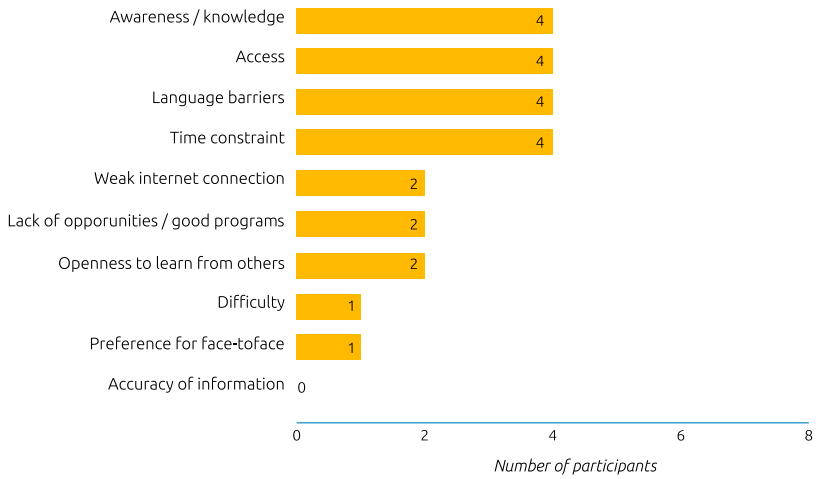

Figure 5.7: Obstacles Towards Access to Mentoring, Networking, and Skill-Building

The interviews revealed that staff mentoring and capacity building was not a priority for many participants. Instead, they generally focused on personal development over institutional capacity development. As owners or founders, they felt that they should upgrade their skills and knowledge at regular intervals. Further, they were hesitant to invest in employee training due to high staff turnover, which was one of the main factors contributing to the lack of institutional needs assessment of capacity building, and why employee mentoring was not considered by some founders.

Pillar 3: Business Processes and Management

Participants noted that digitalization could help SME owners improve their business operations and overall performance. In response to how digital technologies have changed their business, 10 out of 20 participants noted that it helped in better overall performance, while 7 participants each pointed to the impact of digital technologies in building and expanding their customer base; improving company reputation; and for faster and more efficient management and operation processes.

Participants also highlighted that digitalization of work processes helped to reduce costs, increase revenue, and help staff be more responsive in completing their tasks. However, participants differed in their decisions about how much and whether to adopt ICTs, as this would be a high cost, especially for SEs.

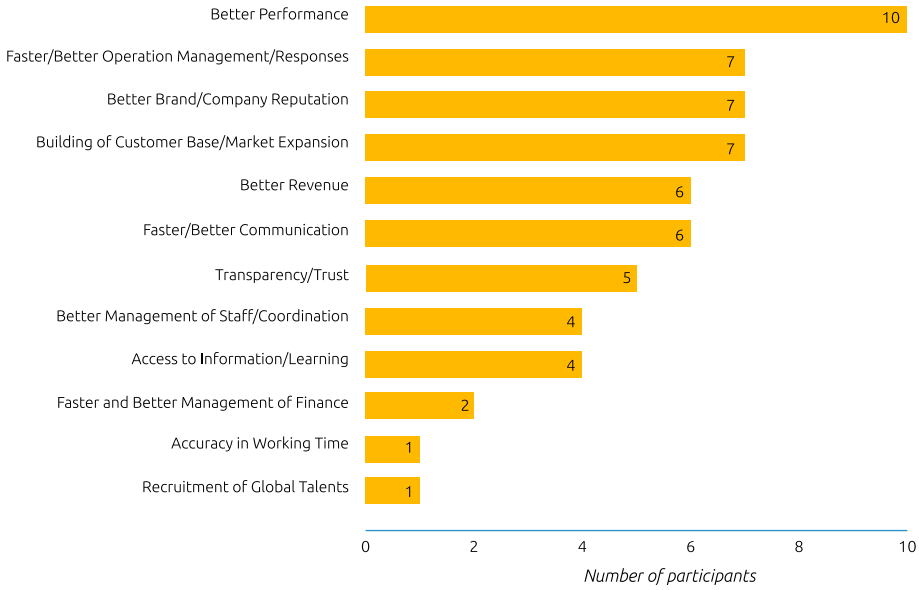

Figure 5.8: Benefits of Technology Adoption for Participants' Businesses

The research revealed that the participating SMEs used a variety of digital tools for business management/processes, which included tools for: (1) communication (personal, work and networking) (2) sales and marketing (3) finance and accounting (4) payments and financial transactions (5) data management/storage, and (6) business operations and management (below).

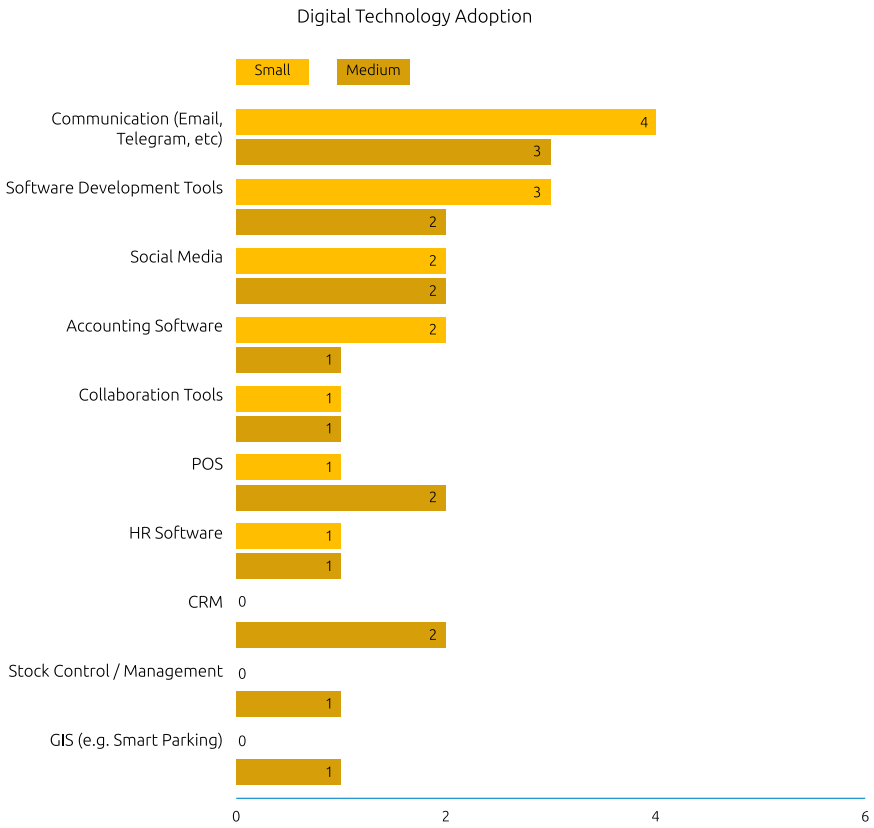

Figure 5.9: Forms of Digital Technology Adoption used by WSME Participants

1 General Communication	• Social Media apps: Facebook, Telegram, Instagram, LINE, WhatsApp • Digital Devices: Cellular Phone, Laptop, iPad
2 Sales and Marketing	• Social Media Apps: Facebook, Line, Instagram • E-commerce: Khmum, WeMall, Personal Apps, • Company websites • Video, Pinterest
3 Finance & Accounting	• Fintech: BanhJi, POS, Bongloy • Accounting Software: Peachtree, QuickBooks • Excel, CRM system
4 Payments & Transfers	• Wing, True Money, ABA • Money Union Transfer, e-bank transfers
5 Data Management/ Storage	• iCloud • Google drive
6 Operation and Management	• Microsoft office: Word, Excel, PowerPoint • Meeting: Google Meet, Zoom, Skype, Telegram, Facebook, Cellular Phone • GitScrum, GitHub, Carrier Mapping • Google Earth, Google Map, Google Search, GPS • Company Apps: MyApp

Table 5.2: Digital Tools Used by the Participants

Most MEs utilized digital technologies for the management of business and products, particularly well-known professional software such as Microsoft Office, as well as designing, location identification systems, virtual communication and meetings, and data management software.

In general, social media applications such as Facebook, Telegram, Instagram, LINE, and WhatsApp were used via digital devices—cellular phone, laptop and iPad—by both SEs and MEs. Social media was used most widely for customer outreach and for online sales.

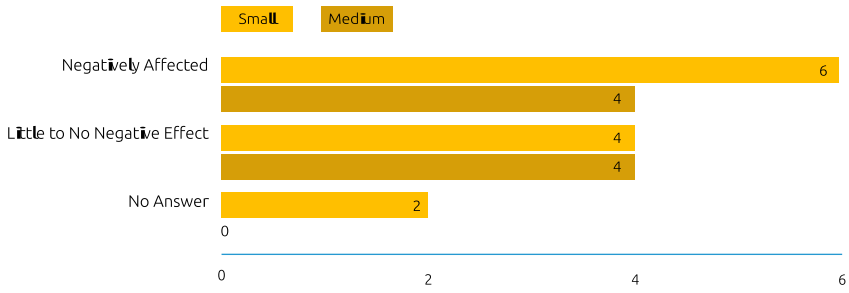

Figure 5.10: Impact of COVID-19 on WSME Participants

Pillar 4: Crisis Management (COVID-19)

COVID-19 initially posed one of the greatest threats to Cambodia's development in 30 years. However, at the time of writing this report, the government's swift action, and emergency and social support measures have left Cambodia well-poised to cope with the impacts of COVID-19.

With the rise of confirmed cases, the government took immediate measures, such as awareness-raising and social distancing, and imposed a lockdown during Khmer New Year in April 2020. As the whole country experienced an economic slowdown, fears of an emerging financial crisis increased social anxiety. The onset of the pandemic affected three sectors the most: (i) tourism, (ii) manufacturing exports, and (iii) construction.[196]

While risks remain, such as a continued slowdown in these key industries, supportive government policies and the lack of a public health crisis has seen an upward revision in its economic growth forecast in late 2020.

This may explain the research findings of the impact of COVID-19 on WSME participants. While the authors found that both SE and ME respondents were negatively impacted by COVID-19, the numbers were lower than expected. Only half of the participants (10 out of 20) said they were negatively impacted, while 8 out of 20 (4 SEs and 4 MEs) said they felt little to no negative impact.

2 ME participants that were not affected by COVID-19 instead saw the pandemic as a solid opportunity to grow their market, and develop new products and services in response to the crisis. They also utilized digital marketing platforms to reach out to consumers directly online. These SEs offered Fast-Moving Consumer Goods (FMCGs), as well as IT and ICT solutions, which were in great demand during the height of the crisis. Some of these SE participants were able to increase their sales by three times during this period but noted that their sales performance dipped after the pandemic situation improved.

The pandemic largely affected sales performance due to social distancing restrictions that cause businesses to reconfigure their business processes and production. In particular, SMEs in the Food and Beverage services (F&B) sector were most significantly affected. Participants noted that 70-90 percent of their income earned from daily sales were lost, either due to their dependence on other retailers to supply their products, as well as the expiry of their products due to reduced consumption.

> "My business is badly affected, around 90 percent of revenue and production, including the supply chain….Usually, I could deliver around 300-400kg of meatballs per day to regular customers, but during the COVID-19 time, I could only sell out around 20kg. My market depends on local markets, marts, retail shops, and especially schools. Since all schools are closed, I lost the revenue, yet I still need to pay the workers and send them to work at the factory house as it is difficult to recruit new workers if we terminate their employment (sic).
>
> (Meatball Enterprise Owner, Siem Reap)

Challenges

This study has shown that WSMEs experienced similar challenges in technology adoption. The top five challenges for technology adoption identified by participants were: finding the right technologies, staff skills adoption and training, digital literacy/knowledge, founder/employer's skills adoption and training, and lastly, high costs and resource constraints.

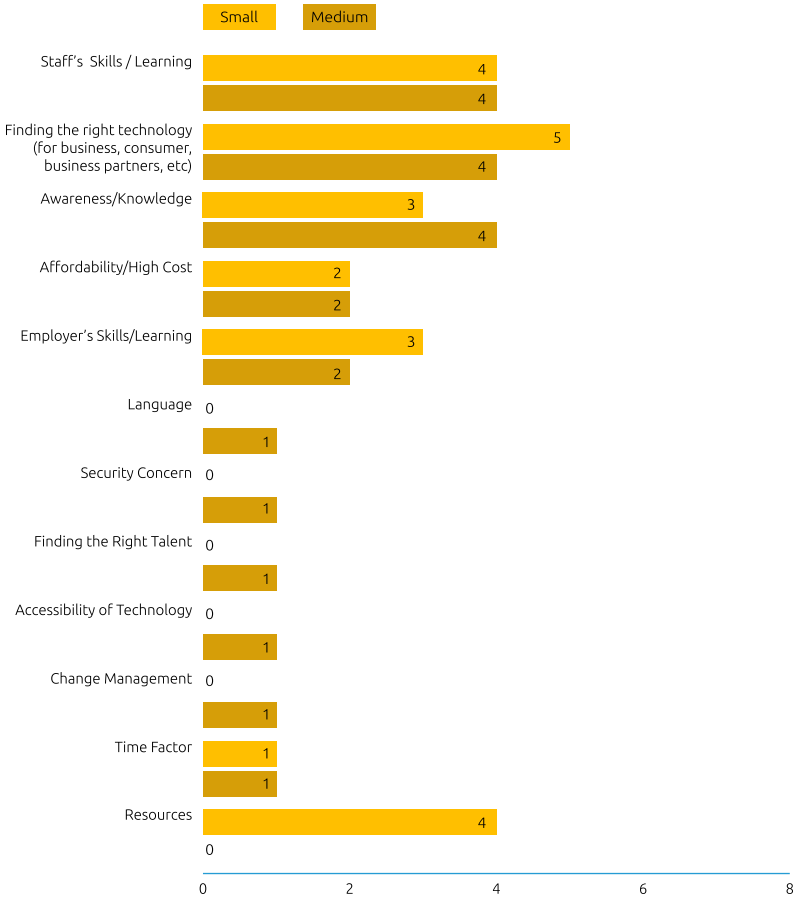

Figure 5.11: Challenges Faced by WSME Participants

Some WSME participants also noted customers' lack of intention to use e-commerce platforms due to reasons such as lower trust in quality of products, issues of payment security, and promised time of delivery. With little customer support, trust and demand, the participants were thus reluctant to invest in and adopt such technologies.

Some founders emphasized that e-markets could not fully satisfy consumers, as they wanted to experience the touch, look, and feel of the product physically before making a purchase. This is related to the first issue above about customer skepticism towards product quality. The owner of a company that produced silk garments noted that customers were not satisfied with seeing the products online and preferred to come down to the store to view the items before purchasing them. Naturally, this affected sales during the period when movement restrictions were in place and impacted the company's motivation to adopt digital processes.

In addition, digital platforms sometimes did not provide enough information to consumers, such as the availability of products displayed, which made online purchases cumbersome.

Digital literacy emerged as a major challenge to technology adoption. The complexity of applications and lack of English language proficiency (the English language is frequently used in the business sector) was a prominent constraint expressed by many participants, as it limited consumers' access to the digital marketplace. SE founders noted that their limited digital literacy made it difficult for them to access digital platforms and devices and understand digital functions. For example, small scale production enterprises based in Siem Reap and Battambang provinces, which are likely to adopt the family business model and have limited knowledge of business strategy models, cited constraints of digital literacy and limited knowledge of English.

Apart from businesses that were involved in technology development, lack of technical skills and expertise and lack of capital resources were considered by many WSMEs as a major challenge to technology adoption. Some ME founders indicated that they needed ongoing and regular maintenance and technical support from technology suppliers, as their staff did not have the requisite technical knowledge and skills, such as software for financial management.

Some MEs employed external technical experts to set up technical systems and improve employee knowledge and skills. Some MEs were pushed to adopt new technologies to meet standards of product quality and safety guidelines requirements. Many small-scale enterprises, however, could not afford to purchase technologies due to their limited resources.

Participants shared the need for more advanced information and skills development related to innovativeness and based on successful case studies. Although some participants accessed information, sources of learning, and fellowship opportunities online, they still faced challenges in skills building and developing their online networks strategically.

> "Most information and learning sources were developed in foreign languages, which has limited access to digital resources and e-learning. Another challenge is time constraints, as women owners play a triple role as a caretaker in the household, entrepreneur, and social worker (sic).
>
> (ME owner, Phnom Penh)

Participants were divided in their experiences of gender-related challenges. Several mentioned that their husbands and families supported them fully in their business, as well as encouraged them to learn new skills and build their networks. In this way, family support emerged as an important factor in keeping women entrepreneurs motivated and able to overcome challenges. Some mentioned that family was more important than the business and prioritized accordingly. For those with little or no family support, the daily stresses and strains of running a business were significantly higher, which often took a physical or emotional toll.

Others pointed out that gender stereotypes were a major challenge. Participants noted that as they undertook cultural roles as mothers and daughters while also operating their enterprise, they faced time constraints that restricted them from participating in skills development, as well as social networks and association activities and events. Some noted that sometimes their families and male colleagues did not trust their business capabilities, so they had to push themselves to work harder to prove their abilities.

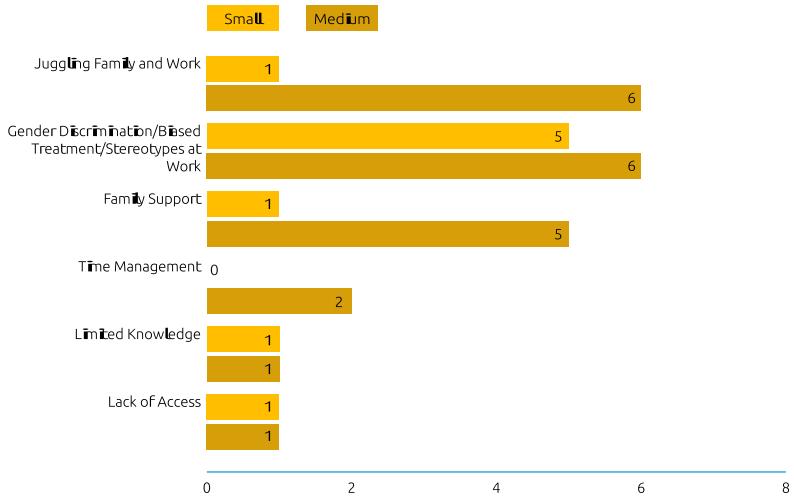

Figure 5.12: Gender-based Barriers to Digital Technology Adoption

Opportunities

In response to crisis management, the adaptive capacity of WSMEs in technology and innovations were significantly enhanced. All SEs and MEs adopted digital technology based on available knowledge and their individual business needs, which included product diversification and access to the digital market. However, time constraints, limited budgets and skills, and socio-cultural barriers prevented a comprehensive adoption of new technologies.

This is reflected in the relatively low level of technology adoption among the interviewees. 10 out 20 WSME participants adopted new technologies, while 10 did not adopt any new technologies (of these 2 had already adopted digital technologies because they were ICT/ tech solution providers). New technologies adopted during the pandemic included new software and programs and digital platforms, such as accounting systems, online meeting applications, and accounting and financial software. For the other half of the participants that continued with existing technologies, doing so minimized costs, allowing for uninterrupted business operations. A few SE and ME participants adopted new technologies, such as new software and programs and digital platforms.

Emerging Opportunities	• Access to digital devices and better knowledge of digital processes • Access to e-commerce, collaborators and consumers • Increase accessibility and ability of fintech and professional software programs • New products and services development to fit consumer needs • Access to a social fund that employed an Inclusive Business Model or worked to support community groups

Table 5.3: Emerging Opportunities for WSMEs Impacted by Covid-19

WSME participants that adopted communication tools did so quite enthusiastically, as they observed that it helped them communicate faster, explore newer avenues and knowledge repositories, meet the growing needs of customers, as well as introduce new products and services. Some tools were used as communication platforms for sending product photos prior to business meetings and for signing cooperation or service agreements.

Some participants expressed their concerns about the security issues related to social media, including various types of cybercrime. They also displayed a critical and practical understanding of technology adoption, noting that they would need to study the advantages and limitations of new technologies further before adopting them. If they didn't have the time or wherewithal to do so, then they preferred to choose existing technology and digital programs, which were both reputable and familiar and easy to use.

WSME Highlight 1: LM Lima Angkor Food Co., Ltd

Viriya Lim is a Co-Founder and CEO of LM Lima Angkor Co., Ltd., a company that produces a variety of traditional snack foods for the international tourism market, providing travelers to Cambodia with traditional food souvenirs to bring home.[197] Her products include cookies and chocolates, and focused on high-quality macarons.[198] She shared her views that the best investment for every woman was education. Women entrepreneurs needed to employ new technologies and learn how to access digital devices to help SME entrepreneurs develop better capacity and better decision-making. She stressed that education and skills would enable women by increasing their knowledge and ability to address a variety of business-, social networks- and gender-related challenges. Ms. Lim noted that her products were recognized as premier quality products, and here, technology innovation played a key role in influencing business growth and good business performance.

Her company applied new technologies that facilitated product innovation and cost estimation before decisions were made for business expansion. For instance, Macaron cake is a result of successful product innovation. LM Macaron is known as one of the finest products of LM LIMA Angkor enterprise and aiming for children, adolescents, youth, and coffee drinkers. It is available in e-markets, coffee shops and marts in Phnom Penh, Siem Reap and airport stores.

WSME Highlight 2: Keiy Tambanh Khmer Enterprise

Kei Tombanh Khmer Enterprise produces fabric and silk products, and supports more than 300 community women in its activities. From March 2020, the enterprise was severely affected by COVID-19, as its sales dipped because its products were no longer a priority for consumers.

Sopheap Chen, a Founder and CEO, noted that the enterprise embraced digital technologies and devices during the crisis, especially for communication with and access to customers via online marketing. Further, the staff was trained on how to use Facebook marketing as well as the risks of social media. Ms. Chen noted that with increased access to digital devices people needed correspondingly more awareness about both benefits and risks of using digital technologies. Facebook also proved useful to understand consumer attitudes, sentiments, behaviors, and intentions to purchase the company's products. The information collected from the Facebook page visits were collated and used to inform their revised sales strategies during the crisis.

5.5
The Future of Digital Transformation for WSMEs

Expert Interviews

Expert interviews are popular in social science and qualitative research. There are several benefits to expert interviews, including gaining inside practical knowledge, expanding the authors' access to the field, and/or quickly obtaining good results.[199] In this study, experts were presented with key WSME interview findings and asked for their insights in order to achieve a better understanding of the SME and digitalization ecosystem, as well as to identify steps needed to overcome challenges mentioned by the WSMEs.

5 experts, well versed in the areas of SME affairs, IT, women's entrepreneurship and policy issues, and digital payments, were interviewed to explore additional aspects related to WSMEs and digital transformation (see profile details in Appendix F).

The expert interviews helped to provide greater contextual and up-to-date knowledge about the WSME ecosystem in Cambodia. For example, the authors were given detailed information about two programs aimed at boosting female entrepreneurship in the country. The first was a five-year project called 'Catalyzing Women's Entrepreneurship: Creating a Gender-Responsive Entrepreneurial Ecosystem'. Launched in April 2019 jointly by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), Global Affairs Canada, and the Government of Cambodia, the project aims to enhance women entrepreneurs' access to capital through innovative financing mechanisms and increase their use of ICT and digital solutions.[200]

The other initiative the authors were alerted to was 'Promoting Financial Inclusion for Women and Women Entrepreneurs', a year-long program aimed at improving the financial literacy of Cambodian women. Launched by The National Bank of Cambodia (NBC) and Visa, the project will have a particular focus on empowerment via digital platforms.[201]

Taken together, both programs are an important step in the right direction towards making women entrepreneurs in Cambodia both financially and digitally literate, which would help them realize their full potential, and provide a powerful boost to the country's ongoing economic development.

According to the experts, adoption of accounting software, fintech applications, and the POS app in particular would be helpful for WSMEs to maintain good financial records and have a better chance to access loans. However, the rate and level of adoption would depend on WSMEs' attitudes towards new technologies and their intention to use them.

The experts noted that WSMEs' reluctance to adopt new technologies was strongly linked to their mindset. By this, the experts meant a mindset that viewed new technologies as a cost, rather than an investment, which in turn prevented WSMEs from preparing for adopting new technologies and processes.

The experts also noted that most WSMEs still applied to the family business model. Although they have employed accountants, the founders do not really like to work under that model. Due to limited resources, SEs do not want to pay extra for accounting and business enterprise software and often use pirated software for these purposes.

> "Digital adoption is limited due to owners' perceptions and available resources. The age of WSME owners is not the issue with fintech adoption, but there is a general lack of related skills, especially when it comes to the financial matters of the company. Thus, the adoption of technology fails due to the resistance of employees and owners (sic).
>
> (ME Owner, Phnom Penh)

The experts agreed that WSMEs found coaching and mentoring very useful in helping them overcome business obstacles and to improve business operations. Yet, there were difficulties in accessing mentoring and skills building opportunities due to lack of digital literacy and language issues, as well as lack of awareness about avenues for learning.

The experts suggested the introduction of more skills development and mentoring programs for women entrepreneurs, which would address current challenges in their business and socio-cultural environments, and how to overcome them. This should include topics such as business fundamentals, capital, and legal requirements, and skills upgrading, among other things.

The experts noted that digital technology helped WSMEs to overcome communication challenges during the outbreak period of COVID-19. Digital technologies also created opportunities for business growth and revenue by improving financial management and cash flow management.

Despite the benefits of digitalization being clear, they also acknowledged that introducing digital transformation would require preparation and resources and would be a challenge for micro, small and medium enterprises located in the provinces.

These WSMEs challenges, along with gender barriers— social and cultural norms, and gender stereotypes— should be addressed in enabling WSMEs to access substantive opportunities equitably. This requires a proper gender-focused strategy that includes resource allocations to support WSMEs.

Advisory Panel

The Avisory Group Meeting aimed to consult with and obtain suggestions from the Advisory panel based on the initial WSME and expert interview results. The objective was to provide inputs that would help policy makers, development partners, and private investors achieve maximum potential of digitalisation for SMEs.

The Advisory Group meeting was conducted with the experts in the areas of SMEs, digitalization, female entrepreneurship, and finance and policymaking in Cambodia (see detailed profiles in Appendix G):

The Advisory Panel raised several important points, which are summarized below:

- The factors that contribute to technology adoption were seen as a key point to be explored further, as it would help policymakers explore how to make digital technologies more accessible.
- Security fears were seen as a real deterrent to WSMEs' technology adoption, as customers could shy away from paying via digital means if they felt their personal and financial information was going to be compromised.
- One solution proposed to encourage customers to use digital payment gateways was to create customer protection and return payment system if a customer was dissatisfied with products and services purchased online.
- Further, digital literacy as well as cybersecurity and cybersafety awareness efforts, would be crucial in enlightening and encouraging customers about the benefits and risks of digital marketplaces and payments. This would help overcome the fears and fixed mindset issues of both employees and customers in adopting new technologies. Digital literacy efforts would also go a long way in helping SMEs overcome the challenges of tech adoption, such as the conversion of physical data into electronic records, which are necessary for digital transactions, such as on e-commerce platforms.
- A fundamental issue to be tackled was WSME access to finance, and key ecosystem stakeholders needed to work together to make financing easier, less complicated, and with WSME constraints in mind.

Practical and Policy Recommendations

Based on key findings of the WSME and expert interviews, and the advisory panel suggestions, the recommendations for both WSMEs as well as policy-makers are presented below and centered around two key areas of intervention:

Creating an Enabling WSME Ecosystem:

Given the specific gender-related constraints faced by women entrepreneurs, it is imperative to create an enabling ecosystem for WMSEs through relevant policies and mechanisms to support growth and development of the sector. This will enable and empower women entrepreneurs and potential entrepreneurs in the digital economy.

One way to do this is to include building and improving a gender-friendly work climate and policies through collaboration or partnership between the Royal Government of Cambodia sectoral programs or projects and the private sector, development partners, and relevant stakeholders.

It is proposed that a single SME development platform be developed and managed by these various stakeholders, which would be a one-stop-portal for WSMEs to access information and resources, training and mentoring opportunities, business development and process improvements, and for understanding how to access and leverage new technologies. Here, governments can play a major role in helping WSMEs adopt new digital technologies and receive technological support.

A good example of a digital platform is Singapore's Business sans Borders (BSB) initiative that acts as a "meta-hub" or connector of several SME-centric platforms.[202] By allowing SMEs access to a much larger ecosystem of buyers, sellers, logistics services providers, financing, and digital solution providers, BSB connects problem owners and solvers. Such a platform would be a significant addition to the WSME ecosystem in Cambodia, which could also allow for matching buyers and sellers, giving them greater exposure to existing and new digital markets, digital platforms, and customers.

Enhancing Digital Literacy:

Digital literacy (along with financial literacy) is a key area of intervention to emerge from the interviews as well as the advisory panel. The projects to boost women entrepreneurship highlighted in the expert interviews section are steps in the right direction. Digital literacy and skills programs need greater emphasis, and some steps are being made in this area. SHE Investments, Cambodia's first and only business incubator and accelerator for women, has stepped up to fill in this gap by providing digital literacy skills training programs for women in MSMEs affected by COVID-19.[203] In partnership with the Google-funded Youth Business International's Rapid Response Recovery program, the social enterprise will develop and impart a range of digital skills in the Khmer language.

Similarly, there should be more multi-stakeholder and integrated efforts to impart digital literacy skills to WSMEs across the country. By joining hands with existing digital literacy initiatives in the private and social sector, the relevant government departments in charge of women's entrepreneurship can extend the reach of these programs to more underserved communities and provinces.

Similar to the SHE Investments program, new interventions should be in Khmer, but also English for participants that are proficient in the language. In order for digital literacy to be effective in the long run, English skills need to be mastered as well. Further, the programs should be designed, keeping in mind the needs of WSMEs, by using existing ICT and digital platforms. Programs should also be tailor-made, keeping in mind the specific barriers mentioned in the report. For instance, events (including online events) could also be run during the day, rather than in the evenings, when women are back home and busy tending to their families.

As digital literacy is one of the most valuable types of knowledge in the current information age and particularly in the post-COVID 'new normal', basic technology knowledge and skills should be made available across society to all individuals and groups that are affected by digitalization.

5.6 Conclusion

Increasing economic growth and rising prosperity in Cambodia have allowed digitalization to flourish in the business sector in general, although adoption rates are slower among WSMEs due to their specific constraints. This study showed that digital technologies had helped WSMEs to improve some aspects of their operations. This includes an improvement in business performance and management, communications, greater transparency in operations, speed of work processes, and data management. This in turn lowered expenses, and saved time and labor costs, which was critical during the onset of COVID-19. While the pandemic impacted many WSMEs' sales, operations, and revenues, the crisis also facilitated the adoption of new technologies, which helped SMEs alleviate some of the impacts and create new opportunities for business and sales strategy while increasing digital knowledge and skills.

Digital technology was not considered a top priority until the COVID-19 outbreak. Despite the obvious advantages of digital technologies, there were several barriers to easy adoption, especially for smaller enterprises that faced resource limitations. This included awareness and digital literacy skills, or avenues for enhancing these skills. Another barrier was mindset whereby a high value was not ascribed to technology and innovativeness.

There is thus a growing need to support WSMEs in enhancing diverse enterprise skills and exposure to innovative technologies. As women entrepreneurs have specific, gender-based challenges, such as the expectations of running the household as well as the business, or the need to work harder to prove themselves, an increased adoption of digital technologies could provide a way to achieve more gender equality in the SME ecosystem.

With the right digital literacy training and up-skilling, women entrepreneurs could be relieved of their reliance on male counterparts and be better connected to professional and mentoring networks. A majority of the women surveyed placed time and effort to maintain their businesses, indicating a willingness to up-skill. The findings and recommendations offered by this report highlight the gaps, opportunities, and challenges in embracing digital technologies, with an emphasis on multi-stakeholder participation and concerted public-private initiatives geared towards overcoming the specific constraints faced by women operating small and medium businesses in Cambodia.

5.7
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Appendices

Appendix A: Indonesia's Experts and Advisory Panelists

M. Andy Zaky (Expert Interview)
M. Andy Zaky is the Vice Secretary of WANTIKNAS (National ICT Council) who has experience in the tech industry. He actively invests and has become a mentor and/or member of board of several digital startups such as Agate International, Good News From Indonesia, KLINIKOO, etc. He is also currently taking the role as Secretary of MIKTI (Indonesia Digital Creative Industry Community).

Benedikta Atika (Expert Interview and Advisory Panel)
Atika is the Impact Investment Lead at ANGIN. On top of being in charge of sourcing investment opportunities towards social enterprises and exploring impact investment schemes with clients, Atika has also been involved in several research projects and delivering training with topics of social enterprises, angel investing, and gender lens investing. Prior to ANGIN, she had worked in the corporate finance and capital market for 3 years, before moving to the impact space. In 2018, she worked with Solve Education!, an education technology organisation, and Wattblock, a Sydney-based clean energy startup in 2018. She earned a master's degree in Business Strategy and Social Enterprises from the University of New South Wales, Australia, being funded by Australia Awards long-term scholarship from DFAT.

Mia Ariyana (Expert Interview and Advisory Panel)
A trainer, researcher, and Executive Director of ASPPUK (Association of Women in Small Micro Business Assistance), Mia Ariyana strictly focuses on women in small and micro business planning and strategies issues on their livelihood, strengthening of women financial institution, gender analysis and budgeting, and reproductive health and sexuality rights. The issue of women's empowerment and economics as well as the sustainability of the lives of marginalized groups is an issue that has come to her attention since she first worked at an NGO, in 2000. She strongly believes that gender justice and equality must be fought for a better life for all marginalized groups, which so far throughout the world, is still neglected.

Vivi Susanti (Expert Interview)
Vivi Susanti is a representative of the Central Representative Council of Indonesia's Association of Women's Enterprises (IWAPI). She has years of experience in the field of women entrepreneurship and mentorship for women. Vivi has been actively speaking on behalf of IWAPI to advocate for the development of women-owned MSMEs in Indonesia.

N/A	**Anonymous Representative (Expert Interview)** Lead Relationship Officer of a multinational tech company that runs entrepreneurship programs for women and digital transformation programs for MSMEs in Indonesia.
	**Nilam Sari Setiono (Advisory Panel)** Nilam is the owner & Founder of PT Baba Rafi Indonesia, established in 2003. Throughout her journey as an entrepreneur, she has been awarded with various awards, namely Best Womenpreneur by Women's Obsession Awards and Winner for Best Practice in Online to Offline Forum Competition between APEC Country, to name a few. She has also published a book titled "Womenpreneur", telling the story of how she developed her journey from one outlet to 1,300 outlets in 9 countries.
	**Wilda Yanti (Advisory Panel)** Mother to 3 children, Wilda Yanti is also the founder and CEO of PT. Xaviera Global Synergy, a company in the environmental sector. As a social entrepreneur, she focuses on tackling waste issues by doing waste management at the source in order to reduce waste that is being sent to landfills. As a result of her work, she was awarded Woman Entrepreneur Of The Year 2018 by Femina and Ernst & Young.
	**Hary Febriansyah (Advisory Panel)** Hary Febriansyah, Ph.D is an Assistant Professor at the School of Business and Management Institut Teknologi Bandung (SBM-ITB) under the Ministry of Research and Higher Education, Republic of Indonesia, since 2006. During this period, Hary has taken responsibility for (1) Teaching on Master of Business Administration and Master of Science in Management Program; (2) Research projects on business-industry collaboration; and (3) Conducting training and consultancies services that benefits local communities. Hary is the Director of center of Knowledge for Business Competitiveness in SBM-ITB (since 2016) and the Vice President for Program on Knowledge Management Society Indonesia (KMSI).
	**Muhammad Nur (Advisory Panel)** Muhammad Nur, S.E has a background in Economics and is currently the Head of the Business Restructuring Standardisation Department of the Ministry of Cooperatives and Small and Medium Enterprises. During the advisory panel, he was also accompanied by one of his staff.
	**Rendi Febriansyah (Advisory Panel)** Rendi Febriansyah is a general manager of Indonesia Digital Creative Industry Community (MIKTI). A nonprofit organization functioned as a gathering place for all people who pay attention to the development of Digital Creative Industries in Indonesia. He is passionate about the management of information technology related to business needs and disruption issues. He has been actively involved in the mentoring programs for SMEs, especially in the creative industries.

Appendix B: Indonesia's Data Collection and Analysis

SME Criteria

	Myanmar	Indonesia	Cambodia	Malaysia
SE	Approx. Up to USD 74,000 for wholesale and service Approx. Up to 37,000 for retail and other	Approx. USD 20,000 to USD 170,000	Approx. USD 50,000 to USD 250,000	Approx. USD 72,000 to USD 720,000
ME	Approx. USD 74,000 to USD 222,000 for wholesale Approx. USD 74,000 to USD 148,000 for service Approx. USD 37,000 to 74,000 for retail and other	Approx. USD 170,000 to USD 3.4 million	Approx. USD 250,000 to USD 500,000	Approx. USD 720,000 to USD 4.8 million

Data Analysis

Stage 1: Transcribing

After conducting the interviews, the authors transcribed the recording to a word document verbatim (word for word) and translated key findings.

Stage 2: Coding

The authors coded the data using the four-pillar guideline to group the data into themes. At this stage, the authors stayed open-minded and let the data dictate the emerging themes and issues.

Stage 3: Frameworking

The two main authors involved in this project met to compare the labels applied and agree on a set of codes to apply to all subsequent transcripts. Several iterations have taken place to avoid ignorance of data that does not fit into the four-pillar guideline.

Stage 4: Indexing

The authors used a numerical system to identify portions or sections of the data that correspond to a particular theme. For example, the authors used 0 to indicate a digital tool being unused and 1 to indicate a digital tool being used by the participants.

Stage 5: Charting

Data were summarized by category under each pillar from each transcript while retaining the original meanings and 'feel' of the interviewees' words especially since the data was collected in Bahasa Indonesia. For example, when translating the word "terdorong", instead of using "pushed" in English, the authors used "being inspired to" because in this context, the person used the word in a positive connotation.

Stage 6: Interpreting

The authors generated typologies, interrogated prior concepts, and mapped connections between categories to explore relationships and/or correlation.

Appendix C: Overview of Relevant SME and Information Communication and Technology ("ICT") Regulations in Indonesia

Title	Outline
Law No.7/1992 and Law No.10/1998 (amendment) on Banking	Regulation on Banks
Law No.20/2008 on Micro, Small and Medium-sized Enterprises	MSME definition and the government obligation to promote the MSME sector
Presidential Decree No.2/2008 on Guarantee Institutions	Regulation on credit guarantee and re guarantee institutions
Regulation No.222/2008 and No.99/2011 on Guarantee Institutions and Reguarantee Institutions	Regulation on credit guarantee and re guarantee institutions (Ministry of Finance)
Law No.17/2012 on Cooperatives	Regulation on cooperatives
Presidential Regulation No.9/2009 on Financing Institutions	Regulation on non-bank financial institutions (NBFIs)
Law No.8/1996 on Capital Market	Regulation on capital markets
Bapepam-LK Rule No.IX.C.7	SME definition in capital markets
Communication and Informatics Ministerial Regulation No.20/2016	Protection of personal data in electronic systems
Law No. 11/2008 on Information and Electronic Transactions	Regulation of communication and information in electronic systems
Communication and Informatics Ministerial Regulation No.36/2014	Electronic System Operator Registration Procedures
Law No. 19/2016 as Revision of Law No. 11/2008 on Information and Electronic Transactions	Protection of personal data in electronic systems
Communication and Informatics Ministerial Regulation No.7/2019	Business Licensing Services in an Integrated Information and Communication Sector
Regulation no.71/2019 on Electronic Transaction and System Operation	Regulation on the implementation of electronic system, electronic agent, electronic transaction, electronic certification, reliability certification institutions as well as domain name management.

Appendix D: Definition of Small and Medium Enterprises in Myanmar

Definition of Small and Medium Enterprise		
Category	**Small**	**Medium**
Enterprise Employee **(a) Manufacturing** **(b) CMP Manufacturing** **(c) Wholesale** **(d) Retail** **(e) Service** **(f) Other**	**≤ 50** **≤ 300** **≤ 30** **≤ 30** **≤ 30** **≤ 30**	**> 50 ≤ 300** **> 300 ≤ 600** **> 30 ≤ 60** **> 30 ≤ 60** **> 30 ≤ 100** **> 30 ≤ 60**
Capital Investment (Kyats in Million) (a) Manufacturing (b) CMP Manufacturing	≤ 500 ≤ 500 Up to USD 370,370[199] approx.	> 500 ≤ 1000 > 500 ≤ 1000 USD 370,370 to USD 740,740 approx.
Last Annual Income Kyats in Million) (a) Wholesale (b) Retail (c) Service (d) Other	≤ 100 ≤ 50 ≤ 100 ≤ 50 Up to USD 74,000 approx. for wholesale and service Up to USD 37,000 approx. for retail and other	> 100 ≤ 300 > 50 ≤ 100 > 100 ≤ 200 > 50 ≤ 100 USD 74,000 to USD 222,000 approx. for wholesale USD 74,000 to USD 148,000 approx. for service Approx. USD 37,000 to 74,000 for retail and other

Source: Small and Medium Enterprise Development Law (2015)
Calculated at 1 USD = 1350 MMK exchange rate.

Appendix E: Myanmar's Advisory Panelists

The advisory panel was made up of the following participants:

(1) Naw Show Ei Ei Tun is currently a Deputy Chief of Party for Yangon-based USAID's Transparency and Inclusive Growth Activity, a four-year USD 19 million project (2020-2023) implemented by Nathan Associates. She manages a range of technical assistance activities to government ministries, private sector and civil society organizations for the purposes of improving economic governance and reducing economic drivers of conflict and inequality in Myanmar. Previously, she served as a Deputy Chief of Party for USAID's Private Sector Development Activity, a five-year USD 23.3 million project, driving various economic reform efforts to improve the regulatory environment for businesses and to promote entrepreneurship. Prior to this, she was a senior consultant at APCO Worldwide - Singapore, specializing in market entry research, policy analysis and public/media relations for multinational clients operating in Southeast Asia. Earlier in her career, she has worked in the fields of policy research, international development and broadcast journalism in Washington D.C. She has an M.A. in economics and international relations with a focus on Southeast Asia from School of Advanced International Studies (SAIS), Johns Hopkins University, and B.A. in economics from Eastern University in the U.S.

(2) Samantha Htoon is an accomplished banking and finance professional, with extensive experience of retail, SME, corporate banking, microfinance and Organizational development. She currently serves as Head of Lending at Yoma Bank, a leading bank in Myanmar with innovative digital banking products. Previously, she was Head of Strategic Planning and Business Operations at Proximity Finance. She holds a Master's Degree in Strategic Management from The City University of New York and a Bachelor's Degree in Finance and Investment from Baruch College Zicklin School of Business.

(3) Seinn Witt Yee is a seasoned Startup Consultant and Trainer at the Ministry of Industry who has worked with MSMEs across Myanmar. As National Adviser of CEFE International, Regional SE Adviser of British Council East Asia and Mentor to ASEAN AbiNet Project, she passionately promotes entrepreneurship and social innovation ecosystem in Myanmar. Seinn is also Director of PS Business School, educating youth with business skills training programs since 2007. She holds an MBA Degree from Yangon Institute of Economics.

(4) Okka Myo is Co-Founder of Impact Hub Yangon that aims to strengthen local social entrepreneurship and social innovation ecosystem since 2015. Impact Hub also provides a modernized co-working space to Startups and SMEs while it hosts incubator programs, VC Meetups, and other tech-related social events. He has partnered with GIZ, Friedrich Naumann Foundation, Ministry of Industry, Grab, and Ooredoo to run programs that support local entrepreneurs. He is currently implementing Digital Readiness Program for Myanmar MSME in partnership with SME Development Agency under MOPFI, and FNF. He holds a Bachelor's Degree in Computer Systems, Networking and Telecom from Curtin University of Technology.

(5) Wit Yee Chan is a successful serial entrepreneur who is running two digital ventures: GroupBuyy, a local discount e-commerce business, and Any Rev Channel, an online TV channel that uses unorthodox ways of exploring and covering trends and issues in Myanmar. She is also a very active mentor who regularly participates in startup challenges, such as Founder Institute Yangon. She holds an MBA Degree from Victoria University of Wellington and MPA from Yangon University of Economics.

(6) Jenna Phu is a talented young entrepreneur who successfully launched mMD Collections, a Yangon-based clothing line targeting career women amidst COVID 19 havoc through her business acumen, resilience, and ability to pivot the strategy quickly. Previously, she was Head of Securities Trading and Sales Department at KBZSC Securities. Jenna received her B.A., in Business/ Management Economics from the College of Wooster, USA.

Appendix F: Cambodia's Expert Interviewees

No	Name	Title	Institutions/Ministry	Sectors
01	Mr. Chhea Layhy	Not to be disclosed	SME Department of MISTI	SME
02	Mr. Sim Chankiriroth	CEO Founder	Banhji/ Fintech, YEA	Digital Technology
03	Mr. The Chhun Hak	Director General	Entrepreneurship Development, Women Policy	WSME & Policy
04	H.E Kuong Sorita	Vice President of CWEA, SME Advisor	CWEA & MoWA	WSME, Women Technology
05	Mr. Manu Rajan	CEO & Managing Director	Wing	Payment service

Appendix G: Cambodia's Advisory Panelists

H.E Chhun Hak
THE Director General, Of Gender Equality and Economic Development General Department, Ministry of Women's Affairs

H.E Chhun Hak is a lead technical advisory and coordination of MoWA within the ministry, focused on gender mainstreaming and promotion of women in good governance and economic development. He is also in charge of the Women's Development Center of MOWA. He holds a Masters Degree in Public Administration and a Bachelor Degree in Law.

Ms. Sodany TAN
Director of ICT Policy Department, Ministry of Posts and Telecommunications (MPTC)

Ms. Sodany Tan, Director of ICT Policy Department, Ministry of Posts and Telecommunications, is an advocate for women and girls empowerment through technology and education. Tan initiated the Cambodia Women in Tech Program for the ministry, which aims to provide recognition to outstanding women and to create role models in tech.

Ms. Reaksmy MAK
Head of Training Division, Legal Department of National Bank of Cambodia

Ms. Reaksmy Mak is Head of the Training Division of the Legal Department of the National Bank of Cambodia . Since 2015, Ms. Reaksmy has been involved in many areas of financial inclusion, including women's financial inclusion. Reaksmy holds a Master of Finance degree.

Dr. Lykuong ENG
President of Cambodia Women Entrepreneur Association (CWEA) And President of CamWen

Dr. Lykuong Eng is the elected president of the Cambodia Women Entrepreneur Associations (CWEA), which consists of more than 500 women members. She is a dentist by profession and is actively involved in social work focused on improving health care and dental hygiene.

Mr. Chanda PEN
Co-Founder and CEO of Bongloy Payments PLC and Chairperson of Cambodia Fintech Association

Mr. Chanda Pen is a technologist and entrepreneur. He is the Co-Founder/CEO of Bongloy, a Southeast Asia based Fintech company. He is a Council Member of the Association of Banks of Cambodia (ABC), National QR Code Task Force Committee, and Cambodia Association of Finance and Technology (CAFT).

Mr. Kamthong LEY
A Founder & CEO of PAPA Deliver

Mr. Kamthong Ley is a founder of PAPA Deliver, and responsible for the company's business development. He is a young entrepreneur who has received several awards from international events such as Cambodia, Malaysia and the United Kingdom. He has a Bachelor's Degree in Computer Science and a Postgraduate Diploma in Mobile Computing.

Mr. Virak NOUN
Youth Employment Project Coordinator
UNDP Cambodia

Mr. Virak Noun is a Project Manager at UNDP Cambodia, leading the implementation of a project to address youth skills, entrepreneurship and employment in the context of Industry 4.0 and the Digital Economy. He has a Bachelor's degree in Economics, a Master's degree in Development Studies, a Graduate Diploma in Public Administration, and a Master's degree in Public Policy.

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