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WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

White Paper

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Women's Economic Empowerment in the Digital Economy

White Paper

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ACRONYMS

A4AI	Alliance for Affordable Internet
ACCMSME	ASEAN Coordinating Committee for on Micro, Small and Medium Enterprises (MSMEs)
ACCSQ	ASEAN Consultative Committee on Standards and Quality
ACW	ASEAN Committee on Women
ADB	Asian Development Bank
AEC	ASEAN Economic Community
AFI	Alliance for Financial Inclusion
AFMGM	ASEAN Finance Ministers and Central Bank Governors' Meeting
AI	Artificial intelligence
AIM	ASEAN ICT Masterplan
AIMD	ASEAN Integration Monitoring Directorate
AML	Anti-Money Laundering
AML/CFT	Anti-Money Laundering and Countering Financing of Terrorism
AMS	ASEAN Member State(s)
APEC	Asia-Pacific Economic Cooperation
APSC	ASEAN Political-Security Community
ASCC	ASEAN Socio-Cultural Community
ASEAN	Association of Southeast Asian Nations
ASEAN BAC	ASEAN Business Advisory Council
ASEC	ASEAN Secretariat
AWEN	ASEAN Women Entrepreneurs Network
B2B	Business-to-business
B2C	Business-to-consumer
BPO	Business process outsourcing
BDS	Business Development Support
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CEO	Chief executive officer
COD	Cash on delivery
CSAP	AEC 2025 Consolidated Strategic Action Plan
DLT	Distributed ledger technology
DFAT	Australian Department of Foreign Affairs and Trade
DFS	Digital financial services

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eKYC	Electronic Know-Your-Customer (i.e., Paperless KYC process)
Fintech	Financial technology
Fintechs	Financial technology companies
GDP	Gross Domestic Product
GEM	Global Entrepreneurship Monitor
GVC	Global value chains
IAI	Initiative for ASEAN Integration
ICT	Information and communication technology
ID	Identification
IDI	In-depth individual interview
ILO	International Labor Organization
IT	Information technology
ITC	International Trade Center
ITU	International Telecommunication Union
KPO	Knowledge process outsourcing
KYC	Know your customer
MFI	Microfinance Institution
MNC	Multinational corporation
MNO	Mobile network operator
MSMEs	Micro, small, and medium enterprises
OECD	Organization for Economic Co-operation and Development
PCW	Philippine Commission on Women
S&T	Science and technology
STEAM	Science, technology, engineering, arts, and mathematics
STI	Science, technology, and innovation
SIM	Subscriber identify module
SMEs	Small and medium enterprises
SMS	Short Message System
TCF	Telecentre Foundation
TCW	Telecentre Women
TELMIN	Telecommunications and IT Ministers Meeting
UIDAI	Unique Identity Authority of India
UNCDF	United Nations Capital Development Fund
UNCTAD	United Nations Conference on Trade and Development

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UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
US-ACTI	ASEAN Connectivity through Trade and Investment
USAF	Universal Service and Access Fund
USAID	U.S. Agency for International Development
WC-FINC	Working Committee on Financial Inclusion
WED	Women's enterprise development
WEE	Women's Economic Empowerment

EXECUTIVE SUMMARY

The ASEAN Economic Community Blueprint 2025 commits the region to promote more “resilient, inclusive, and people-centered community.” At the ASEAN Summit in November 2017, ASEAN’s leaders adopted a series of documents that made it clear that they saw the digital economy as presenting great opportunities for the region while also calling for gender mainstreaming in the AEC. This paper brings these themes together and makes recommendations on how the ASEAN Economic Community 2025 Consolidated Strategic Action Plan (AEC 2025 CSAP) can be implemented to promote women’s economic empowerment.

The challenges facing women are not new. Women in the ASEAN region have long faced a range of barriers to their economic activities, whether they are formal sector workers, owners of small and medium enterprises, or micro entrepreneurs in the informal sector. With the rise of the digital economy, women have new opportunities at work and in business, but with these new opportunities come additional challenges. Women who are already in the workforce need access to training and reskilling to prepare for new jobs. Digital technology is creating new opportunities for accessing finance through new channels and from new sources, but women face several barriers to acquiring the financial services they need. Additionally, as financial services are increasingly made available through ICTs, women will need valid forms of identification to access these. Women entrepreneurs will continue to need traditional business development support, including access to markets and networks, and an enabling environment to help their businesses thrive. These services however need to be better tailored to women entrepreneurs’ needs and circumstances. All women will need digital literacy to engage with the digital economy. This is particularly salient as cyber safety and privacy are becoming increasingly important.

This White Paper will focus on the AEC 2025 CSAP, especially the areas relating to the digital economy, in order to mainstream gender in the AEC. The proposed strategies and actions in the CSAP will be examined in terms of the objectives and aspirations of the AEC Blueprint 2025 as well as the barriers, at the regional or sub-regional levels, to WEE in the specific context of the digital ASEAN. This provides a backdrop to the follow-on analysis of the specific strategic measures and key action lines under CSAP and, as necessary, other sectoral action plans, which should contain or incorporate gender empowerment measures and actions so as to initiate and/or promote WEE in ASEAN. In particular, what are the practical approaches that would facilitate gender empowerment through various ASEAN sectoral committees in the AEC as well as in individual member states? To limit the scope of analysis and as requested by the ACCMSME, the emphasis will be on self-employed women entrepreneurs, rather than on wages and salary earners.

Generally, addressing gender issues and women’s economic empowerment in the AEC will require both cross-cutting and sector-specific activities. At the cross-cutting level, three recommendations stand out. First, there is a need to ***institutionalize***

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gender issues into the planning and monitoring for the AEC. This can be done by establishing a unit with the ASEAN Integration Monitoring Division that would focus specifically on gender and women's economic empowerment, just like there are currently offices addressing trade and finance. This office would be tasked with ensuring that all plans implemented in the AEC address gender issues and that implementation of the impact of the AEC is monitored in a way that highlights outcomes for both men and women. The office would also be tasked with raising awareness in the other AEC directorates of the need for incorporating women's economic empowerment principles in agreements as appropriate.

Second, to enable to gender office of the ASEAN Integration Monitoring Directorate (AIMD) to do its job, it will be necessary to ***collect more and better data on economic integration that is disaggregated by sex.*** This will be difficult and will require significant effort on the part of statistical offices in the region, but the process needs to start immediately.

Third, steps should be taken across the spectrum of sectoral bodies to ***encourage consultation with women's organizations*** in developing policies and agreements. In much the same way that the AEC Blueprint 2025 requires greater consultation with the business community to ensure that the private sector view is heard in ASEAN deliberations, there is a need to ensure that the viewpoints of women workers and entrepreneurs are heard as well.

These actions address improvements in the ASEAN development and integration processes that would more effectively prioritize gender issues in the AEC, but it is ultimately the changes in policy at both the national and regional level that have an impact on outcomes in the digital economy. Fortunately, most countries have existing universal service funds that could be used to finance some policy responses. To the extent possible, it is recommended that universal service funds be used to promote access to the digital economy and the development of digital skills for women. This could include a commitment to use at least a fixed fraction of such funds for this purpose.

The bulk of the paper deals with 26 specific action lines within the CSAP that, if properly targeted, could have a positive impact on women's economic empowerment in the digital economy. They can be broadly grouped into three categories: action lines affecting women as entrepreneurs; action lines relating to financial inclusion; and action lines addressing training and reskilling of women workers. The paper identifies a wide range of recommendations in each of these areas. Two key recommendation are highlighted here.

A foundational requirement for expanding women's role as entrepreneurs in the digital economy is that they be digitally literate. Among other things, ***digital literacy*** is increasingly required for access to financial services. Therefore, promotion of digital literacy for all ASEAN citizens needs to be a top priority of the AEC to ensure equitable and inclusive development.

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Several recommendations are made for AEC activities that would promote digital literacy in the region (see the section on digital literacy as a prerequisite for promoting digital trade in Chapter 4). These include: investing in AMS capacity building initiatives; encouraging AMS to ensure digital literacy and capacity-building initiatives consider women's needs; supporting efforts to provide women with opportunities to develop their digital skills through different channels; supporting steps to make online content and services more accessible to women with limited literacy; providing guidance on minimum standards for the content of digital literacy curricula; promoting female role models as internet users; and partnering with existing programs that promote women's digital literacy.

Supporting **women-friendly telecenters** (i.e., internet access centers) is a priority because it is a channel for delivering digital literacy and other activities addressed in this paper. As noted earlier, internet access centers need to become more women-friendly to more effectively benefit women. Women-only internet access centers may be the best strategy in some locations. In others, capacity building in gender sensitization for telecenter staff may be sufficient if combined with tracking usage by gender.

At the regional level, the AEC can further the promotion of women-friendly internet access centers at a national level by supporting or conducting region-wide research to better understand the needs and preferences for internet access centers by different segments of women including women entrepreneurs and workers.

One of the most widely recognized constraints on women's entrepreneurship is lack of credit. There is a sizeable gap in MSME financing in ASEAN and particularly for women-owned enterprises. Several recommendations are made to improve the enabling and regulatory environment for women borrowers. While several recommendations are outlined in Chapter 5, the following are priorities: provide guidance to AMS to support them in assessing any unintended regulatory impacts that hinder women's financial services; Feed the results into the financial inclusion strategy development process; reform legal and regulatory frameworks that hinder the financial inclusion of women; and, address and harmonize the development of financial infrastructure such as credit bureaus. These actions would go far to assist women in accessing existing financial services.

With respect to digital financial services, it is tempting to recommend that all adults in ASEAN be provided with biometric identification in order to level the playing field for accessing digital financial services, e-government, and other aspects of the digital economy, but it is unclear whether there is sufficient need for these IDs at this time. Instead, it is recommended that ASEAN assess the benefits that could be experienced through using unique, biometric identification in the region. In this respect, it would be important to watch the experience of the Aadhaar program in India for lessons to be learned.

1 INTRODUCTION

The ten-member Association of Southeast Asian Nations (ASEAN) established the ASEAN Community in 2015 consisting of the ASEAN Political-Security Community (APSC), the ASEAN Socio-Cultural Community (ASCC), and the ASEAN Economic Community (AEC). The vision for the AEC is of an integrated and cohesive regional economy that is “competitive, innovative, and dynamic and which has enhanced connectivity and sectoral cooperation, and a more resilient, inclusive, and people-oriented, people-centered community, integrated with the global economy.”¹ The AEC is designed to create “a single market and production base” with free-flowing goods and services, among other things,² while fostering robust productivity growth through innovation, technology, and human resource development. At the same time, the AEC is also tasked with engendering more equitable and inclusive economic growth in ASEAN while putting the region on a path to higher and more sustainable growth.³

The roadmap for achieving this vision is laid out in the 2025 AEC Blueprint which prioritizes:

- A strengthened emphasis on the development and promotion of micro, small, and medium enterprises (MSMEs); and
- Embracing digital technology to leverage enhanced trade and investment, provide an e-based business platform, promote good governance, and facilitate the use of green technology.

While seeking to promote inclusive growth, the AEC Blueprint 2025 makes limited references to promoting gender equality and women's economic empowerment (WEE).⁴ For example, it recommends promoting women's participation in science, technology, and innovation (STI); fostering women's entrepreneurship; and promoting women and youth entrepreneurship through MSMEs. The concrete steps to implement the aspirations of the AEC Blueprint 2025 are detailed in the AEC 2025 Consolidated Strategic Action Plan (CSAP). Gender is addressed in the CSAP through an emphasis on fostering financial literacy and inclusion, via capacity building and innovative means such as digital platforms, for financially unserved and underserved groups, including MSMEs and women.

According to a 2016 study “Projected Gender Impacts of the ASEAN Economic Community,” the legacy of gender inequality in the region means that the policies and programs in ASEAN need to be gender-responsive if women and men, and the

1 ASEAN Secretariat, 2008, ASEAN Economic Community Blueprint, Association of Southeast Asian Nations, 15.

2 “Towards Inclusive and Sustainable Growth in the ASEAN Economic Community,” 2017, ASEAN Secretariat.

3 Deloitte and US-ASEAN Business Council, Inc., n.d., “Advancing the ASEAN Economic Community: The Digital Economy and the Free Flow of Data” Deloitte, 4.

4 The ASCC Blueprint 2025 also focuses on engendering a culture of entrepreneurship in ASEAN through promoting and nurturing creative and inclusive social entrepreneurship for women.

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regional economy as a whole, are to reap the full benefits of equitable and inclusive economic integration.⁵

In particular, the same study found that significant barriers to gender equality in the region have resulted in lower rates of women's labor force and business participation (especially in knowledge-driven and skill-intensive industries and activities) and significant and entrenched gender disparities in wages as well as in ownership and management of industries and enterprises. The study called for the introduction and promotion of gender mainstreaming strategies in the AEC.

At the 31st ASEAN Summit in Manila in November 2017, ASEAN's leaders addressed the issue of mainstreaming gender in the AEC by adopting the Action Agenda on Mainstreaming Women's Economic Empowerment (WEE) in ASEAN. In addition, they adopted the ASEAN Declaration on the Gender-Responsive Implementation of the ASEAN Community Vision 2025 and the Sustainable Development Goals.⁶ Both of these documents call for mainstreaming gender and women's equality under the AEC as well as the implementation of more robust policies to promote WEE across three ASEAN Communities. The adoption of the Action Agenda at the highest level of ASEAN leadership provides the necessary support for mapping out and operationalizing WEE-driven initiatives, strategies and programs in ASEAN.

The Action Agenda on Mainstreaming WEE in ASEAN, set out in Appendix E, aims to internalize WEE through innovation, trade, and inclusive business, as well as related human capital development. It calls on each ASEAN Member State (AMS) to support the five principal components of actions described in the six-component Action Agenda.

At the same meeting, ASEAN leaders adopted the ASEAN Declaration on Innovation to emphasize the opportunities and benefits of innovative start-ups and disruptive technologies for AEC development and transformation. The declaration acknowledged that in order to spur and sustain the growth and competitiveness of regional industries and enterprises under the digital economy, the region needs policies to foster innovation-driven entrepreneurship and new

Five Principal Components of the Action Agenda on Mainstreaming WEE in ASEAN -

(Components for AMS):

1. Adopt concrete and measurable actions to address the barriers that impede maximizing women's full economic potential in five areas;
2. Promote women's participation and skills development in science, technology, engineering, arts, and mathematics (STEAM), including information and communication technologies (ICT)
3. Invest in programs which provide enabling environments for women micro, small and medium enterprises (MSMEs) to prosper;
4. Increase women's representation and leadership in the workforce at the executive and managerial levels; and
5. Encourage public and private sector collaboration through the ASEAN Business Advisory Council (ASEAN BAC) and ASEAN Women Entrepreneurs Network (AWEN) for advocacy.

⁵ Friedrich Ebert Stiftung, UN Women, and ASEAN, 2016, "Projected Gender Impact of the ASEAN Economic Community," Jakarta: Association of Southeast Asian Nations.

⁶ The Declaration, led by ACW and ACWC, aims to ensure the realization of a people-oriented and people-centered ASEAN where all women and girls are able to reach the fullest of their potentials through cross-sectoral collaboration.

businesses as well as to equip workers and entrepreneurs with the knowledge, skills, and competencies for innovation.

1.1 Study Objectives

The purpose of this paper is to support the realization of gender mainstreaming and women-related initiatives under the AEC Blueprint 2025, with a special focus on WEE in the context of the digital economy. The paper is in direct response to the mandate and direction from the leadership of ASEAN provided in the Action Agenda on Mainstreaming WEE in ASEAN. It is intended to lay the foundation for moving the WEE agenda forward within the AEC and for embedding WEE in strategies, programs, and activities across the entire AEC.

1.2 Scope

The paper focuses on the AEC 2025 CSAP, especially the strategic measures and action lines relating to the digital economy. The proposed strategies and actions in the CSAP are examined in terms of the objectives and aspirations of the AEC Blueprint 2025 as well as the barriers to WEE. These barriers, particularly those in the industries and enterprises driven by innovation and technology, as emphasized in the ASEAN Declaration on Innovation, will be discussed. The paper identifies informed and practical opportunities for ASEAN to adopt WEE-enhancing policy and regulatory frameworks, with special emphasis on those that promote women-owned MSMEs. The identified opportunities will be capable of leveraging and maximizing women's roles and contributions as employees and managers as well as entrepreneurs and business persons across the AEC.

1.3 Methods

The paper explores these key questions:

1. What are the key ASEAN-specific factors and forces that have:
 - a. constrained or hindered women from obtaining equitable access to development opportunities and resources; and
 - b. prevented women from playing their full economic role as wage and salary earners or self-employed entrepreneurs and business persons in the digital economy?
2. What are the specific strategic measures and key action lines under CSAP and other sectoral action plans that should contain or incorporate gender empowerment measures and actions so as to initiate and/or promote WEE in ASEAN?
3. What are the range of practical approaches and specific activities that would allow the gender empowerment measures identified and proposed in question 2 above to be introduced and implemented by various ASEAN sectoral committees in the AEC?

To answer these questions, the research team conducted an extensive literature review and consultations with key informants at ASEAN and in the region. The literature review included official ASEAN documents including, strategic action plans⁷ from the relevant sectoral bodies, background papers on the AEC⁸, and literature on gender and/or WEE related to ASEAN, on the gender digital divide, or related to the digital economy generally.⁹ The consultations took place during field visits in Indonesia, Lao PDR, the Philippines, Singapore, and Thailand. The research team met with key stakeholders of ASEAN including members of the ASEAN Coordinating Committee for MSMEs (ACCMSME), ASEAN Committee on Women (ACW), ASEAN Business Advisory Council (ASEAN BAC), ASEAN Women Entrepreneurs Network (AWEN), and the ASEAN Secretariat (ASEC). Additionally, consultations were held with experts at United States Agency for International Development (USAID), the U.S. Department of State, and the International Labor Organization (ILO). (See Appendix A for the Research Matrix.)

1.4 Approach

This paper is intended to provide support to ASEAN in its effort to mainstream WEE in the AEC, within the context of the digital economy, through its existing workplan. A review of the definitions of WEE, mainstreaming, and the digital economy is provided here to frame the discussion.

Surprisingly, there is no single accepted definition of WEE at this time. The concept of WEE however usually includes three themes:

1. ***Women's increased access to, control over, and ownership of resources.***

Resources refers to property, financial tools, cell phones, quality land, and other key assets.

2. ***Women's increased agency, voice, and choice.***

This refers to the ability to speak up for their needs and priorities, without retribution. It also includes the ability to help shape policies and to have decision-making power within the household and in the outside world.

7 ASEAN Committee on Women (ACW), 2015, ASEAN Committee on Women (ACW) Work Plan 2016–2020, ASEAN Secretariat; ASEAN Secretariat, 2015c, ASEAN Strategic Action Plan for SME Development 2016–2025, ASEAN Secretariat; TRPC Pte Ltd, 2015, The ASEAN ICT Masterplan 2020, Jakarta: ASEAN Secretariat.

8 ASEAN, 2015b, ASEAN 2025: Forging Ahead Together, Jakarta: Association of Southeast Asian Nations. (specifically the AEC Blueprint); ASEAN Secretariat, 2008, ASEAN Economic Community Blueprint, The Association of Southeast Asian Nations; and ASEAN, 2017a ASEAN Economic Community 2025 Consolidated Strategic Plan.

9 OECD and ASEAN Coordinating Committee for Micro, Small and Medium Enterprises (ACCMSME), 2017, Strengthening Women's Entrepreneurship in ASEAN Towards Increasing Women's Participation in Economic Activity, OECD; Friedrich Ebert Stiftung, UN Women, and ASEAN Secretariat, 2016, Projected Gender Impact of the ASEAN Economic Community, Jakarta: Association of Southeast Asian Nations; Office of the Special Advisor on Gender Issues and Department of Economic and Social Affairs, 2002 "Gender Mainstreaming: An Overview," New York: United Nations.

3. *Women's improved well-being and dignity*

This encompasses several elements including having a better work-life balance, access to education, and overall improved economic opportunities.¹⁰

For the AEC, mainstreaming WEE will involve a process of assessing how any planned action or policy affects women. The objective of mainstreaming is to make women's concerns an integral part of the design, implementation, monitoring, and evaluation of programs and policies. This requires that policy analysis and formulation are informed by considerations of gender differences and inequalities. Additionally, it implies identifying and taking advantage of opportunities to narrow gender gaps and promote greater equality between women and men. The ultimate goal is to achieve gender equality in outcomes.¹¹ Importantly, the pursuit and achievement of gender equality is expected to contribute to the achievement of other social and economic achievements such as economic growth and efficiency.

The digital economy is of specific interest to ASEAN as it seeks to promote inclusive economic growth and greater international integration. The world economy is being transformed by the interconnection of the internet globally, which has enabled an increasing amount of economic activity and international trade. APEC's Policy Support Unit, quoted in Nathan Associates 2017a, estimated the global digital market to be worth \$3.5 trillion in 2015.¹² Analysis by A.T. Kearny estimated that the digital economy has the potential to add \$1 trillion to the GDP of ASEAN between 2015 and 2025.¹³ The southeast Asia Internet economy (a sub-set of the digital economy) is projected to grow to \$200 billion by 2025.¹⁴ In Indonesia, the digital economy is projected to add 3.7 million jobs by 2025, while in Malaysia it is projected to comprise 20% of the economy by that same year.¹⁵ ASEAN views the digital economy as a key driver of economic and social transformation, through enhanced trade and investments, and good governance¹⁶.

The digital economy "encompasses all sectors of the economy that rely upon or use IP-enabled [internet protocol-enabled] networks and platforms as part of the embedded infrastructure of the society."¹⁷ As the internet increasingly becomes a "fundamental input and driver of all other sectors in the economy" the line between the traditional economy and the digital economy will disappear.

Women can engage with or be affected by the digital economy as economic actors in a variety of ways. Women are not a homogenous group. Their economic

10 Elise Young and Andrea Bertone, 2016, USAID Women's Economic Empowerment and Equality Assessment Report, Washington, D.C.: USAID, 2.

11 United Nations Office of the Special Advisor on Gender Issues and Department of Economic and Social Affairs 2002, 1.

12 Nathan Associates, 2017a, Promoting the Digital Economy in the ASEAN and APEC Regions, Washington, D.C.: USAID, 2. In this paper, \$ refers to U.S. dollars unless otherwise noted..

13 A.T. Kearny, Inc., 2015, The ASEAN Digital Revolution, A.T. Kearny, Inc., 12.

14 Nathan Associates 2017a, 2..

15 Ibid., 2.

16 ASEAN, 2015b, ASEAN 2025: Forging Ahead Together, Jakarta: Association of Southeast Asian Nations, 59.

17 Ibid., Appendix: Definitions.

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opportunities and constraints are shaped by a variety of factors: age, class, education level, marital status, race, and location, etc. Socio-cultural factors are also at play related to religion, ethnicity, and country. These factors can intersect to further advantage or disadvantage women. For example, older, less educated women working in agriculture face constraints that young college educated women living in cities do not encounter. It is beyond the scope of this report to thoroughly segment and analyze the market of economically active women in ASEAN. To better frame the analysis presented here and draw out the WEE issues related to the digital economy, four general profiles of women were identified.

- Women owners of MSMEs using digital technologies
- Women entrepreneurs leading digital technology firms
- Women workers engaged with digital technologies
- Women workers impacted by digital technologies

1.5 Organization

The paper is organized as follows. Chapter 2 discusses the barriers to women's economic empowerment for three types of economic actors: women owners of micro and small enterprises; women who own growth-oriented, tech enterprises; and women workers. Chapter 3 presents the action lines from the AEC CSAP that hold some potential for advancing WEE within ASEAN that have not been covered in other studies. Chapter 4 looks in more detail at the barriers facing women entrepreneurs. The chapter then reviews the threats and opportunities for entrepreneurs from the digital economy. It concludes with a discussion of how selected action lines can incorporate activities to promote WEE for entrepreneurs. Chapter 5 reviews access to finance as a key component of women's economic empowerment that impacts all women. It concludes with ideas for including activities within selected action lines to promote women's financial inclusion. Chapter 6 is similar to Chapter 5 but looks at gender barriers, opportunities, and threats from the digital economy for women workers in ASEAN. Chapter 7 highlights actions that cut across sectoral bodies, strategic measures, and action lines and which have the potential to both increase the capacity of the AEC to mainstream gender in all of its work and to promote the economic empowerment of women. The report finishes with a summary and prioritization of the recommendations for improving the lives of working women in ASEAN. In addition, in many cases in Chapters 4–7, following the recommendations for action by ASEAN are examples of successful programs implementing similar ideas in other countries as well as resources that can be used to design programs for the region.

2 CHALLENGES TO WOMEN'S ECONOMIC EMPOWERMENT IN ASEAN

Despite rapid economic growth in ASEAN over the past two decades which has raised living standards, there are still substantial disparities between men and women in the economy, as indicated by the Global Gender Gap report issued by the World Economic Forum in 2017. ASEAN member states scored between 0.61 to 0.769 (out of a possible 1.0) on the Economic Participation and Opportunity sub-index which measures gender inequalities in the labor force participation rates, remuneration rates, and advancement opportunities in business and political leadership (see Table 2.1).¹⁸ Note that the scores in Table 2.1 below refer to the degree to which men and women within the same country differ on the Economic Participation and Opportunity Index and the Global Index.

Table 2.1: Global Gender Gap

	Economic Participation and Opportunity Rank	Economic Participation and Opportunity Score	Global Index Rank	Global Index Score
Lao PDR	22	0.769	64	0.703
Thailand	24	0.767	75	0.694
The Philippines	25	0.764	10	0.790
Myanmar	26	0.754	83	0.691
Singapore	27	0.752	65	0.702
Viet Nam	33	0.738	69	0.698
Cambodia	56	0.698	99	0.676
Brunei Darussalam	61	0.692	102	0.671
Malaysia	87	0.654	104	0.670
Indonesia	108	0.610	84	0.691

Source: World Economic Forum, *The Global Gender Gap Report, 2017*

Note: Total number of countries in index = 144. Highest possible score = 1.0

The AEC Blueprint is expected to increase trade, cross-country investment, and skilled labor integration through trade liberalization and economic policies. An analysis of the impact of these changes on women's economic opportunities given existing gender inequalities in access to resources and asset ownership, found that existing gender inequities will remain unchanged in the absence of policy interventions.¹⁹ The AEC plan is expected to lead to higher total exports from the region, yet the relative female share of exports will decline in the future, due to "informalization, lower wages, higher labor force dropout, and external migration out of ASEAN."²⁰ While a significant number of new jobs will be created, the impact on the pattern of employment and wages for women will be small. The wage gender gap will stay the same while job gains will be higher for men than for women in both

¹⁸ World Economic Forum, 2017b, *The Global Gender Gap Report 2017*, World Economic Forum, 5.

¹⁹ Friedrich Ebert Stiftung, UN Women, and ASEAN 2016, 2.

²⁰ *Ibid.*, 71.

the semi-skilled and unskilled categories. The report concluded that without policies to address gender gaps, existing gender differentials in the share of exports, employment, and wages will remain the same under the AEC's current strategy.

Economic disparity is an important concern because it reduces the amount and quality of human resources available for economic activity and effects the productivity of countries and of ASEAN as a community. As such, it impacts the growth prospects for the region. Although all countries in ASEAN provide constitutional equality for men and women, this has not led to equality of outcomes for the sexes. There is still a gap in the level of schooling that boys and girls attain. In addition, women have persistently lower labor force participation rates than men, averaging 19 percent for the region.²¹ Women earn less than men on average for the same work. Additionally, occupational segregation often relegates women to lower skilled and lower paying jobs. The overall wage gap between men and women is estimated to be 20 percent.²² Women's choices in work are constrained by a lack of affordable quality child care in all ASEAN countries. The lack of safe and reliable transportation is a limiting factor for women to access work in some countries.²³

2.1 Economic Empowerment Across Different Groups of Women

Women's economic empowerment is directly linked to the opportunities and status of women's paid and unpaid work. Most women, and indeed most men, in Southeast Asia are employed informally (78 percent).²⁴ For jobs outside of agriculture, the rate is 67.4 percent of all jobs. In general, women are just slightly more likely than men to be working informally (78.4 percent versus 77.7 percent).²⁵ For example, women workers predominate in the agricultural, garment, and tourism sectors, which account for a large share of exports for many AMS. While many garment sector jobs are in factories, there are also many informal jobs in which women work from home under short-term contracts from subcontractors. The quality of women's work conditions is often poor. Even in the more developed economies of ASEAN, women are predominantly employed in labor-intensive and vulnerable jobs. Lower-skilled and informal jobs have limited opportunities for advancement or for skills training. Furthermore, informal workers are without social protection, income security, rights at work, or decent working conditions. Although harassment of women in the workplace occurs, this issue is not yet recognized in the region.²⁶ In the formal economy, including the private and government sectors, women are over-

21 Friedrich Ebert Stiftung, UN Women, and ASEAN 2016, 27.

22 Ibid., 71.

23 Interview with key informant, April 2018.

24 As defined by the ILO, this includes ASEAN countries (except for Malaysia, the Philippines, Singapore, and Thailand) and includes Timor-Leste.

25 "Employment in the informal sector is an enterprise-based concept and it is defined in terms of the characteristics of the place of work of the worker. By contrast, informal employment is a job-based concept and it is defined in terms of the employment relationship and protections associated with the job of the worker." (International Labor Organization, 2018a, Women and Men in the Informal Economy: A Statistical Picture, Third Edition, in Geneva: International Labor Organization, 7.)

26 Interview with Key Informant, April 2018.

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represented in lower level positions and under-represented at senior levels in most AMS.

Migrant women make up an important segment of women workers in ASEAN. Women are believed to comprise 48.7 percent of the 6.9 million intra-ASEAN migrants in 2015.²⁷ They account for a significant share of the workforce in ASEAN, making up more than 10 percent of the total workforce in Brunei Darussalam and from 2 to 4 percent in Thailand and Malaysia.²⁸ Actual numbers of women migrants in ASEAN are likely much higher as undocumented workers are not included in the official statistics. These three countries, along with Singapore, are destination countries for migrants, while the workers generally come from Cambodia, Indonesia, Lao PDR, Myanmar, the Philippines, and Viet Nam.²⁹ The “feminization of migration” is a clear trend in migration. In 2004, 81 percent of migrant workers leaving Indonesia were women.³⁰

Women migrant workers tend to be young and have low levels of education. They make significant contributions in the household, agriculture, manufacturing, and construction sectors in their host countries. Their work contributes to both the origin and destination countries, through remittances home and by increasing wages in the destination country.³¹ Women migrant workers are found in low skilled jobs earning low wages. In Brunei Darussalam and Malaysia, women migrants earned less than half that of all employed women. They also earned 30 to 50 percent less than migrant men.³² When migrant women work in high growth sectors, they are employed at the bottom of the occupational skill ladder. There is evidence that “ethnic stereotypes and gender norms” interact to trap migrant women into “general labor” job categories at the bottom rung of the job ladder with no upward mobility or job skill opportunities.³³ Migrant women workers have little access to social protection. Although migrants may be documented, they can easily slip into an undocumented status and end up working informally, in which case they are not covered by national employment regulations.³⁴ It is estimated that over one-third of all migrants in ASEAN are working informally.³⁵ The UN Women and Friedrich-Ebert-Stiftung report, *Women Migrant Workers in the ASEAN Economic Community* examines the situation of women migrant workers in ASEAN in detail and provides recommendations which would allow the ASEAN region to realize the full potential of women migrant workers’ productivity while enabling this segment of the women’s workforce to benefit from the opportunities arising from ASEAN integration. This

27 UN Women Regional Office for Asia and the Pacific (ROAP) and Friedrich Ebert Stiftung (FES), 2017, *Women Migrant Workers in the ASEAN Economic Community*, UN Women, 20.

28 Ibid., 21.

29 Ibid., 40.

30 Ibid., 102.

31 Ibid., 21 and 22.

32 Ibid., 21.

33 Ibid., 22.

34 Ibid., 25.

35 Ibid., 93.

paper will not examine the case of women migrant workers in the digital economy given this previous comprehensive study.

Many women who are informally employed are owners of micro or small enterprises. A large share of the MSMEs (micro, small, and medium enterprises) in the region are informal. The majority are very small in size with either zero or 1–5 employees. Women's businesses tend to be smaller than men's.³⁶ The informal status of their businesses confronts women entrepreneurs with several disadvantages, including low productivity. Additionally, these entrepreneurs are less likely to contribute to pension plans or other social insurance. There is a belief that women prefer entrepreneurship because it provides the flexibility needed to balance work and unpaid care responsibilities.

Women entrepreneurs face several challenges when starting and growing their businesses. They lack access to credit, technology, and other productive resources. They have limited access to business and skills training, as well as to information and markets. They also face expensive and difficult regulations and administrative requirements.³⁷ While women have generally high levels of participation in economic activities in ASEAN, they still retain responsibility for the care of their families. The resulting time poverty of women is an important factor in their economic outcomes. Women's unpaid care work can constrain their options for employment and income-earning activities. Women workers and entrepreneurs are also subject to sociocultural norms, pervasive stereotypes, and a lack of family support—all factors that hold them back economically. The presence and recognition of customary laws in some countries creates legal barriers to women's rights and economic participation. A lack of clarity concerning key labor laws puts women in relatively weaker positions in the labor market.

2.2 How the Digital Economy Will Change ASEAN

The AEC has embraced the digital economy and is working to leverage digital technology to enhance trade and investment, provide an e-based business platform, promote good governance, and facilitate green technology for the region. The vision is for “a digitally-enabled economy that is secure, sustainable and transformative which can promote and develop an innovative, inclusive, and integrated ASEAN.”³⁸ The ASEAN ICT Masterplan articulated the role of information and communications technologies (ICTs) (i.e., digital technology) in each element of this vision:

- **Digitally-enabled economy:** Programs for continual education and upgrading to equip ASEAN citizens with the latest infrastructure, technology, digital skill sets, information, applications, and services.
- **Secure:** A safe and trusted ICT environment in ASEAN, providing

36 United Nations ESCAP, 2017a, “Fostering Women's Entrepreneurship in ASEAN: Transforming Prospects, Transforming Societies,” New York: United Nations, 24–25.

37 United Nations ESCAP 2017a, 11.

38 TRPC Pte Ltd 2015, 9.

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reassurance in the online environment by building trust in online transactions via a robust infrastructure;

- Sustainable: Responsible and environmentally friendly use of ICT;
- Transformative: A progressive environment for the disruptive use of technology for ASEAN's social and economic benefits;
- Innovative: A supportive entrepreneurial environment that encourages innovative and novel uses of ICT; and
- Inclusive and integrated: Empowered and connected citizens and stakeholders.³⁹

Embracing the digital economy entails an economy-wide transformation that will impact all sectors. Digital technology provides many benefits. It is estimated to boost GDP across ASEAN by: increasing broadband penetration; raising worker productivity; and creating new digital industries (e.g., e-commerce).⁴⁰ In addition to boosting productivity, the digital economy achieves efficiency gains while allowing global reach. It facilitates faster, easier, and cheaper trade within ASEAN and with external partners. It enables individual and small businesses to reach markets anywhere in the world. Digital trade is bringing previously unconnected MSMEs to regional marketplaces for cross-border retail trade and is linking them to global value chains. Digital finance has the potential to extend financial services to the unbanked, underbanked, and MSMEs. Digital technologies are expected to support smart cities to address the challenge of rapid urbanization in ASEAN.

Two recent studies that have looked at how ASEAN will change as it transitions to the digital economy found reasons for optimism as well as caution. While new technologies drive higher productivity and are the foundation for better paying jobs and economic growth, automation could cause widespread job loss, particularly in certain sectors and certain types of jobs. Improvements in technology used by global value chains (GVCs) have been accompanied by lower employment levels across all sectors (agriculture, manufacturing, and services), except in the Philippines and Viet Nam.⁴¹ (See the section in Chapter 6 on retraining and reskilling women workers for more on how the development of the digital economy in ASEAN is expected to impact jobs for women.)

The changing economy will have differential effects depending on how women engage with the economy. Below we briefly introduce the benefits and challenges that the digital economy poses for: women entrepreneurs using digital technologies; women entrepreneurs leading digital technology firms; and women working within the context of the digital economy. This paper goes into more detail on each profile in the chapters that follow.

³⁹ Ibid., 9.

⁴⁰ A.T. Kearny 2015, 12.

⁴¹ Asian Development Bank, 2018, Asian Development Outlook (ADO) 2018: How Technology Affects Jobs, Manila: Asian Development Bank, 74.

2.3 Challenges for Women Owners of Micro and Small Enterprises

The AEC is putting great emphasis on the development of MSMEs to generate employment and economic growth in the AMS. The use of digital and ICT technologies can allow women entrepreneurs to: reach out to customers; communicate better with others in their value chain; and access government e-services, information, and online trainings. ICT is now a necessary tool for running a business. The digital economy has also created demand for services related to information technology (IT), the internet, mobile phones, and digital finance. In addition, it has created an opening for technology-based start-ups.

E-commerce provides new opportunities and many potential benefits for women entrepreneurs. Yet, women who wish to start up an e-business encounter many hurdles. Misconceptions about the nature of e-commerce keep some entrepreneurs, including women, from entering this type of business (see Chapter 4 for more details).

To take advantage of the benefits that are possible with digital technology and to engage in e-commerce, women entrepreneurs need effective access to technology. For micro and small entrepreneurs, this begins with mobile phones, but it also requires the infrastructure for effective use of the phones, including reliable network coverage and electricity.

Women face several barriers to the uptake and use of ICTs such as mobile phones and the internet. These include the capacity to afford handsets and data plans, the ability to use the technology (which is in some cases hindered by difficulties in reading and writing), and the perception that these technologies are not relevant to their lives. Concerns about safety and security, both offline and online, also prevent some women from using mobile phones or the internet.

In addition to the barriers to women's uptake of ICTs, women entrepreneurs who want to engage in e-commerce face external challenges to conducting business online. E-commerce activity is curbed to some extent by the lack of digital payment systems that would allow seamless payments, limited logistics infrastructure for delivering goods to customers, and a lack of demand due to customers being unfamiliar with or lacking trust in e-commerce to varying degrees. Where digital payment services exist, women may have difficulty accessing existing digital financial services due to a lack of official identification which is required for KYC (know your customer) purposes.

A global survey of e-commerce entrepreneurs for example, found that cash on delivery was a more important payment method for women than for men (13 percent versus 9 percent). Cash on delivery was the prominent method in developing countries, with 20 percent relying on this method for their transactions. The main reason is the lack of access to e-payment solutions. Lack of trust in e-payments may limit uptake for both consumers and businesses. Cash on delivery reliance reduces

the ability to do cross-border sales. Customers may also lack online payment abilities (cards, etc.).

2.4 Challenges for Women Entrepreneurs Leading Digital Technology Firms

The AEC emphasis on the development of MSMEs is also expected to enable ASEAN to become more globally competitive, innovative, inclusive, and resilient. Women entrepreneurs who aspire to start up and grow tech firms have the potential to create significant value and contribute to the achievement of the AEC vision. Very few entrepreneurs in any country are growth-oriented. Estimates are that only 3 to 10 percent of all entrepreneurs actually grow their business. Women-owned businesses rarely grow from micro to small or medium-sized companies.⁴² Yet, promotion of women-owned, growth-oriented enterprises is important as these firms are more likely to create jobs.⁴³

In addition to the many challenges facing typical women-owned MSMEs, growth-oriented entrepreneurs are hampered by the fact that almost all interventions to promote women-owned businesses are focused on low-income or poor women with micro businesses. Few entrepreneurship development programs work with women who have higher human and social capital.⁴⁴ Growth-oriented entrepreneurs also need other types of support. For one, growth-oriented business women are less likely to benefit from traditional classroom-based business trainings. They need programs tailored to the type and stage of their business and which can provide the information and skills needed to support business growth.

Business incubators and accelerator programs increasingly emphasize growing tech-oriented businesses. Women's organizations in ASEAN have recently set up women's business incubators and accelerators, but these are limited and small, resulting in only a few women-owned start-ups gaining access to them. Women tend also to be under-represented in the larger, government-supported accelerator programs.

A study by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) found that technology-focused firms in ASEAN face barriers related to "poor protection and promotion of intellectual property rights; lack of broadband infrastructure; underdeveloped science/industrial parks and competitive cluster arrangements; and insufficient financial incentives for technology development and research and development."⁴⁵ Additionally, at the policy level, the study found that there is a "lack of strategic innovation policies for SMEs; poor innovation support

42 World Bank, 2014, *Growing Women-Led Enterprises in the Mekong: Testing a Methodology for Accelerating Growth*, Washington, D.C.: World Bank, 2.

43 Xavier Cirera and Qursum Qasim, 2014, "Supporting Growth-Oriented Women Entrepreneurs: A Review of the Evidence and Key Challenges," *Innovation, Technology & Entrepreneurship Policy Note*, Washington, D.C.: World Bank., 9.

44 OECD and ACCMSME 2017, 137.

45 United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) 2017a, 42.

services; a lack of technology support in universities, research and development labs and incubators; and weak linkages between these and SMEs.”⁴⁶ From the policy side, promoting women-owned tech businesses in ASEAN may be challenging. ASEAN entrepreneurs in a survey by the Global Entrepreneurship Monitor were found to have fairly low levels of capacity for innovation.⁴⁷

2.5 Challenges for Women Workers in the Digital Economy

The impact of technology and ICTs will fall disproportionately on employed women as they are in sectors and occupations that are at high risk of displacement from automation. The ILO reports that women in the Philippines and Viet Nam are twice as likely to be in an occupation that is at high-risk of displacement as their male counterparts. In Indonesia and Thailand, women's jobs are 1.5 times as likely as men's jobs to be at high-risk of displacement.⁴⁸ The groups that will be left behind as the economy transitions will be those with weaker basic skills, older workers, the poor, those in rural areas, and women.⁴⁹

New jobs will require skills and education that many workers do not have. To successfully navigate this changing environment, women workers will need skills development and retraining, as well as social protection to provide a safety net in case of unemployment. It is most likely that displaced workers who have low skills and low levels of education will join the informal sector and pursue entrepreneurship or less secure and less remunerative jobs. In five of the ASEAN countries, vulnerable jobs⁵⁰ are estimated to make up one-half of the projected new jobs under the AEC Blueprint.⁵¹

At the same time that more traditional jobs are disappearing due to automation, there is an increased demand for jobs that require ICT skills. However, women in general will not be able to fill these jobs. Several factors hold back women who wish to pursue careers or businesses which require significant ICT or digital technology skills. These include lack of educational preparation for an ICT career, a lack of digital literacy, and barriers to entry and advancement in the ICT industry.⁵² Social and cultural norms and stereotypes affect women's access to both education and

46 Ibid., 42.

47 Ibid., 27.

48 Jae-Hee Chang, Gary Rynhart, and Phu Huynh, 2016, ASEAN in Transformation: How Technology Is Changing Jobs and Enterprises, Geneva: International Labor Organization, Bureau for Employers' Activities, 82.

49 United Nations ESCAP and UN Women, n.d., Women's Economic Empowerment in the Changing World of Work: An Overview for Asia and the Pacific, UN Women, 7.

50 Vulnerable employment is defined by the ILO as “the sum of own-account workers and contributing family workers. They are less likely to have formal work arrangements, and are therefore more likely to lack decent working conditions, adequate social security and ‘voice’ through effective representation by trade unions and similar organizations.” These jobs are characterized by inadequate earnings, low productivity, and difficult work conditions. (“Vulnerable Employment And Poverty On The Rise, Interview With ILO Chief Of Employment Trends Unit,” ILO, January 26, 2010, http://www.ilo.org/global/about-the-ilo/newsroom/features/WCMS_120470/lang--en/index.htm.)

51 United Nations 2017, 17.

52 Catherine Powell and Ann Mei Chang. 2016. Women in Tech as a Driver for Growth in Emerging Economies. New York: Council on Foreign Relations, 3.

ICT careers. Role models and mentors who could inspire and support women in their studies and careers are lacking. Companies, which could provide flexible working arrangements to accommodate women's schedules, are not doing so. The digital economy also demands increasingly advanced technical abilities that require workers to continually upgrade their skills. Women face disadvantages when it comes to training and skills upgrading due to a bias toward investing in men's education before women's.

The actual situation of women in the ASEAN nations and the magnitude of the challenges facing them are not entirely known. In consultations with key informants, the limitations due to a lack of sex-disaggregated data for a number of variables were raised several times. As one key informant put it, the lack of data makes it difficult to have a targeted policy or program. The analysis of the literature revealed that it was difficult to find complete datasets across all AMS, for particular indicators. This report provides data and statistics to the extent that they were identified and it raises the need for sex-disaggregated data on a number of issues, as a priority for ASEAN.

2.6 Summary

Women in the ASEAN region face a range of barriers to their economic activities, whether they are formal sector workers, owners of small and medium enterprises, or micro entrepreneurs in the informal sector. With the rise of the digital economy, women have new opportunities at work and in business, but with these new opportunities come additional challenges. Women who are already in the workforce need access to training and reskilling to prepare for new jobs. Digital technology is creating new opportunities for accessing finance through new channels and from new sources, but women face several barriers to acquiring the financial services they need. Additionally, as financial services are increasingly made available through ICTs, women will need valid forms of identification to access these. An eKYC-compliant means of identification would allow women to not only access financial services but also a host of online government services including cash transfers. (eKYC is the acronym for paperless know-your-customer [KYC] process.) Women entrepreneurs will continue to need traditional business development support, including access to markets and networks, and an enabling environment to help their businesses thrive. These services, however, need to be better tailored to women entrepreneurs' needs and circumstances. They will also need to use digital technologies to remain competitive, whether they are in e-commerce or a traditional business. Women who seek to establish tech start-ups will require tailored support, access to tech incubators and accelerators, as well as more supportive government policies. All women will need digital literacy to engage with the digital economy. This is particularly salient as cyber safety and privacy are becoming increasingly important.

3 PROMOTION OF WEE THROUGH THE AEC CSAP

In order to more effectively implement the AEC Blueprint 2025, ASEAN developed the AEC Blueprint Consolidated Strategic Action Plan. The AEC CSAP is organized along the lines of the ASEAN AEC Blueprint 2015. There are five characteristics that are targeted for strengthening or reinforcing during the 2016–2025 strategic period:

1. A Highly Integrated and Cohesive Economy;
2. A Competitive, Innovative, and Dynamic ASEAN;
3. Enhanced Connectivity and Sectoral Cooperation;
4. A Resilient, Inclusive and People-Oriented, People-Centred ASEAN; and
5. A Global ASEAN.

Each Characteristic has an Objective with several elements. Each Element has its own sub-Objective which has several Strategic Measures that are intended to achieve the sub-Objective. The Strategic Measures are to be operationalized by key Action Lines undertaken by relevant ASEAN sectoral bodies through their corresponding sectoral workplans. Each Action Line also has a timeline during which the action is expected to be taken.⁵³

In order to effectively integrate WEE into the implementation of the AEC Blueprint, this paper focuses on identifying actions that can be taken to shape specific CSAP strategic measures and actions lines to better address the needs of women in the roles identified in the previous chapter. To do this, the full CSAP was reviewed to identify action lines that could promote WEE given the barriers to the equal and equitable participation of women in the digital economy. After an iterative process, a short list of action lines was selected that have the potential to address three types of challenges for women. Pursuing solutions to these challenges through action line activities will go far to promote WEE through the AEC. These three solution areas are:

- Development and growth of women-owned MSMEs;
- Financial inclusion of women, including digital financial inclusion; and
- Training and reskilling women workers.

The selected action lines are presented below, organized by solution. In addition to these solutions, desk research and interviews with key informants surfaced opportunities to strengthen the capacity of the AEC to mainstream WEE, as well as cross-cutting solutions that relate to multiple action lines. These solutions are presented in Chapter 7. The complete list of the selected CSAP action lines are presented in Appendix B, in the order they appear in the CSAP.

53 ASEAN AEC CSAP, I.

3.1 Development and Growth of Women-owned MSMEs

The importance of the development of MSMEs for ASEAN is evidenced by the element of the AEC Blueprint (Blueprint) dedicated to “Strengthening the Role of MSMEs.” In addition to the dozens of action lines included under this element, there are several action lines addressing aspects of MSME development within other elements of the Blueprint. For example, the C2 Information and Communication Technology (ICT) element contains the action line, “Develop an ecosystem conducive to support start-ups and strengthen enterprises.”

Table 3.1: CSAP Strategic Measures and Action Lines Related to MSMEs

STRATEGIC MEASURE NO.	ACTION LINE	SECTORAL WORK PLAN and /or RESPONSIBLE SECTORAL BODY
Characteristic 2: A Competitive, Innovative, and Dynamic ASEAN		
<i>B4. Productivity-Driven Growth, Innovation, Research and Development and Technology Commercialisation</i>		
43	Intensify the engagement of academia, private sector and relevant partners in the planning, implementation and assessment of joint undertakings in human resource development, and research and development	ASEAN Plan of Action on Science Technology and Innovation 2016-2025; Committee on Science and Technology (COST)
Characteristic 3: An Enhanced Connectivity and Sectoral Cooperation		
<i>C2. Information and Communication Technology (ICT)</i>		
79	Promote digital trade in ASEAN	ASEAN ICT Masterplan 2020 (ICT); ASEAN Telecommunications and IT Ministers Meeting (TELMIN)
80	Develop best practices for next generation telecentres	
81	Develop an ecosystem conducive to support start-ups and strengthen enterprises	
82	Reduce development disparities in access and affordability to broadband access and improving ICT interoperability	
85	Develop best practices guide for local content development and support	
	Develop best practices for e-Service Delivery Develop and foster cyber wellness through guidelines, education and outreach programmes	
<i>C3. E-Commerce</i>		
87	Integrate e-commerce considerations into the ASEAN High-level Consumer Protection Principles	Draft ASEAN Work Programme on E-Commerce involves: ICT, Consumer Protection, Financial Integration, and Trade Facilitation]
<i>C9. Science and Technology</i>		
121	Establish support mechanism such as mentorship and incentive program to support and nurture science, technology, and innovation (STI) enterprises from start-up to the next competitive level of development	ASEAN Ministerial Meeting on Science and Technology (AMMST)
123	Engage dialogue and other strategic partners in joint undertakings on appropriate and commercially viable STI initiatives	
Characteristic 4: Resilient, Inclusive and People-Oriented, People-Centered ASEAN		
<i>D1. Strengthening the Role of MSMEs</i>		
126	Creation of interactive on-line platform on a range of financial support available to MSMEs to minimize information gap (ASEAN SME Service Centre)	ASEAN Coordinating Committee on MSME (ACCMSME); IAI Task Force (IAI = Initiative for ASEAN Integration)
127	Establishment and promotion of “Digital Service Hub” that will enhance trade supply chain and also improve the competitiveness of ASEAN SMEs in a low-cost manner	In consultation with Finance’s Working Committee on Financial Inclusion (WC-FINC)
	Promote the development and utilisation of e-commerce platforms to encourage expansion of SMEs	

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The Organization for Economic Co-operation and Development (OECD) and ASEAN Coordination Committee on MSMEs (ACCMSME) provided a comprehensive report, *Strengthening Women's Entrepreneurship in ASEAN*, which presented a detailed discussion of the barriers facing women entrepreneurs in ASEAN.⁵⁴ It concluded with an extensive list of program and policy recommendations for both ASEAN and AMS.⁵⁵ (These recommendations are presented in Appendix C.) The OECD recommendations were mapped out against the AEC action lines that address MSME development or engage MSMEs. (These results are presented in Appendix D.) Action lines that are not addressed by OECD recommendations or those which affect women MSME owners in the context of the digital economy were selected for this analysis and are presented in Table 3.1 above.

3.2 Financial Inclusion

The CSAP items that were selected relating to financial inclusion include action lines that directly address financial inclusion and access to finance, as well as action lines related to addressing the digital divide, a prerequisite for accessing digital finance. Additionally, action lines related to financial literacy were selected as financial literacy is a prerequisite for effective and appropriate use of financial services. These action lines fall under the strategic measures: A4 Financial Integration, Financial Inclusion and Financial Stability; C2 Information and Communication Technology (ICT); D1 Strengthening the Role of MSMEs; and D4 Narrowing the Development Gap. (See Table 3.2 for the complete list.)

Table 3.2: CSAP Strategic Measures and Action Lines Related to Financial Inclusion

STRATEGIC MEASURE NO.	ACTION LINE	RESPONSIBLE SECTORAL BODY
Characteristic 1: A Highly Integrated and Cohesive Economy		
<i>A4. Financial Integration, Financial Inclusion, and Financial Stability</i>		
15	Implement a public awareness campaign for insurance <ul style="list-style-type: none"> - [Financially] underserved to understand importance of insurance - Insurance companies to create products for underserved 	Committees/Working Groups under the ASEAN Finance Ministers' and Central Bank Governors' Meeting (AFMGM)
	Formulate financial inclusion strategy and implementation plan (Includes issuance of guidance note on SME financing, among others)	
	Promote innovative financial inclusion via digital platforms	
	Elevate capacity building of ASEAN member states to enhance financial inclusion ecosystem.	
Characteristic 3: An Enhanced Connectivity and Sectoral Cooperation		
<i>C2. Information and Communication Technology (ICT)</i>		
82	Reduce development disparities in access and affordability to broadband access and improving ICT interoperability	ASEAN ICT Masterplan 2020; ASEAN Telecommunications and IT Ministers Meeting (TELMIN)
Characteristic 4: Resilient, Inclusive and People-Oriented, People-Centered ASEAN		
<i>D1. Strengthening the Role of MSMEs</i>		
126	Facilitate AMS to develop credit rating system	

54 This study was funded by the Government of Canada under the Canada-OECD Project for ASEAN SMEs (COPAS).

55 OECD and ASEAN Coordinating Committee for Micro, Small and Medium Enterprises, 2017.

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	Creation of interactive on-line platform on a range of financial support available to MSMEs to minimize information gap (ASEAN SME Service Centre)	ASEAN Coordinating Committee on MSME (ACCMSME); IAI Task Force In consultation with Finance's Working Committee on Financial Inclusion (WC-FINC)
<i>D4. Narrowing the Development Gap</i>		
141	Support access to finance for MSMEs by, inter alia, establishing and strengthening credit bureaus, and further developing credit guarantee systems	IAI Task Force; ACCMSME

3.3 Training and Reskilling Women Workers

There are few action lines which address the need to train and reskill workers. Below is a list of four action lines which provide opportunities to promote the economic empowerment of women workers (Table 3.3). These are focused on building the capacity of workers and awareness raising for industry and policymakers. Retraining women and providing them with new technology-related skills is an area of WEE that requires more attention by the AEC.

Table 3.3: CSAP Strategic Measures and Action Lines Related to Women Workers

STRATEGIC MEASURE NO.	ACTION LINE	RESPONSIBLE SECTORAL BODY
Characteristic 2: A Competitive, Innovative, and Dynamic ASEAN		
<i>B4. Productivity-Driven Growth, Innovation, Research and Development and Technology Commercialisation</i>		
43	Intensify the engagement of academia, private sector and relevant partners in the planning, implementation and assessment of joint undertakings in human resource development, and research and development	Committee on Science and Technology (COST)
<i>B9. Global Megatrends and Emerging Trade-Related Issues</i>		
73	Promote dialogue and induce awareness on Global Megatrends and Emerging Trade Related Issues in ASEAN	Senior Economic Officials Meeting (SEOM)
Characteristic 3: An Enhanced Connectivity and Sectoral Cooperation		
<i>C2. Information and Communication Technology (ICT)</i>		
83	Continue ongoing efforts to narrow the gaps between demand and supply in ICT human resource	ASEAN ICT Masterplan 2020; ASEAN Telecommunications and IT Ministers Meeting (TELMIN)

The next three chapters examine the challenges and potential remedies for WEE which can be applied through the selected action lines discussed above. The chapters are organized by the three solution areas: the development and growth of women-owned MSMEs; the financial inclusion of women; and the training and reskilling of women workers. Each chapter examines these challenges in more detail and provides policy guidance for promoting WEE through specific action lines. Also, where available, best practice examples and references to useful resources are provided.

4 DEVELOPMENT OF WOMEN-OWNED MSMEs IN THE DIGITAL ECONOMY

The development of MSMEs to generate employment and economic growth in AMS is a strong focus of the AEC Blueprint. This emphasis reflects the dominance of MSMEs in the ASEAN economy and their importance in terms of poverty reduction. MSMEs provide from 51.7 percent to 97.2 percent of all employment in ASEAN Member States, consist of between 88.8 percent and 99.9 percent of all establishments, produce 30 percent to 53 percent of gross domestic product (GDP), and contribute between 19 percent and 31 percent of exports.⁵⁶ Female ownership of firms is believed to be relatively high in ASEAN, with an estimated 61.3 million women entrepreneurs across the region. For example, the share of firms that have a woman owner or co-owner was estimated to be 69 percent in the Philippines, 59 percent in Viet Nam, and 43 percent in Indonesia in 2015.⁵⁷

4.1 Benefits of ICTs and Digital Technology for Women Entrepreneurs

The digital economy provides several benefits and opportunities for women entrepreneurs. The use of digital and ICT technologies can allow women entrepreneurs to reach out to customers; communicate better with others in their value chain; and access government e-services, information, and online business trainings. Digital technology also gives entrepreneurs new ways to promote their business, including reaching international audiences, and to develop new marketing channels. They can provide new opportunities for women in rural areas and women who stay at home. ICTs are now a necessary tool for running a business. MSMEs owners can achieve lower transaction costs, improve efficiency and outreach, and earn higher profits by using new technologies. Evidence from Europe found significant productivity gains for businesses using ICTs, with the effects being larger for small enterprises.⁵⁸ Other research has found a correlation between the growth of women-owned microenterprises and ICT use.⁵⁹

Technology can also help women overcome some of the challenges they face as entrepreneurs. For example, mobile money can enable women to more easily access financial services. Mobile phones and the internet can assist women who have less mobility due to household responsibilities. The growth of mobile broadband, smartphone ownership, and social media activity is driving the growth of e-commerce in the ASEAN region. Internet uptake now averages 40 percent across

56 "Towards Inclusive and Sustainable Growth in the ASEAN Economic Community" 2017, 22.

57 United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) 2017a, 11.

58 United Nations Conference on Trade and Development (UNCTAD), 2015, Information Economy Report 2015: Unlocking the Potential of E-Commerce for Developing Countries, Overview, Switzerland: UNCTAD, 2.

59 Ilavarasan and Levy 2010, quoted in OECD and ASEAN Coordinating Committee for Micro, Small and Medium Enterprises 2017, 161.

the region.⁶⁰ Women can engage in e-commerce from their homes through social media. Access to government services through the internet can save women time.

Technology itself has created business opportunities. This includes the demand for mobile information agents, mobile phone sales and technical support, mobile money agents, women-friendly IT service provision, and women-friendly IT tutoring and training. Technology has enabled other businesses, such as outsourcing of IT services and freelance microwork. Microwork, supported through online platforms, enables individual entrepreneurs to find work with clients based around the world.⁶¹ The digital economy has also created an opening for technology-based start-ups.

E-commerce represents a potentially huge opportunity for women MSME owners. It is growing rapidly in ASEAN, providing MSMEs with access to new opportunities and new markets. Micro and small business could become “micro-multinationals” through digital platforms that connect them to outside markets.⁶² Globally, cross-border e-commerce in 2016 accounted for 12 percent of global goods traded. It is expected to grow at twice the rate of domestic e-commerce.⁶³ Global e-commerce, domestic and cross-border, totaled \$25.3 trillion in 2015.⁶⁴

A survey of e-commerce providers, conducted by the International Trade Center (ITC), found that in developing countries, these firms are mainly micro and small enterprises. Forty-one percent were micro, with 5 or fewer employees, and 31 percent were small, with 6 to 20 employees. The study also found that a very high proportion of respondents that were only involved in cross-border e-trade were micro or small in size.⁶⁵ Of the survey respondents who had not engaged in e-commerce yet, women-owned or led firms were 1.5 times more likely than male-led firms to have considered doing e-commerce.⁶⁶ Anecdotal evidence from consultations with ASEAN stakeholders throughout the region suggest that currently women prefer to conduct business through social media such as Facebook, WhatsApp, and Instagram rather than an internet platform, such as Alibaba, limiting their ability to engage in cross-border trade.

4.2 Challenges to Women Using Digital Technologies as Entrepreneurs

To take advantage of the new possibilities and to engage in e-commerce, women entrepreneurs need effective access to technology. For micro and small

60 Sophia Hasnain and Francesco Pasti, 2017, *Mobile Money and E-Commerce: Three Areas of Partnership in Southeast Asia*, GSMA, 5.

61 Fredriksson, Torbjorn, Marie Sicat, and Thao Nguyen, 2014, *Empowering Women Entrepreneurs through Information and Communications Technologies*, No. 9. UNCTAD Current Studies on Science, Technology and Innovation, New York: United Nations, 24.

62 Asian Development Bank 2018, 86.

63 International Trade Centre (ITC), 2017, *New Pathways to E-Commerce: A Global MSME Competitiveness Survey*, International Trade Centre, viii.

64 *Ibid.*, 1.

65 *Ibid.*, 4.

66 *Ibid.*, 4.

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entrepreneurs, this begins with mobile phones, but it also requires the infrastructure necessary to be able to use phones effectively, network coverage, and reliable electricity. Limited resources, lower levels of literacy and digital literacy, and social norms have limited women's access to mobile phones on a global basis.

Gender disaggregated and consistent data on the actual uptake and use of mobile phones or the internet are difficult to find for the ASEAN countries. With the dynamic growth in the uptake of mobile phones, and particularly smart phones, up-to-date data is critical to understanding the status of women's ownership and use of these technologies. The data that is available does not distinguish between entrepreneurs and other groups. Evidence on the barriers to women's uptake and use of mobile phones and the internet in AMS is also limited. (See Chapter 7 for more on the need for gender-disaggregated data.)

Table 4.1: Connectivity Status by Country, 2016

	Have mobile phone and internet access	Have mobile phone but no internet access	Do not have mobile phone but have internet access	Do not have mobile phone or internet access
	Percent of Respondents			
Cambodia	26	51	1	22
Indonesia	30	44	0	25
Myanmar	35	38	1	27
Philippines	50	31	2	17
Singapore	85	9	2	5
Thailand	46	46	2	6
Viet Nam	40	35	5	20

Source: Crabtree, Diego-Rossel, and Buckels, 2018, *The Impact of Mobile on People's Happiness and Well-Being: Technical Report*, 55.

Note: statistics are based on a world poll conducted by Gallup.

Women's access to mobile phones: Table 4.1 above presents data on access to mobile phones and internet for survey respondents in seven AMS in 2016. Access to a mobile phone was relatively high, ranging from 73 percent to 94 percent of respondents. The average gender gap in mobile phones ownership was 2 percent in the East Asia and Pacific region, but varies widely across the region, according to a separate survey.⁶⁷ This is not a large difference and it is unclear how closely these results reflect the situation in ASEAN. Globally, the gap between men and women's use of mobile phones is wider than that for mobile phone ownership.

Women in Indonesia, Myanmar, and the Philippines have reported that affordability, usability and skills, and relevance are the top three reasons for not owning a mobile phone. In these countries, women were more likely than men to report that not knowing how to use a mobile phone or that reading and writing difficulties are barriers to owning a phone.⁶⁸ The reasons for women's lower usage of mobile

⁶⁷ Oliver Rowntree, 2018, *The Mobile Gender Gap Report 2018*, London: GSMA, 9.

⁶⁸ *Ibid.*, 19.

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phones are unclear. They may well be related to affordability, not knowing how to use a mobile phone that well and/or reading and writing difficulties.

Women's access to the internet: Data for seven of the ASEAN countries demonstrate that mobile internet use varies considerably across the region (see Table 4.1 above). Access to a phone and to the internet ranges from 26 percent to 85 percent of survey respondents. The total share of respondents with access to the internet ranged from 27 percent in Cambodia to 87 percent in Singapore. Five percent to 27 percent of respondents are totally excluded from having a phone and access to the internet. The level of exclusion is roughly related to the stage of development of the country.

As a mobile first region, most women entrepreneurs will need an internet-enabled mobile phone (a smart phone) to engage in e-commerce. Data from the GSMA, a global association of mobile network operators, demonstrate that mobile internet use varies considerably across ASEAN. The gender gap in mobile internet use is 4 percent in the East Asia and Pacific region, which is small compared to the global average of 26 percent.⁶⁹

Data from Myanmar and the Philippines show that the top reasons women mention for not accessing the internet from their mobile phones are affordability and perceived relevance. Lack of know-how and inaccessibility, including lack of network coverage, were other important barriers.⁷⁰ In addition to the barriers to women's uptake of mobile internet, women entrepreneurs face external challenges to conducting business online. Lack of digital payment systems that would allow seamless payments, limited logistic infrastructure for delivering goods to customers, and lack of customer familiarity and trust constrain e-commerce to varying degrees.

Barriers to participating in e-commerce: Aside from barriers to the uptake of mobile internet, women owners of MSMEs who engage in e-commerce face more barriers than men, particularly when scaling up their e-business. Women entrepreneurs engaged in cross-border e-commerce export to fewer markets than men (nine versus fifteen).⁷¹ Misconceptions about e-commerce prevent some entrepreneurs from participating. These misconceptions include the beliefs that: e-commerce is only for goods, not for services; it is only for B2C (business-to-consumer), not B2B (business-to-business) models; it entails mass production; and there are more counterfeits online (that is, entrepreneurs fear having their unique designs copied).

The barriers that entrepreneurs face when setting up or operating an e-business include the following, among others: lack of technical skills (specifically related to setting up and maintaining an online presence and other skills specific to e-commerce) and business knowledge; difficulty in registering or complying with

69 Ibid., 11.

70 Ibid., 22.

71 ITC 2017, viii.

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platform requirements; lack of digital payment systems that would allow for seamless payments; and limited logistics infrastructure. Entrepreneurs in e-commerce also face lower demand due to lack of customer familiarity and lower levels of consumer trust in e-commerce.

Affordability: The costs of connectivity and handset devices pose relatively higher barriers to internet access for women than men because women have relatively lower incomes and less financial independence. Women who can only access the internet through public access facilities or telecenters face even more challenges. Other factors that restrict women's access to ICTs include limited operating hours, distant location, personal safety when traveling, and public telecenters in which women feel unwelcome or uncomfortable in the center.⁷²

In countries where public telecenters are the only places with internet access, women's access to ICTs may be restricted by the existence of an environment which is not women-friendly or gender-sensitive, or in which women are subject to harassment; their access may also be limited social norms that see women's use of such centers or engagement in such activities as inappropriate.

Digital literacy/usability and skills: Low levels of digital literacy can hinder women from benefiting from mobile phones and the internet. With lower levels of literacy and overall education than men, women often have lower levels of digital literacy. Importantly, they tend to have lower levels of confidence in their technical abilities.

Weak digital literacy leads to other challenges. Without access to the internet, women cannot access online information or trainings that would enable them to build their technical capabilities. Additionally, they cannot effectively access online government e-services or government procurement sites, thus precluding them from opportunities.⁷³ Lower confidence levels may lead women to be reluctant to use the internet, or may lead them to use only a few trusted sites, due to fears about cyber safety or loss of privacy. At the same time, those women who do go online but lack digital skills can be at risk for these same reasons. The lack of digital literacy will prevent women in ASEAN from fully participating in the digital economy and poses several risks to their online well-being.

Relevance including availability of local content: Women are more likely than men to believe that mobile phones and the internet are not relevant for them (see Appendix G).⁷⁴ Other studies have found that the lack of relevant content is second only to infrastructure as the most important barrier to the adoption of mobile internet.⁷⁵ The lack of content in the local languages contributes to the lack of overall

72 Broadband Commission Working Group on the Digital Gender Divide, 2017a, Recommendations for Action: Bridging the Gender Gap in Internet and Broadband Access and Use, Paris: UNESCO and GSMA, 29.

73 OECD and ACCMSME 2017, 156.

74 Analysis of data in S. Crabtree, P. Diego-Rossel, and G. Buckels, 2018, The Impact of Mobile on People's Happiness and Well-Being: Technical Report, GSMA and Gallup, <https://www.gsma.com/mobilefordevelopment/country/global/impact-mobile-peoples-happiness-well-being/>, 18, 22.

75 GSMA, 2018, The Mobile Economy 2018, London: GSMA. 38

relevance.⁷⁶ Online products and services are often developed and designed without taking into consideration women's needs, preferences or capabilities.⁷⁷

Threats to access and use of mobile phones and the internet: Safety and security when using mobile devices or the internet was ranked lower as a barrier to accessing mobile phones or the internet. However, for the most part, women were more concerned than men about safety and security when accessing these technologies.

GSMA research has revealed a “paradoxical relationship” between mobile phones and women's perceptions of safety. This research found that “68 to 94 percent of female respondents in 11 low- and middle-income countries reported feeling safer with a mobile phone or that they would feel safer if they owned one.”⁷⁸ Yet studies consistently show that safety concerns are an important barrier to women's ownership of mobile phones.

Research that has looked more closely at safety and security issues found several aspects to this concern. Women fear being vulnerable to theft and physical violence related to having a mobile phone. They are also concerned about receiving harassing and unwanted texts or phone calls. Online, women fear “intimidation, harassment, violence, surveillance and/or illegal data retention.”⁷⁹ Women who are active online and experience problems find it difficult to report online abuse.⁸⁰

Women who engage in e-commerce face real threats when using the internet. In addition to the danger of fraud, women entrepreneurs who sell goods on a COD (cash on delivery) basis are known to provide their bank account information to buyers, over the phone, putting themselves at risk.

Quality of business development support services: Business development support (BDS) services comprise a wide range of nonfinancial services designed to strengthen the capacity of small enterprises to enter and survive, increase productivity, grow, and compete in the market. This includes: training, advisory services, marketing assistance, information, technology development and transfer, mentoring, and business linkage promotion. The OECD report *Strengthening Women's Entrepreneurship in ASEAN* addressed the need for more gender-responsive BDS services for women. That report pointed to examples of BDS programs that incorporated trainings on ICTs, but it did not directly review the relationship between BDS and ICT.

Mainstream BDS does not adequately take into consideration the multitude of constraints facing women entrepreneurs. As a result, the uptake of BDS by women

76 GSMA, 2017b, *The Mobile Economy: Asia Pacific 2017*. London: GSMA, 40.

77 Broadband Commission Working Group on the Digital Gender Divide, 2017a, *Recommendations for Action: Bridging the Gender Gap in Internet and Broadband Access and Use*. Paris: UNESCO and GSMA, 39.

78 Helen Croxson and Oliver Rowntree, 2017, *Triggering Mobile Internet Use Among Men and Women in South Asia*, London: GSMA, 6.

79 Broadband Commission Working Group on the Digital Gender Divide 2017a, 32.

80 *Ibid.*, 33.

entrepreneurs has been rather low. Gender-sensitive BDS services would take into account the specific needs of women entrepreneurs and provide services without any gender bias. ICTs can be combined with BDS in two ways. First, making use of ICTs could increase women entrepreneurs' participation by enabling more flexible services that meet their needs. Examples include trainings and services delivered via mobile phones or online, and text alerts about upcoming trainings. In the same vein, ICTs can complement or substitute for classroom trainings; mentoring and coaching can be delivered by Skype. Second, training on the effective use of ICTs can be tailored to women's specific needs and delivered alongside business trainings. BDS trainings for women, including ICT trainings, should be designed taking into consideration restrictions on women's mobility and time availability. ICTs offer the potential to provide BDS services on a much wider scale, reaching many more women entrepreneurs. The ASEAN SME Academy, an online service run by ASEAN, is one promising example.

Programs that have used ICT to support women entrepreneurs in low- and middle-income countries have found that the following approaches helped overcome challenges women face, including those related to low levels of literacy and technical skills:

- Paying attention to the specific information needs of women entrepreneurs and involving them in content generation;
- Using audio and multimedia to overcome low levels of literacy;
- Tailoring training locations and timings to suit female beneficiaries; and
- Ensuring that trainers are gender-sensitive in terms of the training methodology: for example, giving participants in-group assignments rather than individually oriented training.⁸¹

4.3 Challenges to Women Entrepreneurs Leading Digital Technology Firms⁸²

There is little evidence concerning the specific challenges facing women-owned tech start-ups in ASEAN. However, data on women-owned growth-oriented firms may be instructive to understanding many of the specific challenges facing women-owned tech firms. The World Bank piloted a program to increase the capacity, confidence, and networks of growth-oriented women leading small businesses in Cambodia, Lao PDR, and Viet Nam. The women entrepreneurs participating in this program faced a number of hurdles in growing their businesses. These included:

- Limited exposure to innovative practices, resulting in poor product differentiation, which in turn led to poor positioning that hindered competitiveness and success;

⁸¹ International Institute for Communication and Development as quoted in United Nations Publications 2017, 19.

⁸² That is, women entrepreneurs owning digital technology firms.

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- Few opportunities to upgrade business and technical skills due to lack of formal business training for company directors, managers, and staff;
- Limited access to business networks outside of family and friends, and more critically, limited access to successful, women role models;
- Lack of capital for expansion as well as lack of financial management skills and systems; and
- Low levels of confidence in taking calculated risks plus lack of flexible thinking to adapt to market demands.⁸³

A study of U.S. business incubators found that bias in recruitment and selection of participants acted as barriers of entry for women. It also found that program design and culture issues put women off from joining incubator programs.⁸⁴ The OECD found that “it also appears that the more high-technology the incubator’s focus, the fewer women participate.”⁸⁵

4.4 CSAP Actions Lines that Can Promote WEE through the Development of Women-owned MSMEs

There are several action lines that relate to MSMEs and provide opportunities to advance the economic empowerment of women entrepreneurs. These action lines fall under the responsibility of the ACCMSME and other sectoral bodies. In the Strategic Action Plan for SME Development 2016–2025, the ACCMSME recognized that “one-size-fits-all policy measures” are not appropriate given the diversity of MSMEs in the region. The Strategic Action Plan identified two pathways for MSME development: one focused on global competitiveness (the Competitive Pathway) and the other on social inclusion (the Inclusive Pathway). The selected action lines are categorized along these lines. The Competitive Pathway initiatives are to support urban, medium-sized enterprises in developed AMS, while the Inclusive Pathway initiatives are “to facilitate the transition from the traditional economy through industrialization.”⁸⁶ Micro and small enterprises are targeted for the Inclusive Pathway. These categories were reinterpreted for this analysis. The Competitive Pathway action lines are assigned to entrepreneurs who own technology companies, and the Inclusive Pathway action lines are assigned to micro and small entrepreneurs who use technology. The remaining action lines were categorized according to assumptions about the size and type of business affected.

Action lines related to all women entrepreneurs

- Promote digital trade in ASEAN
- Develop best practices for e-service delivery

83 World Bank, 2014, 8–9.

84 Initiative for a Competitive Inner City, 2016, “Creating Inclusive High-Tech Incubators and Accelerators: Strategies to Increase Participation Rates of Women and Minority Entrepreneurs,” New York: JPMorgan Chase & Co., quoted in OECD and ACCMSME 2017, 139.

85 OECD and ACCMSME 2017, 139.

86 ASEAN Secretariat. 2015, ASEAN Strategic Action Plan for SME Development 2016–2025, ASEAN Secretariat, 2–3.

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- Develop a best practices guide for local content development and support
- Create an interactive online platform on a range of financial support [services] available to MSMEs to minimize information gap (ASEAN SME Service Center)
- Develop and foster cyber wellness through guidelines, education, and outreach programs
- Integrate e-commerce considerations into the ASEAN High-level Consumer Protection Principles

Action lines related to “inclusive entrepreneurs” (i.e., owners of micro and small enterprises)

- Reduce development disparities in access to and affordability of broadband and improve ICT interoperability
- Develop best practices for next generation telecenters or internet access centers
- Promote the development and utilization of e-commerce platforms to encourage expansion of SMEs

Action lines related to “competitive entrepreneurs” (i.e., owners of tech firms)

- Develop an ecosystem conducive to support start-ups and strengthen enterprises.
- Establish support mechanisms such as mentorship and incentive programs to support and nurture STI enterprises from start-up to the next competitive level of development.
- Engage dialogue and other strategic partners in joint undertakings on appropriate and commercially viable STI initiatives.
- Establish and promote a digital service hub that will enhance trade supply chains and also improve the competitiveness of ASEAN SMEs in a low-cost manner.

The following subsections take a closer look at possible steps to realize each of the action lines mentioned above. The discussion is organized by action line category (e.g., action lines related to all women entrepreneurs). For each category the discussion reviews the relevant issues and then lists measures that could be taken to advance WEE on that issue, and, where possible, highlights some examples of existing programs and provides related resources.

4.4.1 Action lines related to all women entrepreneurs

4.4.1.1 Action line: Promote digital trade in ASEAN

This action line is quite broad and the text below inherently addresses three other action lines:

- Develop best practices for e-service delivery
- Create an interactive online platform on a range of financial support [services] available to MSMEs to minimize the information gap (ASEAN SME Service Center)

Digital literacy as a prerequisite for promoting digital trade: Lack of know-how or digital literacy has been one of the top two reasons that women are not taking up ICTs. To enable women to fully benefit from technology, capacity building in the basic ICT skills or digital literacy needs to be scaled up across the region. Digital literacy is a foundational skill that all women, and in fact all citizens, need to participate fully and safely in the digital economy. As such, all women need digital skills and capabilities. Digital literacy is included in this section because it is most urgently needed by women who own micro and small enterprises, especially those who may be engaging in limited e-commerce through social media, at this time.

The exact nature of the digital capabilities programming will vary because the challenges women face are not homogenous across all AMS. For women to benefit from digital literacy capacity building, curricula need to be relevant to women's lives and should not promote stereotypes or gender bias that will put women off. For digital training efforts to be effective, it is best if women have access to ICT resources.⁸⁷

Actions that would advance WEE at the ASEAN regional level

Based on best practice guidance for promoting digital literacy, the following actions could be undertaken at a regional level:

- Invest in AMS capacity building initiatives which pay particular attention to increasing women's digital literacy and confidence. Include women across all levels of education, income, and familiarity with ICT and the internet.
- Encourage AMS to ensure digital literacy and capacity-building initiatives consider women's needs, interests, circumstances, and local contexts during the design phase, in order to encourage meaningful use of mobile phones and the internet in ways that maximize the value and minimize the risks for women.
- Support efforts to provide women with opportunities to develop their digital skills and confidence through different channels, including by accessing public facilities, leveraging existing initiatives and networks, and supporting women to learn on their own.
- Support steps to make online content and services more accessible to women with limited literacy, language, ICT-related skills, and confidence, and also ensure that women with lower literacy levels are included in the pilots and user testing of these services.
- Provide guidance on minimum standards for the content of digital literacy curricula to ensure that safety, security, and privacy are adequately addressed.
- Support and promote female role models as leaders and internet users within communities.⁸⁸

⁸⁷ Broadband Commission Working Group on the Digital Gender Divide 2017a, 29.

⁸⁸ Broadband Commission Working Group on the Digital Gender Divide, 2017b, Bridging the Gender Gap in Internet and Broadband Access and Use. Progress Report, Paris: UNESCO and GSMA, 37.

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- Partner with existing programs that promote women's digital literacy.

Examples

- The **Telecentre Women (TCW)** program of Telecentre.org Foundation (TCF) provides tailored learning solutions for women through the telecenter network. The Telecentre.org Foundation and the International Telecommunication Union (ITU) developed trainings and activities to empower disadvantaged women and girls including Telecentre Women: Digital Literacy Campaign and the ICT and Entrepreneurship training. Key components of the program include: content that is developed with input from the target users to ensure it meets their needs; development of peer learning networks among women learners; and involving women as leaders of the programs on the ground. Together, the ITU and TCF trained over 1 million women to be digitally literate.⁸⁹ Started as a donor-sponsored initiative, TCF is now a part of the Philippines Commission on Information and Communications Technologies (CICT).⁹⁰
- **Women ICT Frontier Initiative (WIFI)** of the UN Asian and Pacific Training Centre for Information and Communication Technology for Development (UN-APCICT). This program, launched in 2016, seeks to create "socially and economically-empowered women" through ICT-enabled entrepreneurship. It has two tracks. The first trains women entrepreneurs to use ICTs in support of their businesses. The second trains policymakers and government leaders to create an enabling environment for ICT-empowered women entrepreneurs.⁹¹ The program was launched in ASEAN in August 2017.⁹² (This program is collaborating with the Philippines Women's Center to deliver entrepreneurial training to women at 2,000 Technology for Education Centers in municipalities and rural areas.)
- Microsoft has worked with the Myanmar Book Aid and Library Preservation Foundation to train young women throughout the country in digital literacy and technology.⁹³ They are currently working with Tag International Development to provide basic digital literacy to rural youth in this country.⁹⁴
- ASEAN Foundation and SAP have a strategic collaboration in ASEAN to provide programs that equip youth to thrive in the digital economy and have the skills to tackle society's problems. Among these programs, the **ASEAN Data Science Explorers competition** trains students in SAP's Analytics Cloud software through webinars and seminars. The competition solicits data-driven insights on urgent social issues facing the region.⁹⁵ While not directed solely to women, this program trains youth in higher level digital skills.
- **Helping Women Get Online** is an initiative of Google India started in 2013. The program teaches women to use the internet through awareness efforts and hands-on training. Videos are used for online training. Google partners with local organizations to disseminate the trainings. The program

89 ITU, "Promoting Digital Literacy for Girls at the Bottom of the Pyramid," (webpage), ITU, <https://www.itu.int/en/ITU-D/Digital-Inclusion/Women-and-Girls/Pages/Digital-Literacy.aspx>, accessed June 15, 2018.

90 International Development Research Centre (IDRC), "Core Support for Telecentre.org Foundation," (webpage), IDRC, <https://www.idrc.ca/en/project/core-support-telecentreorg-foundation>, accessed June 15, 2018.

91 "Women ICT Frontier Initiative (WIFI)," Webpage, Asian and Pacific Training Center for Information and Communication Technology for Development (APCICT), <http://www.unapcict.org/wifi>.

92 "Women ICT Frontier Initiative (WIFI) for the ASEAN Sub-Region," UNESCAP, August 29, 2017, <https://www.unescap.org/events/women-ict-frontier-initiative-wifi-asean-sub-region>.

93 "Democratizing Technology For An Inclusive Revolution," Microsoft, <https://news.microsoft.com/apac/features/democratizing-technology-inclusive-revolution/>.

94 "Sharing Digital Knowledge To Change Lives In Myanmar," Blog post, Microsoft, May 17, 2017, https://blogs.technet.microsoft.com/microsoft_citizenship_asia_pacific/2017/05/17/sharing-digital-knowledge-to-change-lives-in-myanmar/.

95 eGov Innovation Editors, "Asean Foundation To Drive Youths' Digital Literacy Through Collaboration," December 8, 2017, <https://www.enterpriseinnovation.net/article/asean-foundation-drive-youths-digital-literacy-through-collaboration-202245664>.

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has three strategies: inspire, engage, and enable. An important element of these strategies is the use of local content. See <https://hwgo.com/>.

- ***She Will Connect*** launched by Intel in 2012 is a program to empower women and girls through technology. One objective of this program is to close the internet gender gap in Africa, through digital literacy. The initiative partners with local NGOs in several countries to integrate digital literacy into existing development programs for women and girls. In some locations, it partners with organizations that provide income-earning opportunities for women. For example, it partners with business process outsourcing (BPO) firms that can provide jobs to graduates of the digital literacy program. The face-to-face training includes tailored content for women and girls and also emphasizes peer networks. Free access to the internet is provided to participants during and after training.
- UN Women, working with the Mozilla Foundation, has established ***digital literacy clubs*** for women to train them in participatory digital literacy skills. It has also piloted a digital enterprise platform for women farmers and is in the process of piloting dedicated platforms for digital skills through a virtual skills school.⁹⁶

Resources

- ITU has a range of initiatives that focus on digital skills and digital literacy. It has developed the Digital Skills Toolkit, which although not targeted strictly to women, does address women's needs as one of several excluded groups. The toolkit supports efforts to assess, design, and implement national digital skills strategies.⁹⁷
- GSMA has developed a Mobile Internet Skills Training Toolkit which is available on their website (<https://www.gsma.com/mobilefordevelopment/connected-society/mistt/>).⁹⁸ Although not targeted exclusively for women, it teaches the basics of using the internet and common applications. The module was used in Rwanda where it was offered by a mobile network operator. Over three months, 80,000 customers were trained.⁹⁹

Business development support services to promote digital trade: As the OECD report points out, there is a dearth of gender-sensitive BDS services in the ASEAN region. There are also few examples of BDS providers that also provide training in the effective use of ICTs. One exception is the Women's' Development Centres in Cambodia. These centers combine entrepreneurial training and business development services with access to ICT and digital literacy training.¹⁰⁰

96 Broadband Commission Working Group on the Digital Gender Divide 2017b, 19.

97 ITU, 2018, Digital Skills Toolkit. Geneva: ITU. The toolkit is available at <https://www.itu.int/en/ITU-D/Digital-Inclusion/Documents/ITU%20Digital%20Skills%20Toolkit.pdf>.

98 Jack Rabah, "Wikimedia Foundation partners with the GSMA to expand digital literacy in emerging countries," Blog post, GSMA, June 21, 2018,

<https://www.gsma.com/mobilefordevelopment/programme/connected-society/wikimedia-foundation-partners-with-the-gsma-to-expand-digital-literacy-in-emerging-countries/>

99 Mohamed Dabbour, "Millicom and the GSMA: Driving Digital Inclusion in Rwanda through the Mobile Internet Skills Training Toolkit," Blog post, GSMA, February 9, 2018,

<https://www.gsma.com/mobilefordevelopment/programme/connected-society/millicom-gsma-driving-digital-inclusion-rwanda-mobile-internet-skills-training-toolkit/>

100 OECD and ASEAN Coordinating Committee for Micro, Small and Medium Enterprises 2017, 137.

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BDS service centers are also important for providing access to market information and networking opportunities, which are particularly vital for women entrepreneurs. Scaling up access to BDS is challenged both by the cost and by the difficulties entrepreneurs have in finding the time to attend. ICTs could be used to overcome these challenges.

Actions that would advance WEE at the ASEAN regional level

In the context of promoting digital trade, there are several solutions that could help disseminate business support services to a wider range of women.

- Provide guidance and/or support to expand the availability of gender-sensitive BDS service centers which provide digital literacy and ICT training alongside traditional business development support.¹⁰¹ The BDS providers should also provide trainings and other support to promote both domestic and international digital trade. This does not necessarily mean developing new BDS centers, but rather supporting existing BDS suppliers to become more gender-sensitive in the services they provide and the means by which they provide them.
- Promote the use of technology to provide women-focused training, coaching, mentoring, and other enterprise-support services—whether through ASEAN hubs, the SME Academy, access to massive open online courses (MOOCs), or other services.
- Assess the experience with and impact of the Philippines 2013 Go Negosyo Act which mandated that women be represented in the delivery of counselling and advisory services at the Negosyo MSME support centers.¹⁰² If promising, disseminate the results and lessons learned among the AMS.

4.4.1.2 Action line: Develop a best practices guide for local content development and support

As noted by the GSMA, “Most online content is directed at men and designed by men.”¹⁰³ Women are more likely to feel that mobile and internet services are not relevant to them. In some cases, this is due to a lack of awareness of the availability of content and services that would be useful to them. It can also be a result of the fact that most content on the internet is in English. (Fifty-two percent of content is in English; by comparison, only 1.8 percent is in Chinese and 0.2 percent is in Thai.¹⁰⁴) But it is also the case that women’s needs and preferences are not sufficiently taken into account when products are developed. During the design and testing of applications and services, not enough attention is paid to potential female users.

101 A list of existing programs to promote the use of ICT by entrepreneurs in ASEAN is provided in OECD Appendix 7.

102 OECD and ASEAN Coordinating Committee for Micro, Small and Medium Enterprises 2017, 94.

103 GSMA Connected Women, GSMA Digital Inclusion, and Dalberg, 2015, Accelerating Digital Literacy: Empowering Women to Use the Mobile Internet, London: GSMA, 49.

104 Wikipedia, “Languages Used on the Internet,”
https://en.wikipedia.org/wiki/Languages_used_on_the_Internet.

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The relevance of internet content could be improved by incorporating a better understanding of how and why women use the internet while designing products and services. This would be particularly beneficial for applications such as e-government services and business support programs. More content needs to be in the local language and accessible to people with low literacy levels.

Actions that would advance WEE at the ASEAN regional level

Additional activities related to three action lines could support the empowerment of women and at the same time, support the promotion of digital trade:

- When implementing the action lines to develop best practices for e-service delivery and to develop a best practices guide for local content development and support, include guidance that will encourage and support AMS and their stakeholders to involve women entrepreneurs from diverse backgrounds in the design, testing, and development of government and local content, applications, and services. This effort should include low-income micro entrepreneurs, growth-oriented digital entrepreneurs, and those who do not currently use ICTs. It should also include women with lower levels of education and literacy to ensure that the content, applications, and services are accessible for all.
- When implementing the action line supporting the creation of an interactive online platform on a range of financial support [services] available to MSMEs to minimize the information gap, involve women entrepreneurs from diverse backgrounds in the design, testing, and development of the content and application.
- Encourage the development among AMS of an ecosystem of quality, non-stereotypical services, applications, and content relevant to different types of women entrepreneurs.¹⁰⁵

Examples

- The **TCW program** (mentioned above) obtained information on women's content preferences through surveys and local workshops, as well as by collecting data from women using telecenters.¹⁰⁶
- The **HWGO website** in India, provides links to relevant websites for women, such as sites related to health, education, and livelihoods.¹⁰⁷

105 Broadband Commission Working Group on the Digital Gender Divide 2017a, 40.

106 GSMA Connected Women, GSMA Digital Inclusion, and Dalberg 2015, 49.

107 Ibid., 47.

4.4.1.3 Action line: Develop and foster cyber wellness through guidelines, education, and outreach programs

The issues and some of the remedies for this action line are also related to the action line concerned with consumer protection: integrate e-commerce considerations into the ASEAN High-level Consumer Protection Principles.

Women's fears about online threats may have been of lesser concern than affordability in the survey referenced above, but it is likely that fears about engaging with the internet have increased lately with the news of data breaches at Facebook. For example, 1.175 million users in the Philippines may have been affected by the breaches at Facebook.¹⁰⁸ Online threats pose a real challenge to women entrepreneurs, especially those engaged in e-commerce. Raising women's awareness of online risks as well as mitigation and remedial measures should be high on the list of supports for women entrepreneurs. At the same time, the ability of the internet to help women grow and manage their businesses should be emphasized. Further research is needed on how women handle problems that they experience on their phones or online in order to ensure that dispute resolution methods will work for them.

Actions that would advance WEE at the ASEAN regional level

- Support or conduct research on the threats that prevent women from accessing and using the internet in different settings in the region.
- Support or conduct research on the consumer protection issues that impact women entrepreneurs who engage in e-commerce.
- Increase awareness of the threats that prevent women from using the internet, and how those threats can be addressed through awareness and advocacy campaigns, digital literacy programs, and entrepreneurship training programs.
- Partner with internet platforms to develop and provide awareness campaigns.
- Encourage the development of applications and services that make it safer for women to use the internet, addressing issues of harassment and abuse, while ensuring that other fundamental rights are upheld. Include the consumer protection of women as buyers on e-commerce sites.
- Develop guidelines for legal and policy frameworks that will protect women against internet-related abuse, harassment, and fraud, and guidelines for measures that promote access to justice.
- Develop guidelines for mechanisms that make it easy and safe for women to report online abuse (and ensure that such reports are responded to quickly and effectively).¹⁰⁹

108 Ralph Jennings, "Heavy Facebook Use Exposed Southeast Asia to Breaches of Personal Data." VOA News, April 10, 2018, <https://www.voanews.com/a/facebook-data-breach/4340056.html>.

109 Broadband Commission Working Group on the Digital Gender Divide 2017a, 38.

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- Develop guidelines on consumer protection for buyers and sellers in an e-commerce environment. Ensure that women's needs and preferences are incorporated in the design and development of guidelines.
- Encourage AMS to strengthen measures at the national level to protect women against ICT-mediated abuse and fraud.
- Encourage AMS to partner with women's business associations, civil society organizations, and microfinance institutions to disseminate cyber wellness education.

Examples

No examples were found during this research that directly relate to cyber security for women. However, there are ongoing initiatives and materials regarding cyber security for children.

- The **ITU** has a program for child online protection. It has developed guidelines for parents, children, industry, and policymakers on child online protection (see <https://www.itu.int/en/cop/Pages/guidelines.aspx>). The ITU site has an extensive list of programs from around the world that address cyber safety. Not all of them are solely focused on children (see <https://www.itu.int/en/cop/Pages/resources.aspx>). As part of this initiative, ITU conducted consultations with children and youth online.

Resources

No resources were found that focused solely on women and cyber security or women and consumer protection online. However, several resources address consumer protection in a digital environment. In particular, a 2017 report by the United Nations Conference on Trade and Development (UNCTAD) emphasized the need to give special attention to the needs of vulnerable and disadvantaged consumers when developing consumer education for e-commerce.¹¹⁰ The following resources may be useful:

- OECD. 2016. *Consumer Protection in E-commerce: OECD Recommendation*, Paris: OECD Publishing. <http://dx.doi.org/10.1787/9789264255258-en>.
- UNCTAD. 2017. "Consumer Protection in Electronic Commerce." Note by the UNCTAD Secretariat. April 24, 2017. This report explores potential risks faced by online consumers including the information provided by businesses, unfair commercial practices, unfair contract terms, online payment security, data protection and privacy, dispute resolution and redress, and cross-border online transactions. http://unctad.org/meetings/en/SessionalDocuments/cicplpd7_en.pdf.
- OECD. 2016. *Protecting Consumers in Peer Platform Markets: Exploring the Issues*. Background Paper. <https://www.oecd-ilibrary.org/docserver/5jlwvz39m1zw-en.pdf?expires=1529097305&id=id&accname=guest&checksum=792F199016397E3B45735F382EE263C7>.

110 United Nations Conference on Trade and Development (UNCTAD), 2017a, "Consumer Protection in Electronic Commerce," Note by the UNCTAD Secretariat. TD/B/C.I/CPLP/7. Switzerland: UNCTAD, 14.

4.4.2 Action lines related to inclusive entrepreneurs (i.e., owners of micro and small enterprises)

4.4.2.1 Action line: *Reduce development disparities in access and affordability to broadband access and improving ICT interoperability*

Affordability is one of the top two barriers keeping women from accessing mobile phones and the internet. Many of the factors that govern affordability reside at the national level, such as spectrum policy, infrastructure sharing, and policies for broadband and competition, which affect everyone. At the consumer level, access to broadband most often depends on access to an internet-enabled mobile phone or smartphone. The factors that impact smartphone affordability, aside from the component parts, include import duties, taxes, and transportation charges. For consumers in remote locations, prices include the higher transportation and inventory costs incurred by merchants.¹¹¹ Although market prices for smartphones are declining, they are not expected to decline to the extent that all low-income people will be able to afford them in the foreseeable future.¹¹² Several steps could be taken at a regional level to address observed disparities in affordability and access.

Actions that would advance WEE at the ASEAN regional level

- Encourage and support AMS to develop strategies for achieving affordable internet and broadband access that prioritize measures that improve affordability for underserved women.
- Along these lines, support research to better understand how different segments of the women's market are impacted by affordability issues.
- Encourage AMS to support efforts: to ensure that the costs of data and devices for accessing the internet are affordable to lower-income women; to increase network coverage, capacity, and quality, particularly in underserved areas such as rural areas where many women live; and to provide safe and accessible public access facilities (telecenters) to serve women (see below).¹¹³

Examples

- Botswana has used Universal Service and Access Funds (USAF) to support the development of **Wi-Fi hotspots** in public locations. Individuals are able to access 30 minutes of free internet each day with unlimited access to government websites. Municipal governments in South Africa have also set up facilities for the public to access Wi-Fi.¹¹⁴

111 Madeleine Karlsson et al., 2017, Accelerating Affordable Smartphone Ownership in Emerging Markets, London: GSMA, 2.

112 Ibid, 6.

113 Based on Broadband Commission Working Group on the Digital Gender Divide 2017a.

114 Alliance for Affordable Internet (A4AI), 2017, 2017 Affordability Report: Asia Regional Snapshot. Washington, D.C.: A4AI, chapter 3, http://a4ai.org/affordability-report/report/2017/#employing_public_access_solutions_to_close_the_digital_divide, accessed June 15, 2018.

- The **Connected Homes project** in Costa Rica, uses USAF to subsidize the cost of devices and broadband for low-income households.¹¹⁵
- The Philippines government intends to extend its **public Wi-Fi** program beyond Manila. The service is accessible in public sites such as schools, hospitals, and parks.

Improving affordable access to smartphones: Research conducted by the GSMA suggests that the consumer market for smartphones in emerging markets consists of four segments: the extreme poor, for whom smartphones are unaffordable; the working poor, who can afford phones if they pay for them in instalments; the higher-end low-income market, that can afford to save for a phone; and middle-income consumers, who are cost-conscious but can afford a phone through a lump sum payment. Three business models can be used to assist the last three segments: direct payment, asset financing, or third-party payment. Government has a potential role to play in the third-party payment model in which “third party actors who derive value from increased access, subsidize or offset device costs.”¹¹⁶ In this model, costs are “aggressively” reduced for handsets. The model may or may not address data costs, distribution or access, and customer digital literacy. The sustainability of this model is unclear but there are obviously significant upfront costs.

Examples

- In Pakistan, the government has used USAF monies to **provide smartphones** to 30,000 low-income women nationally.
- The Malaysian government launched the **Youth Communication Package** program to enable low-income youth (21 to 30 years old) to buy 3G smartphones at a subsidized price. Beneficiaries were required to register with the government. They then purchased a phone with a 40 percent subsidy (a \$65 discount on a \$165 phone) and the mobile network operator was reimbursed by the government for the rebate. At least 60,000 young people bought subsidized smartphones.

4.4.2.2 Action line: develop best practices for next generation telecenters

Telecenters (also known as internet cafés or internet access centers) are one strategy to provide affordable and accessible internet for women. However, some women report feeling uncomfortable and unsafe in male-dominated spaces, which many internet access centers are.¹¹⁷ The development of the next generation of telecenters is an opportune time to consider what services women entrepreneurs and workers will need in the future. For low-income, women entrepreneurs, whether they engage in e-commerce or traditional businesses, the current need is for internet access centers to provide affordable access to the internet. To be effective for women, internet access centers will need to become more welcoming to them. For example, Azerbaijan has a growing number of women-only internet access centers where women can work on a computer and use the internet. These were developed

¹¹⁵ Ibid.

¹¹⁶ Karlsson, Madeleine et al. 2017, 4.

¹¹⁷ Dhanaraj Thukar with Laura Potter, 2018, Universal Service and Access Funds: An Untapped Resource to Close the Gender Digital Divide, Washington, D.C.: Web Foundation, 14.

in response to women's reluctance and discomfort in using public internet access centers.¹¹⁸

Actions that would advance WEE at the ASEAN regional level

- Support or conduct research to better understand the needs and preferences of different segments of women owners of MSMEs for internet access centers; and
- Share findings with AMS.

4.4.2.3 Action line: *promote the development and use of e-commerce platforms to encourage expansion of SMEs*

There is little systematic information available about women's engagement with e-commerce platforms. E-commerce is very dynamic and it is likely that data on the level of use of e-commerce platforms will have a short shelf life. Nevertheless, basic research on how women are conducting e-commerce, at what scale, and what their challenges and opportunities are would assist in shaping interventions to promote e-commerce for MSMEs. Additionally, to promote women-owned micro and small businesses, the emphasis should be on B2C, which is where women-owned businesses are most active.¹¹⁹

Actions that would advance WEE at the ASEAN regional level

- Support or conduct research to better understand how different segments of women entrepreneurs in different settings are using and benefitting from e-commerce. Research women's needs and preferences for e-commerce platforms which would allow them to grow their businesses.
- Disseminate information on women's engagement with e-commerce among the AMS.
- Develop guidelines on how to involve women entrepreneurs in the design, testing, and development of any e-commerce platforms developed, in order to ensure that women can effectively use the platforms.

4.4.3 Action lines related to competitive entrepreneurs (i.e., Leaders of Tech Firms)

4.4.3.1 Action line: *Develop an ecosystem conducive to support start-ups and strengthen enterprises*

As the OECD notes, many more males than females are participating in technology-focused accelerators and business incubators.¹²⁰ The promotion of gender diversity in government-sponsored incubator and accelerator programs is expected to grow businesses and create jobs.¹²¹ The following actions are recommended to support women's access to these services:

118 OECD and ASEAN Coordinating Committee for Micro, Small and Medium Enterprises 2017, 22.

119 ITC 2017, 4.

120 OECD and ASEAN Coordinating Committee for Micro, Small and Medium Enterprises 2017, 166.

121 Ibid., 25-26.

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- Promote development throughout the region of accelerators and incubators which are focused on women entrepreneurs to ensure women have access to these services
- Promote gender diversity in other incubator and accelerator programs
- Establish regional targets for the number (or proportion) of women who will benefit from the ecosystem and other support to start-ups
- Share good practices across the region on government-sponsored incubators and accelerators focused on women
- Share good practices on how to target growth-oriented women tech entrepreneurs with more innovative and higher potential business ideas.¹²²

Examples

The OECD reviewed incubators that support women-owned start-ups in ASEAN and found only a small number which support women entrepreneurs in general. These include:

- **SHE Incubator Program in Cambodia:** This is a six-month program which aims to scale up women-owned microenterprises. Monthly 2-day workshops are combined with support and skills building. The program tries to connect graduates with investors at the end of the program.¹²³
- **Project-W incubator:** This was started in Myanmar in 2013 when it was recognized that women were not joining the first incubator program set up in 2012. This women-only incubator was intended to create a more supportive environment. The six-month program helps women refine business ideas, design business models, and launch new ventures. The women entrepreneurs attend weekly workshops and monthly meetings with local business leaders for advice. They are provided with resources and work space. At the end of the program, they pitch their projects to investors. This program is supported by international donors and the private sector.¹²⁴

There is little evidence of accelerators or incubators in ASEAN to support women-owned **tech** start-ups. The OECD also found few programs that support women to start ICT-based businesses. These include:

- Gorgeous Geeks' "**Women Netpreneur**" series (Malaysia);
- **Ooredoo Geek Girls Myanmar** project; and
- **Singapore Women Start-up Weekend** (Athena Network, Singapore).¹²⁵

Further, there is little evidence or information on best practices or successful models of incubators or accelerators that focus on growing women-led start-ups. An example of one accelerator that has a women's program component comes from Chile:

- In Chile, **Start-Up Chile** is a successful program launched by CORFO, a corporation charged with promoting economic development. Among the programs offered, Start-Up Chile has the "S Factory" which provides women entrepreneurs, who are still in the ideation phase, a \$14,000 grant. For all entrepreneurs, \$30,000 of seed guidance funding can be provided over 6 months. Companies that are ready to scale can get \$90,000 to help them raise more funds or grow their market share. Chile hosts several large conferences each year and has a number of co-working

122 OECD and ASEAN Coordinating Committee for Micro, Small and Medium Enterprises 2017, 143.

123 Ibid., 141.

124 Ibid., 142.

125 OECD, 2017, "Going Digital: The Future of Work for Women," in *The Pursuit of Gender Equality: An Uphill Battle*, OECD Publishing, 166.

spaces. The support for tech start-ups has helped build an ecosystem and attracted venture capital funds to establish offices in the capital city.¹²⁶

4.4.3.2 Action line: establish support mechanisms such as mentorship and incentive programs to support and nurture STI enterprises from start-up to the next competitive level of development

Networking and mentoring are especially important and have more impact for growth-oriented women entrepreneurs. Having a mentor increases a woman's chance of success, especially for women working in male-dominated fields such as the tech industry. Growth-oriented women entrepreneurs also need training in soft skills.¹²⁷

- Ensure that women participate in and benefit from these support programs by establishing regional targets for the number (or proportion) of women that participate.
- Consider establishing women-only programs.

4.4.3.3 Action line: engage dialogue and other strategic partners in joint undertakings on appropriate and commercially viable STI initiatives

This is an action line that calls for a cross-cutting response. See section 7.4 Increase Women's Representation in Policymaking Processes.

4.4.3.4 Action line: establish and promote a digital service hub that will enhance trade supply chains and also improve the competitiveness of ASEAN SMEs in a low-cost manner

Support or conduct research to better understand the needs and preferences for a digital service hub of growth-oriented women tech entrepreneurs from different parts of the region.

Involve growth-oriented women tech entrepreneurs in the design, testing, and development of the digital service hub to ensure it caters to the needs of women entrepreneurs and that the content, applications, and services are relevant and accessible for them.

126 Conrad Egusa and Victoria O'Shee, "A Look into Chile's Innovative Startup Government," Tech Crunch (online), October 16, 2016, <https://techcrunch.com/2016/10/16/a-look-into-chiles-innovative-startup-government/>, accessed June 18, 2018.

127 World Bank 2014, 12.

5 ACCESS TO FINANCE

Financial inclusion—the access and use of affordable, appropriate financial services—promotes sustainable and equitable development. Women's financial inclusion may also promote gender equity. There is now evidence to suggest that women can better control their income and make personal and productive purchases when they have access to bank accounts, savings, and other financial services. The impacts go beyond women's financial lives. Financial inclusion may help women make more choices about how to use their time and give them more autonomy over decision making that affects their lives. Importantly, they can better grow their businesses, increase their productivity, and reduce their poverty through access to financial services. However, a large portion of women globally, and in ASEAN, have little to no access to formal financial services.¹²⁸

Measured globally, women's access to financial services trails men's access by 7 percent (65 percent versus 72 percent).¹²⁹ According to the Global Findex database, financial inclusion in ASEAN does not follow the global pattern. In Cambodia, Myanmar, and Viet Nam there is no appreciable gender gap. Indeed, in Indonesia, Lao PDR, and the Philippines, women are more likely than men to have an account at a financial institution. Only in Malaysia does the gender gap in access to a financial institution account come close to the world average, at 6 percent. Women are more likely than men to have borrowed from a financial institution in Cambodia, the Philippines, and Thailand. In Myanmar and Singapore, men and women have the same rate of borrowing, while in Indonesia, Lao PDR, and Malaysia, men are only 1 percent to 2 percent more likely to have borrowed from a financial institution. Only in Viet Nam is the gap between men and women in borrowing as high as 5 percent.

Although in ASEAN countries women do not have a lower rate of access to formal financial services than men, the levels of financial inclusion for both men and women are quite low. Account ownership for women stands at 17 percent (Cambodia), 32 percent (Lao PDR), 26 percent (Myanmar), 35 percent (the Philippines), and 29 percent (Viet Nam). Only in Singapore (96 percent), Malaysia (82 percent), and Thailand (79 percent) are the rates relatively high. Rates for women's borrowing from financial institutions are even lower, in the range of 11 percent to 20 percent.¹³⁰

5.1 Gender Gap in Financial Inclusion

In ASEAN, there is a gender gap in the use of financial services. A study of four large financial service providers in Cambodia conducted by the United Nations Capital Development Fund (UNCDF) found that women had on average \$600 less in savings than men (about \$400 versus \$1,000) while their average loan size was

128 Sarah Gannage et al., 2017, *Gender and Digital Financial Inclusion: What Do We Know and What Do We Need to Know?* Washington, D.C.: International Center for Research on Women. 4.

129 Asil Demirguc-Kunt et al., 2018a, *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution*, World Bank, 4.

130 Ibid.

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approximately half that of men's (just under \$1,200 versus \$2,400).¹³¹ The lower loan amounts taken by women reflect, in part, that men access SME loans while women access microloans. Additionally, men predominantly take individual loans while women take group loans.

Other evidence suggests that there is significant unmet demand for financial services in the women's market. In Viet Nam, women-owned SMEs have an unmet demand for credit, both formal and informal, estimated to be as high as 12 percent of GDP. The credit gap for women-owned SMEs is estimated to be \$172 million in Cambodia and \$6 million in Indonesia.¹³²

The availability and types of financing mechanisms available for MSMEs varies by the level of economic development of the country. Bank loans and microfinance are prevalent in the less developed ASEAN nations, while alternative finance like crowdfunding, angel investing, and venture capital are more common in the more developed nations such as Malaysia and Singapore. Public and public-private funding programs targeting SMEs and early stage start-ups are also available in the more developed ASEAN economies. Despite the availability of these various forms of financing, there is still a sizeable gap in MSME financing in ASEAN. In 2011, this was estimated to total \$45.4 billion (across the ASEAN-8)¹³³ or \$184,000 per enterprise.¹³⁴

This gap is particularly wide for small enterprises compared to medium enterprises (49–59 percent versus 18–22 percent).¹³⁵ Small enterprises and even larger microenterprises are too large to qualify for microfinance loans and too small to obtain funding from commercial banks, comprising the “missing middle.” Most ASEAN governments have put in place various financing mechanisms, loans, grants, and equity investment schemes to address this shortfall in MSME financing. However, there is no evidence on the extent to which these programs are filling this need. Furthermore, while alternative financing is expected to be a viable mechanism for filling the missing middle, it is too early to tell whether these mechanisms will help fill the gender gap in financing.¹³⁶ Women entrepreneurs are particularly affected by the missing middle as their enterprises tend to be smaller than men's. It is unclear to what extent alternative financing vehicles are targeted to the market segments in which women are prevalent or whether women will be able to access these sources of finance.

In a 2017 report, the OECD concluded that mainstream financial institutions in the ASEAN region do not give priority to women borrowers and there is a lack of

131 United Nations Capital Development Fund (UNCDF), 2017, “The Gender Gap in Financial Inclusion: What Can We Learn from Microfinance and Banking Data?” News (blog), September 4, 2017, <http://www.uncdf.org/article/2705/>.

132 OECD and ACCMSME 2017, 38, 125.

133 The study included only 8 of the 10 ASEAN nations.

134 Gap is defined as the difference between the formal credit provided to SMEs and the total estimated potential need for formal credit.

135 OECD and ACCMSME 2017, 94.

136 Ibid., 95.

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financing options that target women. It also pointed out that the enabling environment for women's financial inclusion varied considerably across the region. In the Philippines, 93 percent of surveyed women-owned SMEs had obtained commercial bank loans, while in Indonesia and Viet Nam the shares were 49 percent and 44 percent respectively.¹³⁷

Table 5.1: Barriers to Women's Financial Inclusion

Demand-side barriers	Supply-side constraints	Regulatory and infrastructure barriers
<ul style="list-style-type: none"> - Limited financial capability and financial literacy - Lack of assets for collateral - Geographic distance from a financial institution - Lack of formal identification - Limited ownership of mobile phones and SIM cards - Reduced mobility due to time constraints (related to unpaid domestic work) or social norms - Lack of bargaining power within the household - Concentrated in lower paying economic activities 	<ul style="list-style-type: none"> - Lack of sex-disaggregated data - Risk aversion of banks - Financial institution speaks a complicated language - Service delivery is not adapted to women - Inappropriate distribution channels - Lack of gender-specific policies and practices for product design and marketing - Inappropriate product offerings 	<ul style="list-style-type: none"> - Digital and financial services, and distribution channels - Know your customer regimes - Acceptance of discriminatory laws - Collateral requirements and collateral registries - Absence of credit bureaus - Account opening requirements that disadvantage women - Barriers to obtaining formal identification - Legal barriers to owning or inheriting property and other collateral - Lack of gender inclusive credit reporting systems

Sources: Gamage et al. 2017, and Alliance for Financial Inclusion 2017b.

The Alliance for Financial Inclusion (AFI) contends that mainstreaming gender will not be enough to address structural inequalities in women's access to finance. What is required is a proactive, tailored approach that considers the unique needs and behaviors of women. The creation of enabling environments through smart policies and regulation is necessary in order to increase women's access to quality and affordable financial services.¹³⁸ These policies are addressed below. A more gender inclusive financial system will address the barriers faced by women on both the demand- and supply-sides as well as legal and regulatory barriers (see Table 5.1).

Women's access to official identification: Challenges to women MSME owners in the digital economy intersect with traditional challenges such as access to finance. To access a digital financial services account, customers are required to provide valid proof of identity to meet the know-your-customer (KYC) regulations. Globally, women can face more hurdles to accessing valid identification documents. For the

¹³⁷ Ibid., 100.

¹³⁸ Alliance for Financial Inclusion, 2017a, Integrating Gender and Women's Financial Inclusion into National Strategies, Guideline Note No. 27, Kuala Lumpur: Alliance for Financial Inclusion, 2.

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three countries in ASEAN, for which there is data, the lack of personal identification is a barrier for less than 10 percent of women.¹³⁹

Table 5.2: Percent of ASEAN Population With a National Identity Card and Without a Financial Account Due to Lack of Documentation, By Country (2017)¹⁴⁰

	Has a national identity card (% age 15+)	No account because of lack of necessary documentation (% without a financial institution account, age 15+)
Country	Percentages	
Cambodia	89	32
Indonesia	90	26
Lao PDR	no data	24
Malaysia	94	24
Myanmar	89	31
Philippines	no data	45
Singapore	95	no data
Thailand	99	12
Viet Nam	94	15

Furthermore, analysis of the Global Findex Database 2017 (Global Findex) dataset showed that, with the exception of Lao PDR and the Philippines, 89 percent or more of the adult population in ASEAN countries had a national identity card (see Table 5.2 above). The data are not disaggregated by sex so there is no information on differences between men and women in access to ID cards. Yet the Global Findex dataset also shows a wide range in the percentage of individuals who reported that they have no financial account because of a lack of necessary documentation. Of the individuals without a financial institution, from 12 percent to 45 percent reported that not having the necessary documents, was a barrier to having a financial account. This mixed finding, combined with the lack of data on women, suggests that more research is needed on this subject. It is particularly unclear whether the national identity cards that individuals possess are sufficient for meeting banks' KYC requirements.

5.2 Digital Financial Services

Digital financial services (DFS) are considered a potential solution to women's financial inclusion. Digital finance addresses physical access, convenience, and affordability issues, while also increasing transparency and privacy, a particular concern for women. The convenience of mobile money makes it an attractive

¹³⁹ Rowntree 2018, 19.

¹⁴⁰ Analysis of Demirguc-Kunt et al. 2018b dataset.

channel for time-constrained women to access a broad range of financial services including remittances, payments, savings, loans, and managing financial risks. By capturing data on transactions histories, DFS can reduce information asymmetries between financial institutions and consumers. This then opens up new finance opportunities for unbanked women. Mobile money is becoming increasingly important to financial inclusion. In the East Asia and Pacific region for example, registered mobile money accounts were up 9.3 percent from 2016 to 2017 (36.5 million, up from 33.3 million out of a total population of 523 million).¹⁴¹

Women's access to mobile phones: Despite the obvious benefits for women, obstacles to accessing mobile money remain. It is reported that on a global level, women have less access to mobile phones than men, constituting a gender digital divide and resulting in women having less access to digital financial services. The most recent Global Findex data show that mobile phone ownership for all adults in the ASEAN nations was relatively high, ranging from 72 percent in Cambodia to 94 percent in Singapore. Data on women's ownership was not available.¹⁴² Another recent survey, however, found that in the East Asia and Pacific region, 87 percent of women own their own phone (Gallup poll 2016), one of the highest rates among all regions.¹⁴³ Not surprisingly, mobile phone ownership was found to be significantly higher among women who were younger than 35 years of age (94 percent) than women 35 and older (84 percent). In Indonesia, the mobile phone ownership gap between older and younger women was even larger (83 percent versus 66 percent). Mobile money is thus considered to have great potential for the female youth market, especially because they may face more limited social and cultural barriers when it comes to accessing technology.

Women's use of mobile phones: High ownership of mobile phones has not yet translated into significant use of a phone or the internet to access a financial account, except in Singapore. In Cambodia, Lao PDR, Myanmar, the Philippines, and Viet Nam, the share of women using a mobile phone or the internet to access an account varied from 1 percent to 8 percent, while in Singapore, Malaysia, and Thailand the shares were 49 percent, 30 percent, and 15 percent of women, respectively. However, these relatively low figures do not reflect a gender gap in the use of mobile phones or internet to access an account. In fact, in several countries, a slightly higher share of women than men had done this.¹⁴⁴

Perceived barriers to women's use of mobile money, aside from barriers in accessing phones, are believed to include: cost and affordability; technical literacy and confidence—women with low literacy rates find it challenging to use basic

141 GSMA, 2017a, 2017 State of the Industry Report on Mobile Money, London: GSMA, 16. Note the East Asia and Pacific region in this report includes Indonesia, Myanmar, Papua New Guinea, the Philippines and Viet Nam. The combined populations of these countries totaled an estimated 523 million people as of July 2017 (CIA World Factbook [web resource] <https://www.cia.gov/library/publications/the-world-factbook/geos/xx.html>).

142 Demirguc-Kunt et al., 2018a.

143 Deena M. Burjorjee and Yasmin Bin-Humam, 2018, New Insights on Women's Mobile Phone Ownership, Washington, D.C.: Consultative Group to Assist the Poor (CGAP), 3.

144 Analysis of dataset: Demirguc-Kunt et al. 2018b.

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phones to perform complex functions; trust in operators or agents—women's fear of being cheated or harassed limits their engagement; legal, regulatory, and basic infrastructure requirements—identification requirements may constrain women's uptake of mobile money as women face greater difficulties in obtaining official identification; and local legal, social, and cultural norms—the attitudes of men and the larger community may hinder women's use of mobile money.¹⁴⁵ However, the full picture of women's use of digital financial services throughout ASEAN is not available due to the lack of data.¹⁴⁶

At the global level, mobile money is evolving. Last year, mobile money begun to branch out into other financial services such as interest earning savings accounts.¹⁴⁷ Twenty percent of surveyed mobile money deployments are offering savings, pension, or investment products in partnership with banks or third parties. Another 39 percent intend to offer these products in 2018.¹⁴⁸

Women's access to and use of the internet: In the ASEAN region, accelerating growth in smartphone ownership has driven access to the internet and with it, growing use of e-commerce. In 2016, there were millions of active e-commerce users across Cambodia, Indonesia, Myanmar, the Philippines, Thailand, and Viet Nam, driving revenues of \$6.4 billion—and those revenues are projected to double by 2020.¹⁴⁹

Use of the internet to pay bills or buy something varies across the region, depending on the socio-economic level of the country. However, in all countries, it is higher than the use of a mobile phone or the internet to access a financial institution account. Additionally, women have a slightly higher rate of using the internet to pay bills or buy something than men, in all countries except Thailand where the rates are equal. Women's use of the internet in this way ranged from 3 percent to 21 percent in most countries, to 39 percent in Malaysia and 57 percent in Singapore.¹⁵⁰

The evidence on paying online for an internet purchase is limited to only a few countries and is not disaggregated by sex. Of those who used the internet to purchase something, in Singapore 89 percent, in Malaysia 49 percent, and in Thailand 52 percent of purchasers, respectively, had paid online. By contrast, in Viet Nam, only 10 percent of online buyers had paid online. Purchasers who did not pay online, paid with cash on delivery (COD).¹⁵¹ This shows that there is huge scope for expanding online payments—particularly in Viet Nam, which is probably indicative of the situation in other less developed ASEAN countries. This finding aligns with that from the GSMA that over 74 percent of e-commerce payments in the Southeast Asia

¹⁴⁵ Burjorjee and Bin-Humam 2018.

¹⁴⁶ GSMA 2017a, 12.

¹⁴⁷ *Ibid.*, 9.

¹⁴⁸ *Ibid.*, 10.

¹⁴⁹ Hasnain and Pasti 2017, 12.

¹⁵⁰ Analysis of dataset: Demircuc-Kunt et al. 2018b.

¹⁵¹ *Ibid.*

region still involve COD payment processes.¹⁵² These payments are expensive, inefficient, and time-consuming for both entrepreneurs and buyers, and pose financial and possibly safety risks for entrepreneurs.

While mobile money has not yet been broadly adopted in ASEAN, the region's financial services industry is on the verge of being disrupted by financial technology companies (fintechs). These companies, "are radically innovating the finance industry [through] disruptive innovations such as artificial intelligence, machine learning, blockchain technology, biometric identification, cloud computing, and use of big data."¹⁵³ Fintechs are offering technology-enabled solutions that better address customer needs and preferences by offering enhanced accessibility, convenience, and tailored products.

5.3 Superplatforms

The internet giants, Facebook, Alibaba Group, Tencent Holdings, Amazon, and Google are expected to lead this transformation of the financial services industry.¹⁵⁴ What distinguishes these "superplatforms" is that they all have "digital platforms dominant across more than one sector."¹⁵⁵ Their size, innovation, and focus on customer centricity, along with their continuous growth and use of massive amounts of customer data position them to be the "single most powerful forces shaping digital ecosystems" going forward. They have the ability to "fundamentally change ... the entire existing financial ecosystem."¹⁵⁶

In China, for example, the financial services industry is already being disrupted by financial services offered by superplatforms like Alipay—with the result that the traditional retail banking industry is experiencing lower margins and depositor attrition. At the same time, this trend has driven large growth in financial inclusion in China. The Chinese superplatforms that are taking the lead in this area have been expanding to other Asian countries. In 2017, Facebook Messenger Pay was launched in the Philippines and Google Tez, a mobile payments service, was launched in India.¹⁵⁷ Google plans to expand the service to Indonesia, Thailand, and Viet Nam.

It is likely that the growth of superplatform financial services will be "pulled" by the growth of their e-commerce models that require users have access to seamless digital payment options. But the products on offer will not be limited to payment services. The Ant Financial Services Group, owner of Alipay, has already entered

¹⁵² Hasnain and Pasti. 2017, 6.

¹⁵³ Alfred Hannig, "FinTech: What's in It for Financial Inclusion?" Blog post, Alliance for Financial Inclusion (AFI), December 20, 2017, <https://www.afi-global.org/blog/2017/12/fintech-whats-it-financial-inclusion>.

¹⁵⁴ Also referred to as giant P2P (peer-to-peer) platforms.

¹⁵⁵ David Porteous and Olga Morawczynski., 2017, Inclusive Digital Ecosystems of the Future, Project white paper, FIBR, 6.

¹⁵⁶ Ibid., 30.

¹⁵⁷ Greta Bull, 2018, "Financial Inclusion in 2018: BigTech Hits Its Stride," (blog) CGAP, January 9, 2018, <http://www.cgap.org/blog/financial-inclusion-2018-bigtech-hits-its-stride>. And [https://en.wikipedia.org/wiki/Tez_\(software\)](https://en.wikipedia.org/wiki/Tez_(software)).

into SME lending with a new private bank called My Bank.¹⁵⁸ From this perspective, the superplatforms could be the most important channel for women's financial inclusion in ASEAN.

For ASEAN, the most important issue related to superplatforms is that the potential for consumer risk, which is not yet fully known and which will challenge the capacity and authority of national-level regulators. This has prompted some observers to suggest that financial regulators will need to become or cooperate with data regulators.¹⁵⁹ For women, financial products and services provided by superplatforms will pose new and difficult consumer protection challenges, including, but not limited to, data privacy issues.

In China, the payment and financial services offered by superplatforms were able to grow quickly and profitably due to the financial regulators taking a wait and see attitude to support the industry.¹⁶⁰ Ant Financial and Tencent have been quickly replacing cash and bank cards as the most popular payment methods in China.¹⁶¹ The regulators have now imposed a series of measures to curb the industry due to concerns about the way the e-payment platforms managed user deposits and introduced new payment methods. Additionally, new regulations are intended to cut down on fraud and to control the interest rates charged. It is expected that in the future, regulators will look at the way these superplatforms collect and manage user data.¹⁶² Similarly to China, regulators in Malaysia, Singapore, and Thailand, have established regulatory sandbox environments to allow for mutual learning among regulators and the fintech (financial technology) industry.

5.4 Need for Identification to Access Digital Forms of Finance

Mobile technology looks to become the dominant channel for ASEAN citizens to access financial services and a range of other services in the digital age. At a global level, a gender gap in access to valid, official identification (ID) is one of the hurdles for women to access mobile phones. In the ASEAN region, the data does not indicate a gender gap in ID. However, the uptake of mobile money is still relatively so low that barriers to access due to lack of ID may not yet be apparent.

All countries in ASEAN, except for the Philippines, now have mandatory KYC policies that require mobile network operators to capture personal information and identification details from customers purchasing prepaid SIM cards. There are three variations of this mandatory policy. At the most basic level, mobile network operators

¹⁵⁸ Porteous and Morawczynski. 2017, 17.

¹⁵⁹ Ibid., 5.

¹⁶⁰ Jinshan Hong, 2017, "How China's Central Bank Is Clamping down on the Mobile Payment Industry," Forbes, August 18, 2017, <https://www.forbes.com/sites/jinshanhong/2017/08/18/how-chinas-central-bank-is-clamping-down-on-the-mobile-payment-industry/#4138e91250be>.

¹⁶¹ Yue Wang, 2017, "How China's Tech Giants Alibaba and Tencent Want To Shape How The World Pays," Forbes, December 6, 2017, <https://www.forbes.com/sites/ywang/2017/12/06/how-chinas-tech-giants-alibaba-and-tencent-want-to-shape-how-the-world-pays/#259aca17e6d0>.

¹⁶² Yue Wang, 2018, "China Tightens Regulation Over Mobile Payment Apps: What's Next for Tencent and Ant Financial?" Forbes, January 3, 2018, <https://www.forbes.com/sites/ywang/2018/01/03/china-tightens-regulation-over-mobile-payment-apps-whats-next-for-tencent-and-ant-financial/#4e696eac7f1d>.

(MNOs) must “capture and store” customers’ ID information. In some countries, MNOs are required to “capture and share” customer’s identification information with the government. In the third variation, MNOs are required to validate a customer’s biometric identification details against a government database to verify that person’s identity.¹⁶³ In ASEAN, Indonesia, Malaysia, and Thailand require that MNOs “capture and validate” identification information. With the exception of the Philippines, the other countries in ASEAN require MNOs to “capture and store” customers’ details.¹⁶⁴

Furthermore, financial institutions have KYC identification requirements that are imposed typically by central banks or finance ministries, and that may be in addition to SIM registration requirements (imposed by telecommunications regulators).¹⁶⁵

Banks may also have KYC requirements in order to comply with anti-money laundering (AML) and counter financing of terrorism (CFT) policies (i.e., AML/CFT).

Without a valid ID that is recognized by the government, an individual will not be able to obtain a mobile phone or access mobile money. Within ASEAN, only Thailand has a national biometric identification system. The smart ID card program was started in 2005 and is mandatory for all individuals older than 7 years of age. The card, provided free of charge, incorporates the owners’ fingerprints. Over 97 percent of the population now has a smartcard. When purchasing a SIM or a mobile phone subscription, customers must submit fingerprints or facial scans, which are then compared to the smartcard information on file with the government.¹⁶⁶

The world’s largest, and perhaps best known, biometric identification system is in India.¹⁶⁷ Aadhaar is a 12-digit unique identity number for Indians based on biometric details. The Aadhaar program is available to every citizen at no cost. The program, administered by the Unique Identity Authority of India (UIDAI), had signed up 1.1 billion people by the end of 2017. To access a mobile subscription in India, customers are now required to provide their Aadhaar number and have their fingerprints or iris scanned with a biometric reader. This information is then validated against the UIDAI database.¹⁶⁸

The Aadhaar number provides Indians with access to an expanding number of services. Individuals can now use their Aadhaar card to open bank accounts, get a driver’s license, or obtain a passport. The Aadhaar card now allows access to government welfare payments which can be sent directly to a bank account accessible by mobile phone. The Government of India has also licensed mobile phone providers to be “payment banks,” thus providing individuals with easily accessible and cost-effective financial accounts. The number gives citizens access to important services, such as healthcare and education, and identifies them as having the right to participate in elections.¹⁶⁹ As a result, financial inclusion, particularly of women, has grown tremendously in India. Further, the possession of

163 Yiannis Theodorou and Erdoo Yongo, 2018, Access to Mobile Services and Proof-of-Identity: Global Policy Trends, Dependencies and Risks, London: GSMA, 28–29.

164 Ibid., 52.

165 Ibid., 21.

166 Ibid., 36.

167 PTI, “Bill Gates Dismisses ‘Aadhaar’ Privacy Threats; Funds World Bank to Bring It to Other Countries,” May 3, 2018, <https://www.news18.com/news/tech/bill-gates-praises-aadhaar-technology-funds-world-bank-to-bring-it-to-other-countries-1737211.html>.

168 Theodorou and Yongo 2018, 35.

169 GSMA, 2017d, Understanding the Identity Gender Gap: Insights and Opportunities for Mobile Operators to Help Close the Divide, London: GSMA., 11.

the Aadhaar card can enable a customer to open a physical bank account by providing their number and having their fingerprint scanned. This is an example of an eKYC (electronic know-your-customer) process.¹⁷⁰

Digital identification is poised to be a key element of the digital economy in the future. By lowering transactions costs and eliminating barriers to a wide range of financial, social, and government services, digital identification can contribute to the empowerment of women. The requirement that all adult citizens have a digital or biometric identification could level the playing field for women and men in terms of access to appropriate identification, as demonstrated by the experience in India.

5.5 CSAP Action Lines that Can Promote Women's Financial Inclusion

Committees and working groups under the ASEAN Finance Ministers and Central Bank Governors' Meeting (AFMGM), the ACCMSME, and the Initiative for ASEAN Integration (IAI) Task Force have identified several action lines under the CSAP which provide opportunities to promote women's financial inclusion and, subsequently, WEE. These include:

- Formulate financial inclusion strategy and implementation plan
- Facilitate AMS to develop credit rating system
- Support access to finance for MSMEs by, inter alia, establishing and strengthening credit bureaus, and further developing credit guarantee systems
- Implement a public awareness campaign for insurance
- Promote innovative financial inclusion via digital platforms
- Elevate capacity building of AMS to enhance financial inclusion ecosystem

5.5.1 Action line: formulate a financial inclusion strategy and implementation plan

This action line represents an all-encompassing action that will also cover the action lines:

- Facilitate AMS to develop credit rating system
- Support access to finance for MSMEs by, inter alia, establishing and strengthening credit bureaus, and further developing credit guarantee systems

A gender-sensitive financial inclusion strategy will allow ASEAN and the AMS to promote WEE through access to financial services and products. A gender-sensitive approach does not solely focus on women; it is an approach that also takes into consideration the dynamics of relationships between women and men.

¹⁷⁰ Vidaya Sree, "Electronic Know-Your-Customer (e-KYC) Explained," Online posting, MarketCalls, January 16, 2014, <https://www.marketcalls.in/banking/electronic-know-customer-e-kyc-explained.html>.

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When considering the ASEAN financial inclusion strategy and implementation plan, it is good to remember that the ASEAN countries are quite diverse. There are three distinct groups of countries in ASEAN based on their approaches to financial inclusion policy, depending on whether financial inclusion policies are: (1) peripheral to their financial sector (Cambodia, Lao PDR, Myanmar, and Viet Nam); (2) part of their overall financial sector development (Indonesia, Malaysia, the Philippines, and Thailand); or (3) fully integrated into the mainstream policy approach (Brunei Darussalam and Singapore).¹⁷¹ As explained by Hussain et al. (2015), the range in stages of development of financial inclusion policies across the region, provides the opportunity for “regionally integrated financial inclusion policies that connect more developed financial sectors with less developed ones within the region.”¹⁷²

Actions that would advance WEE at the ASEAN regional level

The following are based on recommended good practices when developing national strategies for women's financial inclusion. While they have been adapted to work at a regional level, further adaption may be required.¹⁷³

Set explicit policy objectives and sex-disaggregated quantitative targets for access and use of financial services: Decision makers should define targets and objectives specifically for women and men that acknowledge their respective differing levels of financial service access and usage.

For example, in an analysis of 12 national financial inclusion strategies, AFI found that five strategies addressed women's financial inclusion explicitly. For example, “Indonesia's national financial inclusion strategy refers to women across target income groups and the differences in access, needs and preferences for financial services ...”¹⁷⁴ Four country strategies had quantitative targets for women's financial inclusion. These countries include Burundi (a target of 48.7 percent of all clients); Papua New Guinea (50 percent of the newly banked); Malawi (60 percent of all clients); and Rwanda (80 percent financial inclusion for all by 2017 and a narrower gender gap).¹⁷⁵

Collect, analyze, and report sex-disaggregated financial data: Sex-disaggregated data can be used to reflect on whether certain policies are working equally for women and men or having any unintended gender differential impacts. Elevating the collection and analysis of sex-disaggregated data to a policy priority demonstrates a commitment to gender-sensitive and evidence-based policymaking. Supply side data on financial access and use originated with the national level financial institutions and mobile money operators. It may be necessary to encourage

171 Feisal Hussain et al., 2015, ASEAN Financial Inclusion for What? Connecting the Region's Prosperity to People's Prosperity Post-2015, New York: United Nations, 21.

172 Ibid., 26.

173 This section adapted from Alliance for Financial Inclusion 2017a.

174 Women's World Banking, 2016, Policy Frameworks To Support Women's Financial Inclusion, AFI Special Report, Alliance for Financial Inclusion, 13.

175 Ibid., 13.

or incentivize the collection and reporting of such data to regulators.¹⁷⁶ ASEAN can establish common standards of measurement and indicators for financial inclusion in general, as well as for women's financial inclusion to allow for comparative analysis across countries.¹⁷⁷

Set standards and provide guidance to the AMS regarding collecting, analyzing, and using demand and supply-side sex-disaggregated data for financial services: This should include determining what data are to be reported to the ASEAN level. At both the regional and national levels, this data can be used both for diagnostic purposes and for the policymaking process during implementation of the financial inclusion strategy.

Examples

- Five national financial inclusion strategies, among the 12 surveyed by AFI, include data collection and surveys as part of the strategy. Of these, two require gender-specific tracking. For example, in Rwanda, the national bank works with the government's monitoring office to conduct data collection and research. Papua New Guinea is the second country that requires specific tracking. In a related vein in Burundi, the government is encouraging financial institutions to provide data on loans and deposits by gender.¹⁷⁸
- In Nigeria, which was not included in the survey of 12 countries, the central bank developed a template to collect data from the financial services industry actors. The country disaggregates data by gender in both targets and data collection.¹⁷⁹
- The National Insurance Commission (NAICOM) in Nigeria has begun to track financial inclusion in the insurance sector using sex-disaggregated indicators.¹⁸⁰
- In Tanzania, the government has collected sex-disaggregated supply-side data related to health insurance and pension uptake.¹⁸¹
- Bank Negara Malaysia (BNM) included a plan to expand outreach and increase the insurance penetration rate in its financial inclusion framework. BNM collected sex-disaggregated demand-side data on insurance through national surveys in both 2011 and 2015. It is also possible in Malaysia to analyze insurance industry data by gender through the use of national ID numbers. This would provide sex-disaggregated supply-side data on insurance policyholders.¹⁸²
- The Philippine Insurance Commission (IC) is using the 5 percent gender budget (see discussion of the Magna Carta of Women in "example of gender mainstreaming" below) to set up a gender and

176 AFI's Financial Inclusion Data (FID) Working Group has two resources to support AFI members with this process: (1) a factsheet: *Leveraging Sex-disaggregated Data to Accelerate Progress Towards Women's Financial Inclusion*; and (2) a toolkit: *How to Leverage Sex-disaggregated Financial Inclusion Data to Accelerate Women's Financial Inclusion*. Available online at <https://www.afi-global.org/sites/default/files/publications/2017-02/Guideline%20Note-25%20FID-Leveraging%20Gender%20Data.pdf> and <https://www.afi-global.org/publications/2453/Guideline-Note-26-Sex-Disaggregated-Data-Toolkit>.

177 Hussain et al. 2015, 27.

178 Women's World Banking 2016, 14.

179 Ibid., 14.

180 Katherine Miles and Anke Green, 2017, "The Role of Insurance Regulation and Supervision in Promoting Inclusive Insurance for Women," in Katherine Miles, Martina Wiedmaier-Pfister, Marie-Christina Dankmeyer, eds., 2017, *Mainstreaming Gender and Targeting Women in Inclusive Insurance: Perspectives and Emerging Lessons A Compendium of Technical Notes and Case Studies*, Eschborn, Germany: Women and Inclusive Insurance Project – GIZ, International Finance, 5.

181 Ibid., 5.

182 Ibid., 5.

development technical working group. One subcommittee of this commission focuses on gender data and analysis. It has worked on establishing the differences in access and usage of insurance between men and women and has identified specific gender barriers. The working group is also exploring the feasibility of collecting sex-disaggregated supply-side data from insurance companies on policyholders.¹⁸³

Reform legal and regulatory frameworks that hinder the financial inclusion of women: Laws and regulations are usually gender neutral, but they may still result in different outcomes for men and women, including unintended and negative impacts on women's financial inclusion. As mentioned above, from 12 to 45 percent of unbanked adults in ASEAN lacked the necessary documentation for a financial account.¹⁸⁴ Globally, women and girls disproportionately lack official forms of identity—in part due to the legal disparities between women and men. Tiered KYC requirements can address this significant barrier to financial inclusion. Tiered requirements mean allowing for different KYC account opening requirements for different types of accounts. For example, other forms of identification, such as having a third-party identify the individual, may be substituted for formal, official identification for those individuals opening basic, no-frills accounts.

Other reforms can allow for products that are tailored for specific market segments.

Provide guidance to AMS to support them in assessing any unintended regulatory impacts that hinder women's access to financial services. Results can feed into the financial inclusion strategy development process and prioritize which regulatory reforms to address: National financial inclusion strategies that have a strong focus on digital financial inclusion will benefit women even if women are not explicitly targeted. For example, in Indonesia, policies to promote basic accounts and savings for migrant workers will, by design, be more attractive to women. In Rwanda, the focus on mobile money, agent networks, and e-money deposits is women-inclusive. In Tanzania, the emphasis is on promoting branchless banking, risk-based tiered KYC processes, the national ID database, and enhancing the protection of small and unsophisticated borrowers. All these strategies have the potential to increase women's access.

Examples

- In Bangladesh, a simplified KYC requirement for mobile bank accounts and “no frills” bank accounts enables access to accounts for women.¹⁸⁵
- In Nigeria, the central bank introduced regulations to allow off-site ATMs and to increase ATM deployment in rural areas.¹⁸⁶

Address the development of financial infrastructure (this also addresses the action line: support access to finance for MSMEs by, among other measures,

183 Ibid., 5.

184 Analysis of dataset: Demircuc-Kunt et al. 2018b.

185 Women's World Banking 2016, 15.

186 Ibid., 15.

establishing and strengthening credit bureaus, and further developing credit guarantee systems): Inadequate financial infrastructure, such as a lack of credit bureaus or collateral registries, can create barriers to financial inclusion. The CSAP has already identified the development of credit bureaus and credit guarantee funds as an action line under strategic measure 141: building business opportunities for growth and employment, as well as increasing access to financial services. The discussion below is focused on credit bureaus only.

Integrated credit bureaus that access microfinance credit histories and small loans can increase access to finance. Additionally, credit bureaus should collect positive histories—as when loans have been paid back successfully—in addition to negative histories. Building credit histories is particularly beneficial for women who often lack access to traditional collateral. Currently in ASEAN, the following countries do not require microfinance institutions (MFIs) to provide information to credit agencies: Brunei Darussalam, Lao PDR, the Philippines, Singapore, and Thailand. In ASEAN, only Malaysia requires retailers to provide information to credit bureaus and only Brunei Darussalam and Malaysia require utilities to provide information to credit bureaus.¹⁸⁷

At the regional level, the development of credit agencies could be enhanced by a harmonization of approaches across AMS. Good practices for expanding the number of customers who can benefit from credit bureaus include expanding the credit and payment history data collected by credit bureaus. Data on MFI repayment history, and positive credit histories as well as negative histories should be collected by credit bureaus. These two steps will greatly improve the ability of ASEAN women to document their repayment records and subsequently to access credit.

Collateral registries and secured transaction systems (or movable collateral systems) are other forms of infrastructure that would disproportionately benefit women whose assets are more likely to be movable.¹⁸⁸ Guidance on strategies for overcoming women's lack of access to collateral, and, in turn, credit, could be included within the financial inclusion plan.

A good practice is to initiate and sustain collaboration and coordination among the relevant committees—in this case, between the ACCMSME and the AFMGM.

Examples

Of 12 countries surveyed by AFI, Indonesia, Malawi, and Namibia have included the development of credit bureaus in their national financial inclusion strategies. Three countries out of the 12 included payments infrastructure activities. Papua New Guinea intends to make progress with digital payments platforms and interoperability.¹⁸⁹

¹⁸⁷ Analysis of World Bank, 2018c, "Women, Business and the Law 2018," Dataset, World Bank. <http://wbl.worldbank.org/>.

¹⁸⁸ International Finance Corporation, 2011, *Strengthening Access to Finance for Women-Owned SMEs in Developing Countries*, Washington, D.C.: Global Partnership for Financial Inclusion and International Finance Corporation, 59.

¹⁸⁹ Women's World Banking 2016, 15.

Burundi, Malawi, Namibia, and Nigeria included the issue of moveable collateral in their strategies.¹⁹⁰ The Central Bank of Nigeria is supporting SME finance by setting up a Secured Transaction and National Collateral Registry. The registry will facilitate the use of movable assets and collateral for either business or consumer credit, expanding the scope of eligible assets. The Tanzanian national financial inclusion strategy includes options for alternative collateral, such as warehouse receipts which are important for improving financial access for smallholder farmers.

Often with the support of the International Finance Corporation (IFC), several countries have introduced practices to permit the use of movable collateral. Examples include, China, Ghana, Mexico, and Viet Nam.¹⁹¹ Since 2015, Costa Rica has had a law that supports the use of movable collateral. It provides the legal basis for the establishment of a facility allowing alternative forms of collateral. Nontraditional assets are now accepted as collateral for loans. These assets include: copyrights, intellectual property, and inventories, among others. The law also established the Registry of Movable Guarantees to support the use of movable collateral for obtaining loans.¹⁹²

Refine and strengthen financial consumer protection regulation to address concerns of women clients: There is evidence that women are more vulnerable than men and at great risk of abuse in the financial system. Unequal power dynamics between women and men in society can contribute to this vulnerability. Women's access to mechanisms for consumer complaints and redress can be constrained by their lower levels of literacy and education, and by safety issues.

The financial inclusion strategy would be strengthened by attending to the consumer protection needs of women. Financial consumer protection of women can be strengthened by adopting gender-sensitive complaint mechanisms that specifically address their awareness and access barriers. Identifying the differential consumer protection needs for women and men can be important for a regulator to meet its consumer protection responsibilities. ASEAN is well placed to conduct diagnostic studies across the region. This is more important than ever, given the rapid growth of mobile money and fintech, which are giving rise to new consumer protection concerns.

Examples

Consumer protection is one of the six pillars of Indonesia's national financial inclusion strategy. The objective is to provide a guarantee of security for consumers when they are interacting with financial institutions. The consumer protection pillar includes: (1) product transparency, (2) handling of consumer complaints, (3) mediation, and (4) consumer education.¹⁹³

In order to develop, implement, and monitor a consumer redress mechanism for financial services, Tanzania is reforming its Deposit Insurance Regulatory Framework.¹⁹⁴

Financial education and financial literacy: Good practice calls for addressing financial education and financial literacy within a financial inclusion strategy. This is the opportunity to identify gender differences in financial literacy levels and to devise

¹⁹⁰ Ibid., 16.

¹⁹¹ Ibid. 16.

¹⁹² Alliance for Financial Inclusion 2017a, 10.

¹⁹³ Women's World Banking 2016, 16.

¹⁹⁴ Ibid., 16.

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gender-sensitive strategies that can meet the specific needs of different sub-groups of women and men. Financial literacy is believed to be a significant barrier to women's financial inclusion. Evidence shows that women have lower levels of financial knowledge, have less confidence in their financial skills, and exhibit different financial behaviors than men.¹⁹⁵ Financial literacy levels are lower among women than men in each of the ASEAN countries and are particularly low in Brunei Darussalam, Lao PDR, Myanmar, and Viet Nam.¹⁹⁶ Gender differences in men's and women's societal roles have implications for both the content and delivery of financial education programs if they are to be effective for women.

The importance of financial education and financial literacy cannot be overstated, especially when an economy is rapidly becoming more digitalized. Digital finance has the potential to include vast numbers of people who were previously unserved by the financial system. The newly included will find a range of products and services available to them—whether from their mobile network operator, the superplatform that hosts their e-commerce business, or peer-to-peer lending operations. Entrepreneurs, workers, and consumers will all need the knowledge and skills to navigate a complex and evolving financial services landscape. They will need to know how to select and use appropriate products from appropriate sources, and they will need to know how to protect themselves from both over-indebtedness and fraud. Technology can also provide some of the solution. By leveraging technology, financial literacy can be disseminated on a large scale and through a range of channels such as websites, online games, SMS messages, videos, radio, and television. ASEAN has one action line that specifically addresses financial education. It focuses on insurance education.

Examples

All 12 national financial inclusion strategies surveyed by AFI have financial education and financial literacy components. For example:

- Papua New Guinea: The national strategy includes national surveys to improve understanding the behaviors of low-income customers; programs for rural-based informal workers were created in 50 percent of districts; and a pilot mobile phone financial literacy program.
- Burundi: The national strategy included creation of a financial literacy program for women.
- Malawi: The national strategy included a baseline survey, the development of a strategy, and the creation of national financial literacy network.

Countries beyond those surveyed by AFI also have financial education and financial literacy strategies:

- In the Philippines, the Bangko Sentral ng Pilipinas (BSP) Economic and Financial Learning Program integrates all of BSP's education outreach activities, enabling households and business to make better economic and financial decisions.

¹⁹⁵ International Network on Financial Education (INFE), 2013, Addressing Women's Needs for Financial Education, Paris: OECD, I.

¹⁹⁶ OECD and ACCMSME 2017, 134.

- The strategy in Paraguay includes a target in terms of the share of adults who will receive financial education: “[to] increase from 10 percent to 20 percent the percentage of adults who have received financial literacy training, technical assistance, or support to manage their personal finances.”¹⁹⁷

5.5.2 Action line: Implement a public awareness campaign for insurance

Women are recognized now as a potentially valuable market for insurance. Women’s loyalty as customers, their roles in making trusted referrals, and their relational rather than transactional approaches to financial services make them valuable to the insurance industry. Additionally, women are more risk aware and are concerned with protecting their families, not just themselves. Along with rising levels of education and incomes, women are having more influence over household decision making, making them an attractive market for insurance.¹⁹⁸

Women, however, face several barriers to the uptake of insurance, with the lack of insurance literacy and the related lack of trust in insurance and insurers ranking among the top challenges. Studies have shown that women lack awareness and knowledge of the relevance and concept of insurance and associated products.

Women differ from men in several ways that are relevant to insurance education. They are less confident in their decision making and less trusting of insurers. Men and women have different learning preferences related to the delivery channels, timing, and duration of the learning activity. The women’s market consists of several different segments, which also have different preferences for learning. To be effective, the content of insurance education campaigns needs to better focus on women’s needs and preferences, and on their financial risk management behaviors. Additionally, insurance education interventions need to meet women’s needs and accommodate their constraints in accessing the channels used for disseminating education and campaign messages.¹⁹⁹

Women often have less access to financial education due to constraints on their mobility or time availability. In some settings, safety concerns limit women’s attendance at financial education activities. High illiteracy rates can also be a barrier to accessing insurance education. Delivery channels that can reach large numbers of women and overcome some of these constraints include: print, TV, radio, mobile phones and the internet.

The lack of relevance of insurance education content can also bar women from benefitting fully from financial education. To be successful, insurance education for

¹⁹⁷ Women’s World Banking 2016,17.

¹⁹⁸ AXA Group, Accenture, and IFC, 2015, SHEforSHIELD: Insure Women to Better Protect All, Washington, D.C.: International Finance Corporation and AXA, 8.

¹⁹⁹ Isabel Schirmer and Philipp Decking. “Insurance Financial Literacy that Works for Women,” in Miles, Katherine, Martina Wiedmaier-Pfister, and Marie-Christina Dankmeyer, eds. 2017. Mainstreaming Gender and Targeting Women in Inclusive Insurance: Perspectives and Emerging Lessons A Compendium of Technical Notes and Case Studies. Eschborn, Germany: Women and Inclusive Insurance Project - GIZ, International Finance Corporation, and Women’s World Banking. 2.

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women should address their self-confidence and trust issues. It should raise awareness of the risks facing women and their families at different life stages and for different market segments. It should teach women about the potential outcomes of various risk mitigation strategies, including those they are currently using. An effective program must also enable women to identify with the information provided through the use of female characters or role models.

Actions that would advance WEE at the ASEAN regional level

Tailor insurance education messages to women's needs and gaps in their knowledge, skills, and attitudes toward insurance: Women's financial inclusion can be supported through insurance education campaigns that incorporate women's perspectives and that are designed to meet their needs. Segmenting the market is particularly important for insurance education purposes. This requires undertaking needs assessments (or market research) and consultations with women to establish their level of financial capabilities related to insurance and their awareness of diverse product types. Consultations can inform how women prioritize their financial risk management needs, indicating relevant content and the channels that reach women effectively.²⁰⁰

Recommendation

- The needs assessments and consultations with women in selected markets could be coordinated at a regional level to promote the sharing of lessons learned across ASEAN and promote more effective insurance education campaigns.

Examples

There are several examples of insurance education that has directly targeted women or that has been disseminated through channels that are readily accessible by women. The following are examples of efforts that could be gathered and shared across the AMS:

- In Peru, the *Sarita la Segurita* comic used pictures and plain language to explain how insurance could protect a community from the effects of the El Niño weather pattern.
- In South Africa and in Kenya, the insurance industry associations used radio programs to educate listeners about the importance and features of insurance.
- In the Dominican Republic, insurance messages were embedded into the telenovela *ContraCorriente*.
- In Mexico, financial literacy is embedded in the popular soap opera, *Mucho Corazón*. To increase its effectiveness, each episode is followed by a talk show that discusses related financial topics and provides the opportunity for audience questions and answers.²⁰¹
- In Singapore, the Tsao Foundation provides financial education for mature women, ages 40 to 60, to enable them to remain financially independent in old age through better financial

200 Ibid., 5.

201 Ibid., 4.

management. This is an example of targeting a particular market segment with specific messages.²⁰²

Resources

- Global Financial Education Program, “Risk Management and Insurance: Protect Your Family’s Future,” insurance education curricula, available here:
<https://www.microfinanceopportunities.org/4-work-with-us/mfo-in-the-field/project-list/fecc/>.

Tackle legislation and regulations that address the social norms constraining women’s financial inclusion and which are beyond the scope of the financial sector: The financial inclusion strategy should emphasize and address discriminatory laws and societal constraints that directly or indirectly limit women’s access to financial services. Although all countries in ASEAN have laws that allow women to sign contracts, register a business, and open a bank account, several countries including Brunei Darussalam, Indonesia, Malaysia, and Singapore also recognize personal law;²⁰³ moreover, Indonesia, Malaysia, and Myanmar recognize customary law.²⁰⁴ Both of these types of laws can supersede constitutional law. Additionally, discrimination in access to credit based on gender or marital status is not against the law in Brunei Darussalam, Indonesia, Malaysia, Myanmar, Singapore, or Thailand. In Lao PDR and Viet Nam, discrimination in access to credit based on marital status is not against the law. By harmonizing laws and regulations that remove constraints to women’s financial access at a regional level, financial inclusion across ASEAN will be improved.

5.5.3 Action line: Promote innovative financial inclusion via digital platforms²⁰⁵

The literature on mobile money, digital financial services, and fintech provides many policy recommendations for policies which, if implemented, will provide for safer and more inclusive access to finance through digital means.

202 Financial Literacy & Education, Russia Trust Fund, 2013, Women and Financial Literacy: OECD/INFE Evidence, Survey and Policy Responses, Washington, D.C.: Ministry of Finance of the Russian Federation/World Bank/OECD Trust Fund for Financial Literacy and Education, 93.

203 For example, Muslim personal law is a subset of Sharia law that applies to personal matters such as marriage, divorce and adoption (Tehreem Baht, “Is the Muslim Personal Law a Form of Sharia Law?” Quora (blog), <https://www.quora.com/Is-the-Muslim-Personal-law-a-form-of-Sharia-Law>). In Singapore, a Syariah (i.e., Sharia) legal system co-exists with a common law system. The “Syariah court applies special laws enacted exclusively for Singapore’s Muslim population.” This legal system is fully government-funded yet administered separately. (Black, Ann, 2012, Lessons from Singapore: An Evaluation of the Singapore Model of Legal Pluralism. Working Paper Series No. 026, Asian Law Institute. Singapore: National University of Singapore, <https://law.nus.edu.sg/asli/pdf/WPS026.pdf>, accessed July 26, 2018.)

204 Customary law in Indonesia and Malaysia refers to the unwritten traditional code of indigenous peoples that governs personal conduct (Encyclopædia Britannica, “Adat,” Encyclopædia Britannica online, <https://www.britannica.com/topic/adat>, accessed July 26, 2018).

205 The CSAP has an action line that should fall under the umbrella of formulating a financial inclusion strategy, so we include it here.

Actions that would advance WEE at the ASEAN regional level

Mobile money: Mobile money could be supported by implementing biometric SIM registration. Favorable regulations and government initiatives have allowed for the adoption of streamlined, technology-enabled eKYC (electronic know-your-customer) processes that remove barriers to opening accounts.²⁰⁶

Biometric identification for all adults: The provision of unique, biometric identification to all adults across ASEAN would greatly improve access to financial products, e-government, and a range of other services. The Aadhaar program in India is just one example. The AEC could play a role in researching and establishing best practices and developing guidelines for the AMS.

Fintech: Good practice suggests bringing together experienced regulators and ones who are new to fintech for policy dialogue and sharing of experiences.²⁰⁷ This dialogue would be especially beneficial if it includes investors, policymakers, and fintechs as well as representatives from countries both in and out of ASEAN. Collaboration across different sectoral groups within the AEC could accelerate this work and make it more effective (see the section Coordination and Collaboration Across Sectoral Bodies for more details and recommendations). Further, coordination and collaboration between sectoral bodies within the ASEAN Secretariat would undoubtedly lead to collaboration of the respective ministries at the national level. For fintech coordination, regulatory domains such as between financial regulators, telecommunications regulators, and ministries of internal affairs (which are oftentimes in charge of ensuring data security and protection) will become the norm rather than exception in the future.

Recommendations

The following measures, proposed by the Alliance for Financial Inclusion, could be considered for adoption at the ASEAN level:²⁰⁸

- Build a knowledge repository for financial regulators with relevant material on “fintech for financial inclusion” technological innovations that are transformative and relevant for financial inclusion including closing the gender gap.
- Facilitate peer learning, knowledge sharing, and capacity building on best practices in fintech for financial inclusion among regulators to support implementation of policy measures that will reinforce digital financial services. Share lessons on how to balance financial innovations with financial inclusion.
- Build the capacity of policymakers and regulators on practical exposure to fintech innovations; and train regulators in collaboration with technical

206 Hannig 2017. <https://www.afi-global.org/blog/2017/12/fintech-whats-it-financial-inclusion>

207 Ibid.

208 Ibid.

partners on relevant topics such as cybersecurity and AML/CFT²⁰⁹ regulatory issues.

Incorporate fintech into national financial inclusion strategies: The AFI also suggested that when considering fintech innovations, ask: “which innovation can be transformative” that is, which one can provide financial services to the previously financially excluded. For the AEC, it is fitting to ask which ones hold promise to close the gender gap in financial inclusion.

Examples of transformative fintech to date include:²¹⁰

- Biometric SIM card registration – enabling millions of people to open new mobile accounts safely in Pakistan.
- Tiered KYC systems – enabling women to set up accounts without documentation or minimum balance requirements with mobile bank agents in Nigeria.
- eKYC implementation of AML/CFT measures in India through the national biometric ID program Aadhaar
- An iris recognition solution in Jordan to assist vulnerable and unbanked Syrian refugees with food and cash-based assistance.

Regulators in ASEAN need to be well informed about how women engage with payment and other financial services available on superplatforms such as Alipay or Facebook, and what their specific consumer protection issues are.

Recommendations

In addition to these policy measures, the processes by which the policy measures and the financial inclusion strategy are formulated and then implemented should be conducted in a gender-sensitive way. The following are recommended good practices for developing a financial inclusion strategy that promotes women's financial inclusion:

- To ensure an effective and gender-sensitive policymaking process, set up a dedicated financial inclusion unit within the AEC and ensure that it has a gender diverse membership.
- Develop and document a vision for women's financial inclusion in ASEAN. It is recommended that the vision be: *to transition women from informal to formal forms of financial inclusion.*²¹¹ Many women rely on informal financial services; this is believed to have negative implications for women and the economy as a whole.

209 AML/CFT refers to the Anti-Money Laundering and Countering Financing of Terrorism Act 2009.

210 Hannig 2017, <https://www.afi-global.org/blog/2017/12/fintech-whats-it-financial-inclusion>

211 Alliance for Financial Inclusion 2017a.

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- During the development of the strategy, have a mechanism to consult with men and women representatives of each type of institutional stakeholder, including women's community groups. Encourage women's participation in any stakeholder consultations. There is evidence that engagement with women's business associations is beneficial for gender-sensitive policy reform.²¹²
- Support or develop diagnostic studies to establish the current state of financial inclusion for men and women in the region, barriers to inclusion, and policy priorities. Women are not a homogenous group. Diagnostic studies should define the financial inclusion profiles of different types of women, for example, based on age, geography, income level, and educational background. Each segment will have different financial needs and behaviors and may require different policy approaches. Gender gaps in both the demand and supply sides should be documented in the strategy.
- Support efforts to conduct capacity building for financial service providers on the need for women's financial inclusion.
- Develop a monitoring and evaluation framework for the strategy that has sex-disaggregated objectives and targets requiring the ongoing collection, analysis, and tracking of sex-disaggregated data.

The CSAP has an action line related to the processes for developing and implementing the financial inclusion strategy.

Examples

- In Zambia, existing FinScope research on financial inclusion was analyzed to assess women's financial inclusion. The study looked at the state of women's financial inclusion overall and how it compared to male financial inclusion.²¹³ A second study focused more closely on access to finance of women smallholder farmers.²¹⁴ The studies highlighted how women's disadvantaged position generally leads to their greater financial exclusion. The findings motivated the Bank of Zambia to mainstream gender in the financial sector.
- In the Solomon Islands, consultations were conducted with women-focused savings clubs and MFIs, a women's business association, and the Ministry of Women, to inform the financial inclusion strategy.²¹⁵

5.5.4 Action line: Elevate capacity building of ASEAN Member States to enhance financial inclusion ecosystem

This provides another opportunity to promote women's financial inclusion. ASEAN should ensure that this capacity building includes the sharing of evidence of the business case for targeting the women's market and good practices in advancing women's financial inclusion. The lack of sex-disaggregated data and low levels of

212 Ibid., 6.

213 FinScope, 2016, Women and Financial Inclusion in Zambia, cited in Alliance for Financial Inclusion 2017a, 5.

214 FinScope, 2016, Women Smallholder Farmers: Managing their Financial Lives, cited in Alliance for Financial Inclusion 2017a, 5.

215 Alliance for Financial Inclusion 2017a, 6.

awareness can be barriers to understanding the importance of supporting women's financial inclusion.²¹⁶

Resources

The following organizations have evidence and other materials that support the business case for women's financial inclusion.

- IFC (International Finance Corporation):
https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/priorities/entrepreneurship/investing+in+women_new+evidence+for+the+business+case.
- The Global Banking Alliance for Women: <http://www.gbaforwomen.org/>.

²¹⁶ Alliance for Financial Inclusion 2017a, 15.

6 RETRAINING AND RESKILLING WOMEN WORKERS

The employment projections for women in the ASEAN region are mixed. One analysis of ASEAN economic integration through trade liberalization and supportive economic policies found that it is expected to leave the existing gender gap intact.²¹⁷ In the absence of policy changes to address gender inequality, the AEC Blueprint is expected to lead to a lower relative female share of exports, due to informalization, lower wages, higher labor force dropout, and external migration out of ASEAN. It is expected to produce few changes in employment or wages for women.²¹⁸ Two other studies looked at how the economy and jobs will change in reaction new technologies. In 2018, the Asian Development Bank (ADB) examined how technology affects jobs in their 2018 Outlook report. The International Labor Organization (ILO) also examined the impact of new technology on jobs and firms in ASEAN, but with a focus on a few specific sectors.²¹⁹ These studies found significant negative impacts on women workers. The following discussion reviews these studies and then considers the implications for women.

New technologies are the foundation for better paying jobs and economic growth. Nevertheless, there is growing anxiety that new technologies will cause widespread job loss.²²⁰ The ADB report includes an extensive analysis of the changes to be expected from technology and the Fourth Industrial Revolution across Asia and found reasons for both optimism and caution.²²¹

On the positive side, the ADB 2018 Outlook report states that:

- “New technologies often automate only some tasks of a job, not the whole job.” Thus, technology will make workers more productive.
- “Job automation goes ahead only where both technical and economically feasible.” In several countries, the cost of labor is still low enough that investment in technology is not economical, at this time.
- “Rising demand [will] offset job displacement driven by automation.”
 - Rising domestic demand will more than compensate for jobs displaced by technology.
 - Production returning to advanced economies may not threaten employment in Asia.
- “Technological change and economic growth create new occupations and industries.”
 - New types of jobs have emerged to handle new technologies in the past, and it is expected this will happen in the future.²²²

217 Friedrich Ebert Stiftung, UN Women, and ASEAN 2016, 2.

218 Ibid., 85

219 Chang, Rynhart, and Huynh, 2016.

220 ADB 2018, xv.

221 Defined as industry in which sophisticated robots and computing power underpin production.

222 ADB 2018, xiv–xv.

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There are also several worrying trends. The report questioned whether manufacturing will remain an engine of growth creation in Asia. Even as new technology creates jobs, automation will hurt workers in certain types of jobs. In fact, technology improvements within global value chains have been accompanied lower employment in all sectors (agriculture, manufacturing, and services), except for in the Philippines and Viet Nam.²²³

The technical feasibility of automating tasks, combining machines and computing power, is often greater for routine and manual tasks such as repetitive physical operations (e.g., tasks of sewing machine operators) and routine and cognitive tasks (e.g., tasks performed by accountants, bank tellers, and some BPO workers). These are the types of task that will be displaced by automation. Job demand will be strongest for nonroutine cognitive, social, and ICT tasks. In fact, the ADB found that in Indonesia, Thailand, and Viet Nam, jobs less intensive in ICT and nonroutine cognitive tasks, and jobs that heavily involve manual tasks are already disappearing.²²⁴

The ADB report examined the impact of introducing new technologies in a few selected sectors in Asia, including agriculture, retail, and financial services. The International Labor Organization (ILO), in a separate report also examined the impact of new technology on jobs and firms in ASEAN. The ILO focused on five priority sectors for ASEAN: electrical and electronics; textiles, clothing and footwear; business process outsourcing; retail; and automotive and auto parts. The ILO found that technology will increase productivity across all sectors, making some occupations redundant but also creating new ones²²⁵.

The findings of both reports are summarized here by sector.

Agriculture. This sector is the top employer in several ASEAN countries. By 2030, if current trends continue, 43 percent of the workforce in Lao PDR and 28 percent in Myanmar will still be employed in the agricultural sector.²²⁶ Currently, in the group of countries that includes Cambodia, Lao PDR, Myanmar, and Viet Nam, women's engagement in agriculture ranges from 48 percent in Viet Nam to 69 percent in Myanmar. If inequality in the region is to be successfully addressed, agricultural productivity and incomes must rise. Productivity can be enhanced by extending the use of proven technologies such as irrigation, pesticides, or high-yielding varieties and by using Fourth Industrial Revolution technologies such as bioinformatics and precision agriculture, and by using drones and automatic controls for watering. Cheap and accessible ICT technologies can benefit smallholder farmers by connecting them with markets and extension information. For farmers to benefit, they

223 Ibid, 74.

224 Ibid., 96.

225 Chang, Rynhart, and Huynh 2016, xv.

226 ADB, 2018, 111.

must have affordable access to mobile phones and the internet, as well as a reliable network.²²⁷

Electrical and electronics. This is a prominent sector in ASEAN with more than 2.5 million workers employed. Young women are dominant in this industry, particularly in labor-intensive assembly line jobs.²²⁸ Three technologies are poised to disrupt the sector: robotic automation, 3D printing, and the Internet of Things (IoT). The Internet of Things represents an opportunity for the industry due to strong demand. Currently, people are more cost-effective than robots, but lower skilled jobs, such as assembly work, may be at risk. There is a potential to lose 60 percent of salaried workers in Indonesia, the Philippines, and Viet Nam.

Textiles, clothing, and footwear. This is a highly competitive sector shaped by large multinational brands and retailers. It traditionally has been a conduit for individuals transitioning to formal wage employment. The sector provides over 9 million jobs, most of which are held by young women. The female share of employment exceeds 70 percent in Cambodia, Lao PDR, the Philippines, Thailand, and Viet Nam. It is one of the most labor-intensive industries and therefore at the highest risk of automation. Robotic automation poses the biggest risk for jobs through production moving closer to end markets. The shares of workers that are at high risk of displacement range from 64 percent in Indonesia to 88 percent in Cambodia. Lower skilled workers will be strongly and negatively impacted, while the demand for higher skilled technicians and engineers will increase.

Business process outsourcing (BPO). This sector has experienced amazing growth in the Philippines where it employs about 1 million workers. The introduction of cloud computing, software automation, and knowledge process outsourcing (KPO) will have a large impact on workers in call centers. The shift to KPO, which is a higher value service, has serious implications for the 600,000 workers in the Philippines who are at high risk due to automation. At the same time, KPO services will require higher skilled workers, including those with credentials in medicine or law, for example. The impacts on women could be significant as they make up 59 percent of the BPO workforce, and a slightly higher share in call centers.

Financial services. Financial services are facing disruption from different types of technology. One of these is blockchain (or distributed ledger technology [DLT]), and it said to have the potential to revolutionize the financial sector and the microcredit sector especially. In microfinance, DLT functions as an open accounting system eliminating the need for audits or documentation. It allows unbanked clients to build personal credit histories and thus a bankable reputation. Pilots of DLT to support microfinance suggest that operational costs can be cut down to 10 percent of traditional costs while providing faster transaction times. Some believe that: "DLT

227 ADB, 2018, 111.

228 It is estimated that the share of women workers in electronics factories ranged from 60 to 90 percent in Malaysia, Viet Nam, and Thailand, respectively, in 2011 (Laura Villadiego, "The Gender Gap in Electronics Factories: Women Exposed to Chemicals and Lower Pay," Equal Times (online), December 22, 2017).

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could be a real game changer by lowering costs and doing away with paperwork and bureaucratic hurdles that preclude access for SMEs."²²⁹

Trade finance is another area in which the ADB sees the potential for disruption. The global trade finance gap was \$1.5 trillion in 2016, and that gap was particularly acute in Asia. MSMEs face various barriers in accessing trade finance, including lack information about available financial services and a lack of collateral or a documented history of past transactions.

Large, global e-commerce platforms, or superplatforms, have established payment systems to provide a seamless experience for users. Ant Financial Group is providing lending (catering mostly to SMEs) as well as training and tailored advice. These services have not yet made deep inroads into Southeast Asia. (This subject is further discussed in Section 5.3 earlier on page 55.)

Retail. The outlook for this sector is rosy as it is poised for growth with an expanding consumer market that currently includes 632 million people. The retail sector is the largest provider of jobs in ASEAN, with 44.6 million workers, or about 16 percent of total employment and 44 percent of total services jobs. These jobs are the least threatened by technology. Disruptive technologies in retail include, among other things, mobile and e-commerce platforms, but those technologies have yet to be taken up widely in the region.

However, as technology becomes more pervasive through investments by larger retail outfits, there will be a high risk of automation. The biggest barrier to technology uptake in this sector is local, traditional retail which comprises 80 percent or more of the region's outlets. However, modern retail outlets are expanding and increasing their market share. Potentially, over three-quarters of workers in this sector across the region could be at risk of being displaced: 68 percent Thailand, 71 percent Cambodia, 85 percent Indonesia, and 86 percent in the Philippines.

In theory, mobile and e-commerce platforms could massively displace conventional retail establishments. However, retail outlets continue to be popular, because ASEAN consumers in general, do not trust online or mobile shopping. As of now, e-commerce has only a small share of the retail market, with less than 1 percent of sales. Less than one-third of companies have a website and only about half use email to communicate. Yet, developing economies in ASEAN are leading the world in social commerce in which sales are online but payments are offline (cash on delivery).

The popularity of social media has turned these sites into free e-commerce platforms. In 2016 in Thailand, the largest of these markets, 51 percent of online shoppers reported buying something on social media, while 31 percent of online shoppers in Malaysia did the same. By comparison, the global average was 16

229 ADB 2018, 23.

percent for that year.²³⁰ Social media sales account for 30 percent of e-commerce transactions in Southeast Asia. In the ASEAN region, 47 percent of the population is active on social media with 42 percent accessing it from mobile devices. Facebook is widely used in Viet Nam (64 million users), Indonesia (130 million users), and the Philippines.²³¹ In fact, Indonesia has the fourth-largest number of Facebook users globally.²³² At the same time, enterprises seeking to intensify their e-commerce and mobile shopping presence are expected to recruit people with strong digital marketing and social media skills in addition to data analysis, programming, and supply chain management experience.

6.1 Challenges to Women Workers in the Digital Economy

The above analysis shows that women are in sectors and occupations that are at high risk of displacement from automation. Women in the Philippines and Viet Nam are estimated to face more than twice the probability of being in a high-risk occupation than their male counterparts. In Indonesia and Thailand, the relative probability for women to occupy a high-risk job compared to men is approximately 1.5 times higher. ASEAN's textile, clothes, and footwear sector, electrical and electronics sector, BPO sector, and retail sector all face high risk from automation, jeopardizing employment opportunities for millions of the region's female workers. The ILO has found that technology improvements within global value chains have already resulted in lower employment across all sectors in Asia, except for in the Philippines and Viet Nam.²³³ Others have projected that globally "gender, inter-regional, inter-generational and income inequalities" will likely widen further as the economy transitions.²³⁴

The trends indicate an increase in jobs that require proficiency in nonroutine cognitive and ICT tasks and a decline in opportunities involving intensive manual work. Workers with weaker basic skills as well as older workers, the poor, those living in rural areas, and women will be left behind.²³⁵

Many workers will not have the skills and education that new jobs will require. The skills that will be in high demand include the ability to do cognitive, social interaction, and ICT tasks. Workers will need to have completed high school or have some tertiary education. The bright spot in this picture is that wages for these types of jobs are twice as high as wages for low-intensity jobs.

The advance of the digital economy means that women workers will need skills development and retraining, as well as social protection to provide a safety net in case of unemployment. It is predicted that globally, workers will have to engage in

²³⁰ Analysis of Global Findex Database, Demircuc-Kunt et al. 2018b.

²³¹ Jennings 2018.

²³² Asian Development Bank 2018, 85.

²³³ Chang, Rynhart, and Huynh 2016, 74.

²³⁴ World Economic Forum, and The Boston Consulting Group, 2018, Towards a Reskilling Revolution: A Future of Jobs for All, Insight Report, New York: World Economic Forum, 1.

²³⁵ United Nations ESCAP, and UN Women, n.d., 7.

lifelong learning if they are to remain employable. In ASEAN, it is likely that displaced workers who have low skill and education levels will join the informal sector and/or pursue less secure and less remunerative jobs. It is projected that under the AEC Blueprint, sectors that involve informal and vulnerable employment will gain jobs. In fact, in five of the ASEAN countries, vulnerable jobs are estimated to make up one-half of the projected new jobs.²³⁶

Women workers are further challenged by a lack of attention at the policy level within the region. The focus of attention is largely on developing MSMEs, most of which are unlikely to create large volumes of jobs. In the area of women's employment, most of the policy focus is on developing women's leadership.

6.2 Digital Economy Jobs

While more traditional jobs disappear due to automation, demand is increasing for jobs that require ICT skills. Although there is a shortage of skilled ICT workers, women in general are unable to fill these jobs.

Jobs that use ICTs or digital technologies have the potential to benefit women workers in several ways. They offer the possibility of flexible hours and work locations, which would allow women to better juggle work and home responsibilities. Jobs that involve working with ICTs are better paid and the skills are often transferrable. Digital technologies operate in a borderless world, allowing workers to provide services or products to international markets through online platforms.

A study that found that when businesses in Viet Nam increased their use of ICT, it had positive effects for women in the labor market. The research found that college educated women made up a greater proportion of employees at firms that had higher ICT use. The impact was greater for women who were skilled. But the effect was weaker for women working in complex industries where a higher proportion of male employees had highly technical skills. The report found that this supports the observation that ICT use increases relative demand for non-routine, interactive tasks raising the relative share of women employed.²³⁷

The authors of the report also contend that business use of ICT has been a boon to women. And they concluded that the uptake of ICT has more potential to generate growth of high-quality employment for women, when compared to programs focused on providing capital and training.²³⁸

6.3 Challenges to Women Taking Up Digital Economy Jobs

Several factors pose challenges to women who wish to pursue careers or businesses that require significant ICT or digital technology skills, starting with

²³⁶ United Nations 2017, 17.

²³⁷ ADB, 2018, 72.

²³⁸ Ibid.

education. Girls and young women are less likely to study and graduate in the subjects that are necessary for these careers. Access and use of technology builds up digital literacy. With less access to technology in general, women have lower levels of digital literacy.

Women face barriers to entry and advancement in the ICT industry. The tech industry is globally perceived to be male-dominated. In the United States in 2015, only 25 percent of ICT specialists were women, while in the European Union in 2011, only 16 percent were women.²³⁹ Traditional gender hierarchy patterns are prevalent with women in low-skilled, lower wage jobs.²⁴⁰ Social and cultural norms also hold women back. Stereotypes can keep girls from pursuing studies in computer science and engineering. Role models and mentors who could inspire and support women in their studies and careers are lacking. Companies are not structuring their work in a flexible way that could accommodate women's schedules, even though this is technically feasible. Furthermore, the digital economy demands increasingly advanced technical abilities that require workers to continually upgrade their skills. Women face disadvantages when it comes to training and skills upgrading. There is a bias toward investing in men's education before women's. When women take time out of the workforce for family reasons, their skills erode.

6.4 CSAP Actions Lines that Can Promote WEE for Women Workers

There are surprisingly few action lines within the CSAP that directly relate to helping workers prepare for and adjust to the digital economy, let alone action lines related to women workers. All areas of the CSAP were reviewed carefully to identify opportunities for actions that will promote the capabilities of workers to productively contribute to the digital economy. Four action lines were identified:

- Intensify the engagement of academia, private sector, and relevant partners in the planning, implementation, and assessment of joint undertakings in human resource development, and research and development
- Continue ongoing efforts to narrow the gaps between demand and supply in ICT human resources
- Develop best practices for next generation telecenters
- Promote dialogue and induce awareness on global megatrends and emerging trade Related Issues in ASEAN

6.4.1 Action line: Intensify the engagement of academia, private sector, and relevant partners in the planning, implementation,

239 United Nations Conference on Trade and Development (UNCTAD), 2017c, Information Economy Report 2017: Digitalization, Trade and Development, Switzerland: UNCTAD.

240 Powell and Chang 2016, 3.

and assessment of joint undertakings in human resource development, and research and development

The question of reskilling and training workers to prepare for the jobs of the future is receiving increased attention recently. This includes the establishment of the Global Commission on the Future of Work in August 2017.²⁴¹ At this time, there are more questions than answers about what it will take to scale up reskilling to meet the challenges posed by technology-based disruption of the labor market.

What is clear is that countries will need to encourage continuous reskilling and lifelong learning in order to develop and maintain human resources with the capabilities necessary to fuel inclusive economic growth.²⁴² Skills development systems will need to accomplish two things simultaneously: deliver basic skills that allow people to embrace evolving technological opportunities; and facilitate dynamic, lifelong learning so that workers can keep up with digitalization.²⁴³

A global survey of executives in large companies found that a good share of them see addressing the skills gap as a top priority and a competitive imperative. However, only 16 percent of them reported that their company is prepared to address this skills gap. At the same time, the private sector believes that it should take the lead on reskilling workers, although in partnership with other stakeholders including governments, educators, and workers.²⁴⁴

While the private sector has expressed the desire to take the lead, other commentators have stressed the need for governments to take a proactive role.²⁴⁵ Collaborating with academia, the private sector, and other stakeholders to learn together, collaborate, and pool resources will be key to success and a good first step for the AEC. There is scope for policymakers to support analyses to inform worker reskilling initiatives, for government programs to provide reskilling and worker training, and for governments to offer incentives for workers and firms to upgrade their skills or develop new ones.

241 International Labor Organization, 2018b, "Skills Policies and Systems for a Future Workforce," #8, Issue Brief, Geneva.

242 World Economic Forum, and The Boston Consulting Group, 2018, *Towards a Reskilling Revolution: A Future of Jobs for All*, Insight Report. New York: World Economic Forum, 17.

243 International Labor Organization 2018b, 1.

244 Pablo Illanes et al., 2018, "Retraining and Reskilling Workers in the Age of Automation," Washington, D.C.: McKinsey & Company, 3.

245 World Bank, 2018a, "The Changing Nature of Work: Concept Note," *World Development Report 2019*. Washington, D.C.: World Bank, 28.

Forecasting future skill needs: Traditional worker training programs have been criticized for uptake of new lack of requirements of predict and allow workers to investments. companies, safety nets. has developed job transition required that was first market to The to other to promote planning, among other applications.²⁴⁶

Singapore SkillsFuture

SkillsFuture describes itself as “a national movement to provide Singaporeans with the opportunities to develop their fullest potential throughout life, regardless of their starting position.” The initiative has four key thrusts:

1. Help individuals make well-informed choices in education, training, and careers
2. Develop an integrated, high-quality system of education and training that responds to constantly evolving needs
3. Promote employer recognition and career development based on skills and mastery
4. Foster a culture that supports and celebrates lifelong learning

not resulting in the sufficient jobs. One of the factors was a understanding of the changing the market. The ability to plan for job transitions would policymakers, companies, and prioritize their actions and This could reduce the strain on public finances, and social The World Economic Forum a practical tool that can identify opportunities and thus the reskilling. It is a data-driven tool applied to the U.S. labor predict job transition pathways. methodology can be extended countries and it might be used gender inclusive workforce

Programa Valentina

An expanding technology sector in Guatemala has been creating jobs since 2005. The critical need for appropriate training and job placement programs led to the establishment of the Programa Valentina of the Sergio Paiz Andrade Foundation, FUNSEPA. This program trains disadvantaged young Guatemalans for employment in the technology sector. It was designed with the employers' needs in mind and seeks to emulate the experience of working in technology companies. When finished, certified participants are equipped to work in entry level jobs in the tech industry. Programa Valentina aspires to be the “leading open-source training and placement program for the tech industry in Latin America by 2025.”

Source: UNCTAD, 2017c. *Information Economy Report 2017: Digitalization, Trade and Development*. Switzerland: UNCTAD, 91

Examples

246 World Economic Forum and The Boston Consulting Group 2018, 18.

Access to lifelong learning and retraining can be provided by government or facilitated through financial incentives for firms or individuals. Examples of such programs include the following:

- Singapore has recognized that with the faster pace of technological change, skills upgrading is critical to maintaining a competitive economy. The **SkillsFuture initiative** was introduced in 2015, offering educational credit to Singaporeans above 25 years to encourage individual ownership of skills development and lifelong learning.
- Another example comes from Sweden which has established **Job Security Councils** across the country. These are nonprofit organizations governed by representatives of employers and employees and financed by employers. The goal is to encourage a seamless transition for laid-off workers by planning ahead and by providing guidance and training, if necessary. This program has resulted in over 85 percent of workers being re-employed within a year.²⁴⁷
- The Republic of Korea's **Employment Insurance Fund** provides direct funding for SME workforce training.
- In Malaysia, the **Human Resources Development Fund**, funded by contributions of employers in the manufacturing and service sectors, aims to develop quality human capital and a world class workforce. Training grants are open to all employers that are both registered and paying the levy that underwrites all or a major portion of the costs of employee trainings.²⁴⁸

Resources

- Global Commission on the Future of Work: http://www.ilo.org/global/topics/future-of-work/WCMS_569528/lang--en/index.htm.
- Digital Skills Toolkit (Decent Jobs for Youth Initiative, ITU): <https://www.itu.int/en/ITU-D/Digital-Inclusion/Documents/ITU%20Digital%20Skills%20Toolkit.pdf>.

6.4.2 Action line: Continue ongoing efforts to narrow the gaps between demand and supply in ICT human resources

This action line is under the human capital development strategic measure. It is about strengthening the professional development of the ICT workforce in the region. The first area of focus for improving a nation's ICT skills is usually the formal education system. This report does not address the formal education system. Rather, the emphasis here is on enhancing the ICT abilities of adult women who are out of school, which is a greater challenge.

The public sector has a role in ensuring that all people have the basic ICT skills needed to work in the digital economy. This starts with digital literacy (see section above on digital literacy).

Narrowing the gap between the demand and supply of ICT skills in the workforce involves three types of actions: (1) forecasting the digital skills which will be in demand in the future; (2) disseminating information on these needs to job seekers

247 Ibid., 28.

248 3E Accounting, "What is HRDF?" Blog post, 3E Accounting, <https://www.3ecpa.com.my/blog/what-is-hrdf/>, accessed June 2, 2018.

and firms; and (3) making training systems more responsive to market needs. WEE can be promoted through the latter two actions.

Policymakers have a role to play in sharing as widely as possible the information on demand for digital skills. This includes disseminating the information as widely as possible, particularly to education and training providers, to provide guidance to jobseekers and to workers who are considering upgrading or adding new skills that will be in demand.

Extra efforts could be made to ensure the information reaches women, for example by disseminating it to women's organizations as well as women-focused training institutions. At the policy level, steps can also be taken to promote role models of successful women with ICT skills to make ICT careers more attractive to girls and women.

Good practice in building ICT skills entails making training systems more responsive to industry needs through improved governance, requiring close coordination between the ICT industry, training institutions and the government. This also includes targeting funding for training programs based on the skills that are expected to be in demand in the future. The public sector can also play an important role in assessing the quality of private and public training institutions. This can assist in ensuring that the curricula offered are aligned with current and projected industry needs.

Work experience is an important element in the production of human capital. The nature of the job shapes the knowledge and skills that an employee learns.²⁴⁹ Therefore, work experiences need to be included as a means of transferring ICT skills to women. This could include apprenticeships, internships, and job placements that allow individuals to build skills on the job.

Ensuring that skills training works for women: Both action lines above are related to skills training for women: whether specific reskilling for job transition in general or skills training to prepare for a job in ICTs. Women's training needs differ from men's in important ways. Actions that can improve the outcomes of training and reskilling for women are listed below.

When it comes to the mismatch between the supply of skills and labor market demand, women are often one of the most affected groups.²⁵⁰ Training for women is often supply-driven and focused on female-dominated sectors.

Demand-driven. Women are able to reach a wider range of jobs and occupations and even enter into male-dominated sectors, when skills training is demand-driven. As such, skills training can be a key component of breaking down occupational segregation.

249 World Bank 2018a, I.

250 Kring, Sriani Ameratunga, 2017, Gender in Employment Policies and Programmes: What Works for Women? Employment Working Paper No. 235, Geneva: International Labor Organization, 32.

Comprehensive approach. Skills training for women needs to be part of a comprehensive approach. It is most effective when accompanied by job-search support, opportunities for work experience, and mentoring and guidance. Skills training should also include so-called soft skills such as communication techniques and problem-solving. These have been shown to be very valuable to women's employment outcomes. For example, the youth employment program *Juventud y Empleo* in the Dominican Republic, targeted young women with more than just technical skills, and found that the soft skills component significantly enhanced their employment prospects.²²

Adapt to women's circumstances. Effective skills training programs for women take into account women's care responsibilities and provide flexible pedagogies. They also include: appropriate scheduling times for training; provision of transport or grants/subsidies; and additional basic skills where necessary (e.g., literacy and numeracy training).

Set targets. Participation of women in trainings has been shown to increase when there are targets and quotas for gender balance.

Remove bias. Gender sensitization of training staff and management as well as the removal of any bias or stereotypes in the curricula also are beneficial for women's participation and outcomes.

Consider apprenticeships. In addition to training, apprenticeships can increase women's labor force opportunities—even in sectors dominated by men, such as ICTs. Setting targets, quotas and providing financial incentives to both trainers and women can help break down barriers to participation.²⁵¹

Opportunities for the AEC

As part of a coalition focused on human resource development, the AEC is well placed to ensure that a gender perspective is applied to the planning, implementation, and assessment of the joint undertakings. Specific actions that would contribute to WEE in this area include the following:

- Develop guidance on the methodology to forecast future skill needs and job transition pathways that promotes gender inclusive workforce planning. Provide support to AMS for implementation of the skill forecasting tool.
- Develop guidance on how to set gender targets and quotas and then track them, for reskilling programs. Include consideration of incentives.
- Develop guidelines on how to review and revise curricula to remove gender bias and stereotypes.
- Implement a pilot program to test how gender-sensitive training programs can build skills and capacities of women workers. This would include providing gender sensitization training and revising curricula.

251 Ibid., 32–33.

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- Ensure that representatives of women workers' interests are included in the engagement of all stakeholders. This could include union representatives from industries in which women form the majority of workers, from women's associations, and from women's rights organizations, among others. Additionally, representatives of women's groups within ASEAN could be included in the dialogue.

Interventions to narrow the gap in the supply and demand for ICT skills provide an excellent opportunity to promote WEE. In addition to adapting the points mentioned above to the ICT setting, the following actions would also advance women's uptake of ICT skills:

- Promote successful women workers or employers in ICT jobs as role models.
- Provide awards for and create publicity around women who successfully complete a high-quality ICT training program and transition to ICT jobs.

6.4.3 Action line: Develop best practices for next generation telecenters

This action line was addressed under the MSME section (see the Affordability section in Chapter 4, Development of Women-owned MSMEs in the Digital Economy).

6.4.4 Action line: Promote dialogue and induce awareness on global megatrends and emerging trade related issues in ASEAN

This action line relates to engendering and maintaining an industrial relations environment that facilitates investing in workers and in firms as learning centers for industrial upgrading and managing labor adjustments as the ASEAN community becomes more integrated. Including representatives of women workers, particularly from the industries in which women workers are dominant, such as garments and electronics, would ensure that women's perspectives and concerns are included in the dialogue. A more inclusive ASEAN would be promoted by addressing women's specific needs, preferences, and constraints in dialogues regarding industrial upgrading and managing labor adjustments. This is also an opportunity for several sectoral bodies within the AEC to work together and collaborate to better understand the projected trends in employment in the digital economy and the implications for women.

7 CROSS-CUTTING ISSUES

The purpose of this project has been to identify specific action lines within the AEC CSAP that provide opportunities for measures that can promote WEE. The review of literature and, more importantly, interviews with key informants, also highlighted actions which can promote WEE but are applicable to many action lines and strategic measures. One of these cross-cutting issues is the need for sex-disaggregated data. This need applies to every area of WEE addressed in this paper. Similarly, the need for women and their perspectives to be represented in all policy dialogues and formulations cuts across almost all CSAP strategic measures and action lines.

Another issue that emerged, which is not as obviously linked to WEE, is the need to work more collaboratively within the AEC itself, but also across ASEAN communities, particularly across the AEC and the ASCC. This is imperative, not only due to the nature of the challenges facing women's equality in ASEAN, but also, and perhaps more importantly, due to the changes and challenges that are emerging with the growth of the digital economy.

Finally, the primary research revealed that the understanding of gender equality and the status of WEE in the ASEAN region varies widely among ASEAN stakeholders, including ASEC staff. For this reason, the first recommendation for cross-cutting actions is for training and sensitizing ASEC staff on gender mainstreaming.

7.1 Institutionalizing Gender Mainstreaming in the AEC

"Women's needs must be at the heart of policy and program design, not incidental or supplementary to it."²⁵²

Mainstreaming WEE will involve a process of assessing how any planned actions or policies of the AEC affect women. The objective is to make women's concerns an integral part of the design, implementation, monitoring, and evaluating of programs and policies. This requires that policy analysis and formulation are informed by considerations of gender differences and inequalities. Additionally, it implies identifying and taking advantage of opportunities to narrow gender gaps and promote greater equality between women and men. The ultimate goal is to achieve gender equality in outcomes.²⁵³ Importantly, the pursuit and achievement of gender equality will contribute to the achievement of other social and economic achievements such as economic growth and efficiency.

Mainstreaming women's economic empowerment into the work of the AEC implies that gender equality become one of the targeted policy outcomes for the AEC along with resilient and inclusive economic growth. Mainstreaming WEE will require

252 Broadband Commission Working Group on the Digital Gender Divide 2017a, 23.

253 United Nations Office of the Special Advisor on Gender Issues and Department of Economic and Social Affairs 2002, 1.

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assessing how planned policies or actions will impact both men and women, given underlying gender differences. Such analysis will promote more informed and evidence-based policy options. It will enable policymakers to identify actions that can narrow gender gaps.

Mainstreaming will involve the inclusion of gender perspectives at several points in the policy process, including:

- Formulation of the policy issue/question to be addressed.
- Definition of the information needed to assess policy options.
- Assessment of the implications or impacts of different options, by gender because they might have different costs and benefits for men and women. Using gender analysis tools to assess strategies, policies, and frameworks can ensure that gender equality considerations are included.
- Determination of who will be consulted and how. Consult with gender equality advocates and experts from the beginning to ensure that policy development incorporates and reflects women's perspectives, circumstances, preferences, and capabilities. Consider consulting with women in local communities.
- The formulation of recommendations for policy choices. These should be based on the information and analyses on gender equality resulting from the earlier steps. Where possible, set targets for gender equality and track and report progress against these targets regularly.

Recommendations

- A program of internal capacity-building on gender sensitization and mainstreaming WEE will support AEC sectoral bodies to build the knowledge, skills, and attitudes required to mainstream WEE throughout the workplan. Training and capacity building on gender sensitization will lead to a shared vision within the AEC of the meaning and objectives of gender mainstreaming. It will also result in a shared language around this subject.
- Effective gender mainstreaming will require resources, ongoing attention, and political capital as experience has shown that gender mainstreaming can be difficult to implement.
- Coordination of mainstreaming efforts would be aided by the establishment of an office within the AEC Department in the ASEAN Secretariat to build capacity, provide resources, and serve as a point of contact. This office should also track progress of gender mainstreaming activities by means of a robust monitoring and evaluation program. As this office will not be associated with a specific ministerial meeting, it could be established as a new division within the ASEAN Integration Monitoring Directorate (AIMD).

Examples

A good example of gender mainstreaming comes from the Philippines. The Philippines government adopted a "**Magna Carta of Women**" in order to translate the Convention on the Elimination of All

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Forms of Discrimination against Women (CEDAW) into national law. The objective of the Magna Carta of Women is to eliminate discrimination against women and clearly articulate women's rights in the Philippines. Importantly, this law mandates that all government offices, at all levels adopt gender mainstreaming as the strategy for implementing the law.

Implementation of programs and policies is supported by a mandatory gender budget consisting of five percent of all government budgets. Additionally, the law requires:

- Planning, budgeting, monitoring and evaluation for gender and development;
- Creating and/or strengthening gender and development focal points; and
- Generating and maintaining gender statistics and sex-disaggregated databases to aid in planning, programming, and policy formulation.²⁵⁴

To communicate the importance of this law, the Philippine Commission on Women (PCW), a separate office reporting to the president of the country, is charged with primary policymaking and coordinating responsibilities as well as ensuring that government offices have the capacity to effectively implement the law. The PCW has developed tools to support gender mainstreaming throughout government agencies (see <http://www.pcw.gov.ph/> for more details).

Resources

- GSMA, the Association for Progressive Communications, A4AI, and the World Wide Web Foundation have developed a gender-responsive ICT policy curriculum to train policymakers in key policy areas to address the digital gender gap.²⁵⁵ The *Toolkit for Researching Women's Internet Access and Use* was released in July 2018 (<http://a4ai.org/measuring-womens-connectivity-a-toolkit-for-researching-access-and-use/>).²⁵⁶
- The GSMA developed a practical training course for government officials to support them in integrating gender perspectives in strategies, policies, plans, and budgets. It is available free of charge online and will also be rolled out through the GSMA's Capacity Building partner network (www.gsmatraining.com).
- USAID developed a Gender Digital Divide Online Course to build the capacity of USAID staff to better understand key gender and ICT considerations when designing and implementing projects and programs with digital components. This course is available here: <https://www.panoplydigital.com/gender-and-ict-online-course/>.

7.2 Developing Gender Disaggregated Data

Across all topics related to WEE touched on in this paper, whether financial inclusion, access to the internet, or the status and number of women entrepreneurs, there is a lack of gender disaggregated data that are consistent across all ASEAN countries and up-to-date. The limited availability of sex-disaggregated data on different topics obscures gender gaps. This is a particular constraint to understanding women's access to, use of, and barriers to the internet, social media,

254 Philippines Statistics Authority, "Q&A: Magna Carta of Women (Republic Act No. 9710)," March 15, 2010, <https://psa.gov.ph/content/q-magna-carta-women-republic-act-no-9710>.

255 GSMA Women Connect et al., 2018, *A Toolkit for Researching Women's Internet Access and Use*, London: GSMA; Broadband Commission Working Group on the Digital Gender Divide 2017b, 9.

256 A4AI, "Measuring Women's Connectivity: A Toolkit for Researching Access and Use," blog post, A4AI, July 9, 2018, <http://a4ai.org/measuring-womens-connectivity-a-toolkit-for-researching-access-and-use/>.

and, to a lesser extent, mobile money. Without accurate information, policymaking decisions will not be fully informed.

Recommendations

Policy proposals to address the gap in data and thereby improve policymakers' understanding of women's status and issues, include the following elements:

- Collect, analyze, and track sex-disaggregated data. The data should be accessible to others, collected according to international guidelines, and done in a manner to allow regular comparisons over time.
- Conduct research to understand women's needs, circumstances, and preferences in different local contexts, as well as the factors limiting WEE, including cultural and social norms. This is critical in enabling policy and strategies which can address women's needs, priorities, and preferences in the diverse local contexts in which they live.
- Publish and share data. The pace of development of the digital economy means that adaptive policies and strategies are needed. Accurate and up-to-date information is required to support evidence-based policymaking.

In order to do this, capacity may need to be built at the ASEAN and national levels for collecting and analyzing sex-disaggregated data. The AEC is well positioned to play a coordinating role in this area. The gender mainstreaming division within the AIMD could take the lead on coordinating this with the relevant sectoral bodies as well as statistical offices in the AMS. This office could:

- Support member states in the collection, analysis, and tracking of sex-disaggregated data and encourage them to include indicators of WEE into their existing data collection requirements.
- Collect, analyze, and track sex-disaggregated data in all relevant activities and include indicators of WEE in existing data collection requirements.
- Support and conduct robust, reliable, accurate, and up-to-date research concerning specific topics in WEE (for example, use of social media or access to internet) to better understand the needs, circumstances, and preference of women and girls in different local contexts, and the factors limiting women's and girls' economic empowerment (including cultural and social norms).
- Publish sex-disaggregated data in a safe and secure manner and within the limits of data protection requirements and privacy considerations.
- Support efforts to ensure that national and regional WEE data are collected in accordance with international guidelines.
- Facilitate regular comparisons over time and between countries within ASEAN²⁵⁷.

257 Based on Broadband Commission Working Group on the Digital Gender Divide 2017a, 20.

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The indicators of WEE, based on the topics covered in this report, would include, but not be limited to:

- Participation in economic activity—a range of indicators including employment status (formal and informal), size of enterprise, enterprise status, sector, and access to social protection, among others;
- Access and use of mobile phones, internet, and social media; and
- Access to and use of financial services, including digital financial services, other alternative financial sources, and the full range of financial services (credit, savings, insurance, etc.).

Examples

- In 2011, the Solomon Islands set sex-disaggregated financial inclusion objectives and targets as part of the country's first financial inclusion strategy. The motivation for this was the perception that women are better household managers and evidence that women's economic empowerment would benefit the whole family as well as the community.²⁵⁸

Resources

- A4AI (Alliance for Affordable Internet), the World Wide Web Foundation, the GSMA, and the Association for Progressive Communications collaborated to develop a set of baseline indicators on the gender digital divide: "Women and Internet Research" toolkit.²⁵⁹
- ITU collects and publishes gender disaggregated data on internet penetration and internet users and estimates the gender gap in internet use.²⁶⁰

7.3 Coordination and Collaboration Across Sectoral Bodies

The barriers to gender equality and WEE are complex, varied, and interrelated. Addressing women's equitable and full participation in the ASEAN digital economy requires a systemic approach that considers all the factors that impact women's economic status. Improving women's standard of living and quality of life will require that all stakeholders work together. This is all the more important given the scale and complexity of the changes occurring with the digital economy.

The degree to which WEE requires the coordination and collaboration of different sectoral bodies is illustrated by this example. Women entrepreneurs who are engaged or wish to be engaged in e-commerce have multiple needs including: access to digital finance, access to mobile phones and internet services, ICT skills,

258 Women's World Banking 2016, 16.

259 GSMA Connected Women, Association for Progressive Communications, Alliance for Affordable Internet, and World Wide Web Foundation. 2018. *A Toolkit for Researching Women's Internet Access and Use*. London: GSMA. https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/05/GSMA-Women-and-Internet-Research-Toolkit_WEB.pdf.

260 Broadband Commission Working Group on the Digital Gender Divide 2017a, and Broadband Commission Working Group on the Digital Gender Divide 2017b.

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entrepreneurship skills, and access to both domestic and international markets. They also need reliable infrastructure to ensure good mobile and internet coverage and they need reliable and affordable logistics. No one sectoral body can address all these issues. Cooperation among the sectoral bodies and ASEAN stakeholders will be critical to enable the development of coherent policies that can effectively improve the status of women in ASEAN.

Recommendations

- A gender mainstreaming division within the AIMD that has authority to advise on and track implementation of gender mainstreaming actions would be well positioned to convene dialogues and other opportunities that would promote coordination and collaboration across the individual sectoral bodies within the AEC.
- Additionally, this division should have the authority to liaise with the relevant sectoral bodies in the other two ASEAN Communities, in order to promote joint activities and further coordination throughout ASEAN on WEE mainstreaming.
- This division could identify or develop and share tools, guidelines, case studies, and other materials which can support AEC efforts to promote WEE.

7.4 Increase Women's Representation in Policymaking Processes

Throughout the CSAP, there are opportunities to include women's voices in the formulation and implementation of AEC activities. The strategic measures and action lines listed in Table 7.1 are just three examples of a number of ways women's voices and perspectives can be included in the policy dialogue process.

Table 7.1: Examples of Action Lines with Opportunities for Women's Representation, by Strategic Measure

Strategic Measures	Action Lines
123 Establish innovative support systems to promote and manage regional STI enterprise arising from spin-offs and joint ventures	Engage dialogue and other strategic partners in joint undertakings on appropriate and commercially viable STI initiatives
126 Increase access to finance by developing and enhancing the institutional framework in respect of improving understanding and strengthening traditional financing infrastructure as well as the policy environment and measures that foster alternative and non-traditional financing promote financial inclusion and literacy and the ability of MSMEs to be better engaged in	"Conduct roundtable discussions between SMEs, regulatory agencies, and financing institutions to share current issues on access to finance, such as credit rating, credit scoring, credit bureau, secured transaction law, microfinance, SMEs focused lending, intercompany credits (accounts receivable, promissory notes, factoring, Small Debt Resolution Scheme), etc. ²⁶¹ "

261 ASEAN Secretariat 2017a, 39.

the financial system, enhance tax and other incentive schemes	
130. Implement a more inclusive and consultative process involving the private sector	“Institutionalise regular consultative process among relevant ASEAN bodies with lead private sector entities (business associations and business councils) in support of the implementation of sectoral work plans under the AEC ²⁶² ”

UNCTAD has found that women have often been absent from policy dialogues related to ICT.²⁶³ To ensure that women participate fully and equally in the digital economy, it will be critical that women, and their needs and perspectives, are represented in the policymaking process. A better awareness of women’s issues, whether they are related to displaced women workers, to micro entrepreneurs, or to women tech executives, will improve the policymaking process and result in more relevant and more effective policies.

Depending on the policy and the types of women who will be affected by it, different kinds of women’s groups as well as individual representatives should be involved. Women’s organizations including women-based entrepreneur associations, women’s e-business associations, women’s civil society associations, women’s rights groups, and industry associations and trades unions that represent occupations or industries where women are predominant could be included in the dialogue process.

Examples
<ul style="list-style-type: none"> As mentioned in Chapter 5, the Solomon Islands government conducted consultations with women-focused savings clubs and MFIs, a women’s business association and the Ministry of Women, to inform the national financial inclusion strategy.

7.5 Explore the Use of Universal Service and Access Funds to Support WEE Initiatives

Many of the proposed initiatives and interventions in this report, such as training and reskilling workers or providing digital literacy to women entrepreneurs, need to be scaled if they are to be effective. However, scaling up programs requires resources. Universal Service and Access Funds (USAFs) may provide part of the solution. USAFs are pools of money financed through mandatory contributions from telecommunications services providers. These funds were established to incentivize countries to expand internet services to underserved areas and address gaps in access and use of the internet. In ASEAN, Indonesia and Viet Nam have used their funds to expand both public access to the internet and connectivity to rural villages and public institutions such as schools and libraries. However, not all countries in

262 ASEAN Secretariat 2017a, 42.

263 Fredriksson, Torbjorn, Sicat, and Nguyen 2014, 24.

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ASEAN have set up USAFs. The limited information that is available on USAFs in ASEAN suggests that there may be significant amounts of these monies left unspent. For example, in Malaysia, spending has been below 20 percent since 2008.²⁶⁴

It is important to consider a gender-sensitive approach to the use of USAF funds for a number of reasons, as mentioned above.

Additionally, it is assumed that mobile data plans and content that is subsidized by mobile network operators are equally appealing to both men and women. However, research by the World Wide Web Foundation found that men are more likely than women to save money by purchasing service-specific data bundles and larger full-cost data plans. The foundation suggests that greater insight into women's access and content needs would support mobile network operators to offer plans tailored to women's preferences, including more desirable content.²⁶⁵

Universal Service and Access Funds could be used to support programs that expand access to the internet and to digital skills. For example, the funds could invest 50 percent of their money in programs targeted to women and girls. This would require setting gender-specific disbursement targets and monitoring progress. It would also involve making the project design and implementation more gender-responsive by including women's perspectives in the development process. In addition to including representatives of the targeted women's groups in initial studies, this can also be done by including women's organizations in the process. Aligning USAF use to address women's access to the internet would further involve making sure USAF data related to fund disbursements and project investments are disaggregated by gender and made openly available to the public.

Internet access centers in ASEAN have reportedly struggled with sustainability. The expansion of USAF funding for these centers in AMS beyond Indonesia and Viet Nam would help to bolster their sustainability. In addition, USAF funds could be used to support the creation of local content that is of more interest and relevance to women, as well as to support training women in ICT skills and in ICT entrepreneurship. In Africa, USAFs are being used in Benin, Ghana, and Rwanda to address the gender digital divide in various ways.²⁶⁶

Examples

- In Rwanda, the funds are used to support the **Ms. Geek Africa** program, a competition that seeks to encourage girls to participate in STEM fields. Winners receive prizes of cash and equipment plus training and mentorship.
- In Ghana, the Ghana Investment Fund for Electronic Communications, used the USAF to support **ICT skills training** for hairdressers and other services industry workers. Funds were

264 United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), 2017b, The Impact of Universal Service Funds on Fixed-Broadband Deployment and Internet Adoption in Asia and the Pacific, Asia-Pacific Information Superhighway (AP-IS) Working Paper Series, Bangkok: United Nations ESCAP, 35.

265 Ibid., 13.

266 Ibid., 13.

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also invested in the Digital for Inclusion program which provides, among other things, financial services via a digital payment platform. Sixty percent of the positions for local agents who sell services for the platform are reserved for women.

- In Benin, the funds were used to support a project that developed a mobile phone-based system to provide prices of local agricultural products to benefit rural women entrepreneurs.²⁶⁷

²⁶⁷ Dhanaraj Thakur with Laura Potter, 2018, Universal Service and Access Funds: An Untapped Resource to Close the Gender Digital Divide, Washington, D.C.: Web Foundation, 13.

8 SUMMARY

This report has identified 26 action lines within the AEC CSAP that have the potential to mainstream women's economic empowerment within the AEC's activities. The report categorized these action lines depending on whether they affect women entrepreneurs or women workers or whether they are cross-cutting. While the proceeding chapters provide many recommendations for policies, policy frameworks, and activities, a few stand out as having the capability to have a significant, positive impact on mainstreaming WEE within ASEAN.

The priority recommendations are for both: (1) activities and policies to be undertaken within the AEC or preferably ASEC; and (2) activities and policies those that would be conducted across the region or with the AMS, i.e., external to ASEC. The recommendations internal to the AEC are cross-cutting actions and include:

- Mainstream gender across the AEC pillar by embedding gender impact analysis in the design, implementation and monitoring and evaluation of all activities
- Collect, analyze, and track sex-disaggregated data
- Coordinate and collaborate across sectoral bodies and across pillars within ASEC

The recommendations external to the AEC pillar include:

- Digital literacy and financial literacy—look for opportunities to combine them when possible
- Digital/biometric national identification cards
- Expanded and improved women-friendly telecenters.

8.1 Institutionalize Gender Mainstreaming across the AEC

This recommendation is listed first because without it, it will be difficult for the AEC to make progress on gender mainstreaming in a comprehensive and consistent way across all sectoral bodies. The process of gender mainstreaming within the AEC should start with an internal capacity-building effort on gender sensitization. The objective should be to build the knowledge and skills required to mainstream gender in the work of the AEC and to develop a shared vision and common language around women's economic empowerment. The process of mainstreaming women's economic empowerment would be furthered by creating an independent division within the AIMD tasked with building capacity and tracking progress, among other things. To be effective, the gender mainstreaming effort will require dedicated resources, in addition to ongoing attention and support from top leaders. It will also require a robust monitoring and evaluation component. The experience with gender mainstreaming within the Philippines government, based on the Magna Carta of Women, is a good model that the AEC could draw on (see the examples discussion in section 7.1 for more details).

8.2 Collect, Analyze, and Track Sex-disaggregated Data

The lack of data on different aspects of women's economic status is a major barrier to developing and refining effective policies to promote WEE. The need for data on women's economic participation is particularly relevant as their opportunities and constraints within the economy are evolving quickly with the digital economy. This is particularly apparent with respect to women in certain sectors of the workforce and those who are involved in e-commerce.

In the previous chapter, several recommendations were made for collecting sex-disaggregated data and improving the capacity within ASEAN to do this. Within the AEC, priority should be put on developing a framework for collection, analyzing, tracking, and reporting sex-disaggregated data for all relevant AEC activities. Indicators of WEE should be incorporated in all existing data collection efforts at the AEC. To support the AMS in incorporating sex-disaggregated indicators and WEE indicators in their data collection efforts, the AEC is well-placed to play a capacity building role and to provide guidance on international standards in indicator design and data collection (see the Gender Disaggregated Data section in Chapter 7 for more details).

At the international level, the AEC could work with multilateral and bilateral agencies as well as other international actors to coordinate approaches to collecting sex-disaggregated data. The objective would be to ensure consistent and standard data collection approaches that would result in complete data sets, across the ASEAN member states, that could be used by ASEAN for policymaking purposes.

In addition to collecting data, the AEC can set targets or provide guidelines for targets concerning the level of female inclusion across many dimensions such as financial inclusion, and financial and digital literacy.

8.3 Coordinate and Collaborate across Sectoral Bodies and across Pillars

The previous chapter touched on how important coordination and collaboration across the AEC sectoral bodies and with the other two pillars is, given the complexity of changes occurring with the digital economy. The need for a holistic approach to women's economic empowerment reinforces this need for coordination and collaboration. There are already indications within the CSAP of sectoral bodies working together to achieve specific strategic measures, but there is scope for broader coordination. One area in which several sectoral bodies could collaborate is on forward-thinking efforts. An example is the action line on promoting dialogue and inducing awareness on global megatrends and emerging trade-related issues in ASEAN. Within this a focus on the future of the workforce, including women workers is an area that can use coordinated attention. By positioning a gender

mainstreaming division within AIMD it is possible that cross-sectoral collaboration could be reviewed by an apex group under the Foreign Ministers.

8.4 Promote Digital Literacy

Digital literacy is a prerequisite for participating in the digital economy. Among other things, digital literacy is increasingly required for access to financial services. Therefore, promotion of digital literacy for all ASEAN citizens needs to be a top priority of the AEC to ensure equitable and inclusive development.

Several recommendations were made for AEC activities that would promote digital literacy in the region (see section on digital literacy as a prerequisite for promoting digital trade in Chapter 4). These include: investing in AMS capacity building initiatives; encouraging AMS to ensure digital literacy and capacity-building initiatives consider women's needs; supporting efforts to provide women with opportunities to develop their digital skills through different channels; supporting steps to make online content and services more accessible to women with limited literacy; providing guidance on minimum standards for the content of digital literacy curricula; promoting female role models as internet users; and partnering with existing programs that promote women's digital literacy.

8.5 Support Expanded and Improved Women-friendly Internet Access Centers

Supporting women-friendly telecenters (i.e., internet access centers) is a priority because it is a channel for delivering digital literacy and other activities addressed in this paper. As noted earlier, women may be uncomfortable entering or using internet access centers for a variety of reasons. These centers need to become more attractive to women to more effectively benefit them. Women-only internet access centers may be the best strategy in some locations. In others, capacity building in gender sensitization for telecenter staff may be sufficient if combined with tracking usage by gender.

At the regional level, the AEC can further the promotion of women-friendly internet access centers at a national level by supporting or conducting region-wide research to better understand the needs and preferences for internet access centers by different segments of women including women entrepreneurs and workers.

8.6 Promote a Proactive and Tailored Approach to Women's Financial Inclusion through the Financial Inclusion Strategy

There is a sizeable gap in MSME financing in ASEAN that is particularly wide for the larger micro and small enterprise categories and therefore has disproportionate effects on women. Addressing female entrepreneurs' need for credit requires alleviating barriers on the demand, supply, and regulatory sides. ASEAN can best promote women's financial inclusion by taking actions that improve the enabling and

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regulatory environment. These actions could be promoted by supporting the AMS, or ASEAN could take actions to promote the harmonization of financial inclusion regulations across the region. While several recommendations were outlined in Chapter 5, the following should be prioritized: provide guidance to AMS to support them in assessing any unintended regulatory impacts that hinder women's financial services; feed the results into the financial inclusion strategy development process; reform legal and regulatory frameworks that hinder the financial inclusion of women; and address and harmonize the development of financial infrastructure such as credit bureaus. These actions would go far to assist women in accessing existing financial services.

With respect to digital financial services, ASEAN should assess the benefits that could be experienced from using unique, biometric identification throughout the region. This would include following the experience of the Aadhaar program in India for lessons to be learned. It is tempting to recommend that all adults in ASEAN be provided with biometric identification. It is likely that these forms of identification will be a necessity for participating in the digital economy. Furthermore, they could level the playing field for women for accessing digital financial services, e-government, and other aspects of the digital economy. However, it is unclear whether there is sufficient need for these IDs at this time.

BIBLIOGRAPHY

- A3E Accounting. "What is HRDF?" Blog post. 3E Accounting. <https://www.3ecpa.com.my/blog/what-is-hrdf/>. Accessed June 2, 2018.
- Alliance for Affordable Internet (A4AI). 2017. *2017 Affordability Report: Asia Regional Snapshot*. Washington, D.C.: A4AI.
- _____. 2018. "Measuring Women's Connectivity: A Toolkit for Researching Access and Use." Blog post. A4AI. July 9, 2018. <http://a4ai.org/measuring-womens-connectivity-a-toolkit-for-researching-access-and-use/>.
- Alliance for Financial Inclusion (AFI). 2017a. *Integrating Gender and Women's Financial Inclusion into National Strategies*. Guideline Note No. 27. Kuala Lumpur: AFI.
- _____. 2017b. "Denarau Action Plan: The AFI Network Commitment to Gender and Women's Financial Inclusion." Alliance for Financial Inclusion. https://www.afi-global.org/sites/default/files/publications/2017-08/AFI_FS_Denarau_17_AW_digital.pdf.
- _____. 2017c. *Bridging the Gender Gap: Promoting Women's Financial Inclusion: Tools and Guidance from the AFI Network*. Kuala Lumpur: AFI. https://www.afi-global.org/sites/default/files/publications/2017-11/AFI2017_Gender_full_AW_ISBN_digital.pdf.
- _____. 2017d. "Leveraging Sex-disaggregated Data to Accelerate Progress Towards Women's Financial Inclusion." Guideline note no. 25. Kuala Lumpur: AFI. <https://www.afi-global.org/sites/default/files/publications/2017-02/Guideline%20Note-25%20FID-Leveraging%20Gender%20Data.pdf>
- _____. 2017e. "How to Leverage Sex-disaggregated Financial Inclusion Data to Accelerate Women's Financial Inclusion." Guideline note no. 26. Kuala Lumpur: AFI <https://www.afi-global.org/publications/2453/Guideline-Note-26-Sex-Disaggregated-Data-Toolkit>
- ASEAN. 2007. *Third Report on the Advancement of Women in ASEAN*. Jakarta: ASEAN Secretariat. http://asean.org/storage/images/2012/Social_cultural/ACW/publications/Third%20Report%20on%20the%20Advancement%20of%20Women%20in%20ASEAN.pdf.
- _____. 2017. *Handbook on Proposal Development for ASEAN Cooperation Projects*. Jakarta: ASEAN Secretariat. First reprint (2018) available at <http://asean.org/storage/2017/08/Handbook-on-Proposal-Development-for-ASEAN-Cooperation-Projects-1st-Reprint.pdf>.
- _____. n.d. *The ASEAN Strategic Action Plan for Consumer Protection (ASAPCP) 2016–2025: Meeting the Challenges of a People-Centered ASEAN Beyond 2015*. Jakarta: ASEAN Secretariat. <http://asean.org/storage/2012/05/ASAPCP-UPLOADING-11Nov16-Final.pdf>.
- "ASEAN and the Digital Economy." 2018. *Financial Tribune*. February 13, 2018. <https://financialtribune.com/articles/world-economy/81771/asean-and-the-digital-economy>.
- ASEAN Committee on Women (ACW). 2015. *ASEAN Committee on Women (ACW)*

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

Work Plan 2016–2020. ASEAN Secretariat.

ASEAN Secretariat. n.d. *ACWC Work Plan 2016–2020*. Association of Southeast Asian Nations.

_____. n.d. *Alignment between the Action Agenda on Mainstreaming Women's Economic Empowerment (WEE) in ASEAN with the ASEAN Committee on Women (ACW) Work Plan 2016–2020*. Association of Southeast Asian Nations.

_____. n.d. *ASEAN Economic Community 2025 Strategic Action Plans (SAP) for Financial Integration from 2016–2025*. <http://asean.org/storage/2012/05/SAP-for-Financial-Integration-2025-For-publication.pdf>.

_____. n.d. *ASEAN Integrated Food Security (AIFS) Framework and Strategic Plan of Action on Food Security in the ASEAN Region (SPA-FS) 2015–2020*. Association of Southeast Asian Nations. https://www.asean-agrifood.org/?wpfb_dl=58.

_____. n.d. *ASEAN Plan of Action on Science, Technology and Innovation*. Association of Southeast Asian Nations.

_____. n.d. *The ASEAN Intellectual Property Rights Action Plan 2016–2025: Meeting the Challenges of 'One Vision, One Identity, One Community' Through Intellectual Property*. Association of Southeast Asian Nations. [https://www.aseanip.org/Portals/0/ASEAN%20IPR%20ACTION%20PLAN%202016-2025%20\(for%20public%20use\).pdf?ver=2017-12-05-095916-273](https://www.aseanip.org/Portals/0/ASEAN%20IPR%20ACTION%20PLAN%202016-2025%20(for%20public%20use).pdf?ver=2017-12-05-095916-273) .

_____. 2008. *ASEAN Economic Community Blueprint*. The Association of Southeast Asian Nations.

_____. 2015a. *ASEAN Tourism Strategic Plan 2016–2025*. Association of Southeast Asian Nations.

_____. 2015b. *ASEAN 2025: Forging Ahead Together*. Jakarta: The Association of Southeast Asian Nations.

_____. 2015c. *ASEAN Strategic Action Plan for SME Development 2016–2025*. ASEAN Secretariat. <http://www.smecorp.gov.my/images/pdf/SAP-SMED-Final.pdf>.

_____. 2017a. *ASEAN Economic Community 2025 Consolidated Strategic Action Plan*. Association of Southeast Asian Nations.

_____. 2017b. *ASEAN Declaration on the Gender-Responsive Implementation of the ASEAN Community Vision 2025 and Sustainable Development Goals*. Association of Southeast Asian Nations. [http://asean.org/storage/2017/11/7.-ADOPTION ASEAN-Declaration-on-the-GR-Implementation CLEAN Sept.8-2017 for-31st-Summit CLEAN.pdf](http://asean.org/storage/2017/11/7.-ADOPTION%20ASEAN-Declaration-on-the-GR-Implementation%20CLEAN%20Sept.8-2017%20for-31st-Summit%20CLEAN.pdf).

_____. 2017c. *ASEAN Cooperation Project Proposal Template*. asean.org/resource/asean-project-templates/.

_____. 2017d. *Action Agenda on Mainstreaming Women's Economic Empowerment (WEE) in ASEAN*. Association of Southeast Asian Nations. <http://asean.org/storage/2017/11/Action-Agenda-on-Mainstreaming-Women-Economic-Empowerment.pdf>.

_____. 2017e. *ASEAN Declaration on Innovation*. Association of Southeast Asian

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

Nations.

ASEAN Studies Program. 2017. *Discussion Report Talking ASEAN: Women and the World of Work*. ASEAN.

http://admin.thcasean.org/assets/uploads/file/2017/09/Discussion_Report_TA_-_Women_and_the_World_of_Work.pdf.

Asian Development Bank. 2015. *Women In The Workforce An Unmet Potential In Asia And The Pacific*. Mandaluyong City, Philippines: Asian Development Bank.

<https://www.adb.org/sites/default/files/publication/158480/women-workforce-unmet-potential.pdf>.

_____. 2018. *Asian Development Outlook (ADO) 2018: How Technology Affects Jobs*. Manila, Philippines: Asian Development Bank.

<https://www.adb.org/publications/asian-development-outlook-2018-how-technology-affects-jobs>.

A.T. Kearney, Inc. 2015. *The ASEAN Digital Revolution*. A.T. Kearney.

<https://www.atkearney.com/documents/10192/6986374/ASEAN+Digital+Revolution.pdf/86c51659-c7fb-4bc5-b6e1-22be3d801ad2>.

Australian Department of Foreign Affairs and Trade (DFAT). 2015. *Investing in Women Initiative Design Document*. DFAT.

<https://dfat.gov.au/about-us/tenders/Documents/se-asia-investing-in-women-design.pdf>.

AXA Group, Accenture, and International Finance Corporation (FC). 2015.

SHEforSHIELD: Insure Women to Better Protect All. Washington, D.C.: International Finance Corporation and AXA.

http://www.ifc.org/wps/wcm/connect/a2d8348049d01b0c82a5a3e54d141794/SheforShield_Final-Web2015.pdf?MOD=AJPERES.

Bhat, Tehreem, "Is the Muslim personal law a form of Sharia law?" *Quora* (blog),

<https://www.quora.com/Is-the-Muslim-Personal-law-a-form-of-Sharia-Law>.

Accessed July 26, 2018.

Bhoola, Urmila. n.d. *Investing in Women: Philippines Country Context Paper*.

Australian Department of Foreign Affairs and Trade (DFAT).

Black, Ann. 2012. *Lessons from Singapore: An evaluation of the Singapore model of legal pluralism*. Working Paper Series No. 026, Asian Law Institute. Singapore:

National University of Singapore. <https://law.nus.edu.sg/asli/pdf/WPS026.pdf>.

Accessed July 26, 2018.

Broadband Commission Working Group on the Digital Gender Divide. 2017a.

Recommendations for Action: Bridging the Gender Gap in Internet and Broadband Access and Use. Paris: UNESCO and GSMA.

<http://www.broadbandcommission.org/Documents/publications/WorkingGroupDigitalGenderDivide-report2017.pdf>.

_____. 2017b. *Bridging the Gender Gap in Internet and Broadband Access and Use. Progress Report*. Paris: UNESCO and GSMA.

<http://www.broadbandcommission.org/documents/publications/wg-gender-digital-divide-report2017.pdf>.

Bull, Greta. 2018. "Financial Inclusion in 2018: BigTech Hits Its Stride." Blog. CGAP.

January 9, 2018. <http://www.cgap.org/blog/financial-inclusion-2018-bigtech-hits-its-stride>.

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

- Burjorjee, Deena. 2018. *Women's Financial Inclusion: What the Gallup World Poll Tells Us*. Consultative Group to Assist the Poor (CGAP).
<http://www.cgap.org/blog/women%E2%80%99s-financial-inclusion-what-gallup-world-poll-tells-us>.
- Burjorjee, Deena M., and Yasmin Bin-Humam. 2018. *New Insights on Women's Mobile Phone Ownership*. Consultative Group to Assist the Poor (CGAP).
www.cgap.org/publications/new-insights-women's-mobile-phone-ownership.
- Chandra, S. n.d. *Investing in Women: Myanmar Country Context Paper*. Australian Department of Foreign Affairs and Trade (DFAT).
<http://investinginwomen.asia/wp-content/uploads/2018/01/Investing-in-Women-Myanmar-Country-Context-Paper-1.pdf>.
- Chang, Jae-Hee, Gary Rynhart, and Phu Huynh. 2016. *ASEAN in Transformation: How Technology Is Changing Jobs and Enterprises*. Geneva: International Labor Organization, Bureau for Employers' Activities.
- Cirera, Xavier, and Qursum Qasim. 2014. "Supporting Growth-Oriented Women Entrepreneurs: A Review of the Evidence and Key Challenges." Innovation, Technology & Entrepreneurship Policy Note. Washington, D.C.: World Bank.
- "Conference Aims to Strengthen Women's Role in Digital Economy." 2017. *Viet Nam News*. October 30, 2017. <http://vietnamnews.vn/economy/416453/conference-aims-to-strengthen-womens-role-in-digital-economy.html#49wVHc3lYW3JBsiA.97>.
- "Connecting over 241 Million People in Southeast Asia on Facebook." Facebook Business. March 15, 2016.
<https://www.facebook.com/business/news/Connecting-over-241-Million-People-in-Southeast-Asia-on-Facebook>.
- Crabtree, Steve, Pablo Diego-Rosell, and Grant Buckles. n.d. *The Impact of Mobile on People's Happiness and Well-Being: Technical Report*. London: GSMA and Gallup. https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/01/The-Impact-of-Mobile-on-People%E2%80%99s-Happiness-and-Well-Being_report.pdf.
- Croxson, Helen, and Oliver Rowntree. 2017. *Triggering Mobile Internet Use Among Men and Women in South Asia*. London: GSMA.
- Croxson, Helen, and Amber Wilson. 2018. *Connected Women: A Framework to Understand Women's Mobile-Related Safety Concerns in Low-and-Middle-Income Countries*. London: GSMA.
https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/05/A-framework-to-understand-women%E2%80%99s-mobile-report_march.pdf.
- Dabbour, Mohamed. "Millicom and the GSMA: Driving Digital Inclusion in Rwanda through the Mobile Internet Skills Training Toolkit." Blog post. GSMA. February 9, 2018. <https://www.gsma.com/mobilefordevelopment/programme/connected-society/millicom-gsma-driving-digital-inclusion-rwanda-mobile-internet-skills-training-toolkit/>.
- Deloitte and US-ASEAN Business Council, Inc. n.d. *Advancing the ASEAN Economic Community: The Digital Economy and the Free Flow of Data*. Deloitte.
<https://www2.deloitte.com/content/dam/Deloitte/sg/Documents/about->

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

deloitte/sea/about-aec-digital-economy-free-flow-of-data-2016.pdf.

Demirguc-Kunt, Asli, Leora Klapper, Dorothe Singer, Saniya Ansar, and Jake Hess. 2018a. *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution*. Washington, D.C.: World Bank.

<https://openknowledge.worldbank.org/handle/10986/29510>.

_____. 2018b. "The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution" Dataset. Washington, D.C.: World Bank.

"Democratizing Technology For An Inclusive Revolution." Microsoft.

<https://news.microsoft.com/apac/features/democratizing-technology-inclusive-revolution/>.

eGov Innovation Editors. "Asean Foundation To Drive Youths' Digital Literacy Through Collaboration." December 8, 2017.

<https://www.enterpriseinnovation.net/article/asean-foundation-drive-youths-digital-literacy-through-collaboration-202245664>

ERIA SME Research Working Group. 2014. *ASEAN SME Policy Index 2014: Towards Competitive and Innovative ASEAN SMEs*. ERIA Research Project Report 2012, No. 8. Jakarta: Economic Research Institute for ASEAN and East Asia (ERIA).

Encyclopædia Britannica. "Adat: Malayan and Indonesian Traditional Law."

Encyclopædia Britannica online. <https://www.britannica.com/topic/adat>. Accessed July 26, 2018.

Facebook, OECD, and World Bank. 2017a. *Future of Business Survey: Management Gender in Business*. Future of Business Survey.

<https://eu.futureofbusinesssurvey.org/manager/Storyboard/RHViewStoryboard.aspx?RId=2±&RLId=±µ&PIId=±°%C2%BD&UIId=µµ»³.&Rpld=20>.

_____. 2017b. *Future of Business Survey: Trade Report*. Future of Business Survey.

<https://eu.futureofbusinesssurvey.org/manager/Storyboard/RHViewStoryboard.aspx?RId=%C2%B2%C2%B1&RLId=%C2%B1%C2%B5&PIId=%C2%B1%C2%BA%C2%B4%C2%BA%C2%BD&UIId=%C2%B5%C2%B5%C2%BB%C2%B8%C2%B8&Rpld=20>.

_____. 2018. *Future of Business Survey: Financing and Women-Owned Small Businesses: The Role of Size, Age and Industry*, Future of Business Survey.

<https://eu.futureofbusinesssurvey.org/manager/Storyboard/RHViewStoryboard.aspx?RId=%C2%B2%C2%B1&RLId=%C2%B1%C2%B5&PIId=%C2%B1%C2%BA%C2%B4%C2%BA%C2%BD&UIId=%C2%B5%C2%B5%C2%BB%C2%B8%C2%B8&Rpld=20>.

Financial Literacy & Education, Russia Trust Fund. 2013. *Women and Financial Literacy: OECD/INFE Evidence, Survey and Policy Responses*. Washington, D.C.: Ministry of Finance of the Russian Federation/World Bank/OECD Trust Fund for Financial Literacy and Education.

Fontana, Marzia. n.d. *Investing in Women: Vietnam Country Context Paper*.

Australian Department of Foreign Affairs and Trade (DFAT).

<http://investinginwomen.asia/wp-content/uploads/2018/01/Investing-in-Women-Vietnam-Country-Context-Paper-1-1.pdf>.

Ford, Michele. n.d. *Investing in Women: Indonesia Country Context Paper*.

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

- Australian Department of Foreign Affairs and Trade (DFAT).
- Fredriksson, Torbjorn, Marie Sicat, and Thao Nguyen. 2014. *Empowering Women Entrepreneurs through Information and Communications Technologies*. No. 9. UNCTAD Current Studies on Science, Technology and Innovation. New York: United Nations.
- Friedrich Ebert Stiftung, UN Women, and ASEAN Secretariat. 2016. *Projected Gender Impact of the ASEAN Economic Community*. Jakarta: Association of Southeast Asian Nations. <http://library.fes.de/pdf-files/bueros/singapur/12676.pdf>.
- Gammage, Sarah, Aslihan Kes, Liliane Winograd, Naziha Sultana, Sara Hiller, and Shelby Bourgault. 2017. *Gender and Digital Financial Inclusion: What Do We Know and What Do We Need to Know?* Washington, D.C.: International Center for Research on Women. <https://www.icrw.org/wp-content/uploads/2017/11/Gender-and-digital-financial-inclusion.pdf>.
- “Gender Digital Divide Online Course.” USAID/Panoply Digital Ltd. <https://www.panoplydigital.com/gender-and-ict-online-course/>.
- Global Banking Alliance for Women. Website with resources. <http://www.gbaforwomen.org/>.
- Global Commission on the Future of Work. Webpage with resources. International Labor Organization. http://www.ilo.org/global/topics/future-of-work/WCMS_569528/lang-en/index.htm.
- Global Financial Education Program. “Risk Management and Insurance: Protect Your Family’s Future.” <https://www.microfinanceopportunities.org/4-work-with-us/mfo-in-the-field/project-list/feccl/>.
- Global Partnership for Financial Inclusion (GFPI), Financial Inclusion Technical Team. 2016. *G20 High-Level Principles for Digital Financial Inclusion*. G20 2016 China. <https://www.gpfi.org/sites/default/files/G20%20High%20Level%20Principles%20for%20Digital%20Financial%20Inclusion.pdf>.
- “Gorgeous Geeks.” n.d. Website. <http://gorgeousgeeks.net/>. Accessed March 21, 2018.
- GSMA. n.d. “Capacity Building” Webpage for partner network with online courses. <https://www.gsmatraining.com>.
- _____. 2015. *Connected Women 2015: Bridging the Gender Gap: Mobile Access and Usage in Low and Middle-Income Countries*. London: GSMA. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2016/02/Connected-Women-Gender-Gap.pdf>.
- _____. 2017a. *2017 State of the Industry Report on Mobile Money*. London: GSMA. https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/02/GSMA_State_Industry_Report_2018_FINAL_WEBv4.pdf.
- _____. 2017b. *The Mobile Economy: Asia Pacific 2017*. London: GSMA. <https://www.gsmaintelligence.com/research/?file=336a9db2ab3ed95bc70e62bf7e867855&download>.
- _____. 2017c. *Aadhaar: Inclusive by Design. A Look at India’s National Identity*

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

- Programme and Its Role in the JAM Trinity*. London: GSMA.
<https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/03/gsma-aadhaar-report-270317.pdf>.
- _____. 2017d. *Understanding the Identity Gender Gap: Insights and Opportunities for Mobile Operators to Help Close the Divide*. London: GSMA.
<https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/08/Understanding-the-Identity-Gender-Gap.pdf>.
- _____. 2017e. *Connected Society: Mobile Internet Skills Training Toolkit*. London: GSMA. <https://www.gsma.com/mobilefordevelopment/%20connected-society/mistt/>.
- _____. 2018. *The Mobile Economy 2018*. London: GSMA.
<https://www.gsma.com/mobileeconomy/wp-content/uploads/2018/02/The-Mobile-Economy-Global-2018.pdf>.
- GSMA and Boston Consulting Group. 2017. *Embracing the Digital Revolution: Policies for Building the Digital Economy*. London: GSMA.
https://www.gsma.com/publicpolicy/wp-content/uploads/2017/02/GSMA_DigitalTransformationReport2017_Web.pdf.
- GSMA Connected Women, Association for Progressive Communications, Alliance for Affordable Internet, and World Wide Web Foundation. 2018. *A Toolkit for Researching Women's Internet Access and Use*. London: GSMA.
https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/05/GSMA-Women-and-Internet-Research-Toolkit_WEB.pdf.
- GSMA Connected Women, GSMA Digital Inclusion, and Dalberg. 2015. *Accelerating Digital Literacy: Empowering Women to Use the Mobile Internet*. London: GSMA.
https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2015/06/DigitalLiteracy_v6_WEB_Singles.pdf.
- The Habibie Center. 2017. "Exploring ASEAN's Commitment for Women: Fifty Years of Evolution." ASEAN Studies Program.
[http://www.ach.or.kr/resources/file/newsletter/2017/Thinking_ASEAN_Aug_2017\(%EC%98%81\).pdf](http://www.ach.or.kr/resources/file/newsletter/2017/Thinking_ASEAN_Aug_2017(%EC%98%81).pdf).
- Halabisky, David. 2016. "Policy Brief on Women's Entrepreneurship." Luxembourg: European Commission and OECD. <https://www.oecd.org/cfe/smes/Policy-Brief-on-Women-s-Entrepreneurship.pdf>.
- Hanna, Hala, and Caroline Federal. 2017. "To Fix the Gender Gap, Fix the Digital Divide." Solve. MIT. June 30, 2017. <https://solve.mit.edu/articles/to-fix-the-gender-gap-fix-the-digital-divide>.
- Hannig, Alfred. 2017. "FinTech: What's in It for Financial Inclusion?" Blog post. Alliance for Financial Inclusion (AFI). December 20, 2017. <https://www.afi-global.org/blog/2017/12/fintech-whats-it-financial-inclusion>.
- Haotanto, Anna V. 2016. "Clair Deevy, Head of Economic Growth Initiatives for Asia-Pacific, FACEBOOK." *The New Savvy* (blog). September 21, 2016.
<https://thenewsavvy.com/career/interviews/clair-deevy-facebook/>.
- Hasnain, Sophia, and Francesco Pasti. 2017. *Mobile Money and E-Commerce: Three Areas of Partnership in Southeast Asia*. London: GSMA.

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

<https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/07/GSMA-Establishing-successful-mobile-money-and-e-commerce-partnerships-in-Southeast-Asia.pdf>.

Herrington, Mike. 2016. "Global Entrepreneurship Monitor." Policy Briefs 2016. Global Entrepreneurship Monitor (GEM).

Holloway, Kyle, Zahra Niazi, and Rebecca Rouse. 2017. *Women's Economic Empowerment Through Financial Inclusion: A Review of Existing Evidence and Remaining Knowledge Gaps*. Innovations for Poverty Action. <https://www.poverty-action.org/publication/womens-economic-empowerment-through-financial-inclusion>.

Hong, Jinshan. 2017. "How China's Central Bank Is Clamping down on the Mobile Payment Industry." *Forbes*, August 18, 2017. <https://www.forbes.com/sites/jinshanhong/2017/08/18/how-chinas-central-bank-is-clamping-down-on-the-mobile-payment-industry/#4138e91250be>.

Hussain, Feisal, Satish Mishra, Hennie Bester, Jeremy Gray, David Saunders, and Christine Hougaard. 2015. *ASEAN Financial Inclusion for What? Connecting the Region's Prosperity to People's Prosperity Post-2015*. New York: United Nations.

Illanes, Pablo, Susan Lund, Mona Mourshed, Scott Rutherford, and Magnus Tyreman. 2018. "Retraining and Reskilling Workers in the Age of Automation." Washington, D.C.: McKinsey & Company.

Intaratat, Kamolrat. 2016. "Women Homeworkers in Thailand's Digital Economy." *Journal of International Women's Studies* 18 (1): 87–103. <http://vc.bridgew.edu/jiws/vol18/iss1/7>.

"Integrating Gender Equality and Women's Empowerment into an Activity, Program or Policy." 2012. <https://www.ndi.org/sites/default/files/Gender%20Analysis%20Guideline.pdf>.

International Development Research Centre (IDRC). "Core Support for Telecentre.org Foundation." Webpage. IDRC. <https://www.idrc.ca/en/project/core-support-telecentreorg-foundation>. Accessed June 15, 2018.

International Finance Corporation (IFC). Investing in Women: New Evidence for the Business Case. Report and other resources. https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/priorities/entrepreneurship/investing+in+women_new+evidence+for+the+business+case.

_____. 2011. *Strengthening Access to Finance for Women-Owned SMEs in Developing Countries*. Washington, D.C.: Global Partnership for Financial Inclusion and International Finance Corporation.

_____. 2017. *Women-Owned Enterprises in Vietnam: Perceptions and Potential*. Viet Nam: IFC. https://www.ifc.org/wps/wcm/connect/45c8b501-6239-45b2-bf4c-dae2b6d7647b/Market-study-on-Women-owned-enterprises-in-Vietnam_Eng_v1.pdf?MOD=AJPERES.

International Finance Corporation and USAID. 2016. *Women-Owned SMEs in Indonesia: A Golden Opportunity for Local Financial Institutions, Market Research Study*. Washington, D.C.: IFC and USAID.

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

https://www.ifc.org/wps/wcm/connect/677906e9-398d-45c1-8f87-84e503292f50/SME+Indonesia+Final_Eng.pdf?MOD=AJPERES.

International Labor Organization. 2018a. *Women and Men in the Informal Economy: A Statistical Picture*. Third Edition. Geneva: International Labor Organization. http://www.ilo.org/global/publications/books/WCMS_626831/lang--en/index.htm.

_____. 2018b. "Skills Policies and Systems for a Future Workforce." #8. Issue Brief. Geneva: International Labor Organization.

International Network on Financial Education (INFE). 2013. *Addressing Women's Needs for Financial Education*. Paris: OECD.

International Telecommunication Union (ITU). n.d. "COP Guidelines" Webpage (Child Online Protection). ITU. <https://www.itu.int/en/cop/Pages/guidelines.aspx>. Accessed August 10, 2018.

_____. n.d. "COP Resources" Webpage (Child Online Protection). ITU. <https://www.itu.int/en/cop/Pages/resources.aspx>. Accessed August 10, 2018.

_____. n.d. "Gender Equality and the Empowerment of Women and Girls through ICTs." ITU. <https://www.itu.int/en/action/gender-equality/Pages/default.aspx>. Accessed March 21, 2018.

_____. n.d. "Girls in ICT Portal." ITU. <https://www.itu.int/en/ITU-D/Digital-Inclusion/Women-and-Girls/Girls-in-ICT-Portal/Pages/Portal.aspx>. Accessed March 21, 2018.

_____. n.d. "Promoting Digital Literacy for Girls at the Bottom of the Pyramid." Webpage. ITU. <https://www.itu.int/en/ITU-D/Digital-Inclusion/Women-and-Girls/Pages/Digital-Literacy.aspx>. Accessed June 15, 2018.

_____. 2018. *Digital Skills Toolkit*. Geneva: ITU. <https://www.itu.int/en/ITU-D/Digital-Inclusion/Documents/ITU%20Digital%20Skills%20Toolkit.pdf>.

ITU News. 2018. "Spotlight on Digital Inclusion for Girls and Women in Rural Thailand." EQUALS Global Partnership to Bridge the Digital Gender Divide. <https://www.equals.org/single-post/2018/03/12/Spotlight-on-digital-inclusion-for-girls-and-women-in-rural-Thailand>. Accessed March 12, 2018.

ITU Secretariat. 2016. *Trends in Tech MSMEs and Startup Support*. ITU. https://www.itu.int/dms_pub/itu-s/opb/gen/S-GEN-MSMES-2016-PDF-E.pdf.

International Trade Centre (ITC). 2017. *New Pathways to E-Commerce: A Global MSME Competitiveness Survey*. International Trade Centre. [www.intracen.org/uploadedFiles/intracenorg/Content/Publications/New%20Pathways%20to%20E-commerce_Low%20res\(2\).pdf](http://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/New%20Pathways%20to%20E-commerce_Low%20res(2).pdf).

Jennings, Ralph. 2018. "Heavy Facebook Use Exposed Southeast Asia to Breaches of Personal Data." VOA News, April 10, 2018. <https://www.voanews.com/a/facebook-data-breach/4340056.html>.

Karlsson, Madeleine, Gaia Penteriani, Helen Croxson, Alexandra Stanek, Robin Miller, Darshana Pema, and Fadzai Chitiyo. 2017. *Accelerating Affordable Smartphone Ownership in Emerging Markets*. London: GSMA. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2017/07/accelerating-affordable-smartphone-ownership-emerging-markets-2017.pdf>.

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

- Kelly, Donna, Candida Brush, Patricia Greene, Mike Herrington, Abdul Ali, and Penny Kew. 2015. *Special Report: Women's Entrepreneurship*. Global Entrepreneurship Monitor (GEM). <https://www.gemconsortium.org/report/49281>.
- Klinger, Bailey, Asim Ijaz Khwaja, and Joseph LaMonte. 2013. "Improving Credit Risk Analysis with Psychometrics in Peru." Technical Note No. IDB-TN-587. Washington, D.C.: Inter-American Development Bank, Capital Markets and Financial Institutions Division (CMF), Institutions for Development (IFD). <https://publications.iadb.org/bitstream/handle/11319/5999/Improving%20Credit%20Risk%20Analysis%20with%20Psychometrics%20in%20Peru%20FINAL.pdf?sequence=1&isAllowed=y>.
- Kring, Sriani Ameratunga. 2017. *Gender in Employment Policies and Programmes: What Works for Women?* Employment Working Paper No. 235. Geneva: International Labor Organization. http://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_613536.pdf.
- Lindsey, Dominica. 2017. "A Framework for Mobile Operators to Close the Gender Gap." GSMA (blog). September 13, 2017. <https://www.gsma.com/mobilefordevelopment/programme/connected-women/framework-mobile-operators-close-gender-gap/>.
- Mathuros, Fon. 2018. "Digital Identity – Why It Matters and Why It's Important We Get It Right." Online. World Economic Forum. January 25, 2018. <https://www.weforum.org/press/2018/01/digital-identity-why-it-matters-and-why-it-s-important-we-get-it-right/>.
- MicroSave. 2018. *Leveraging Technology for Meaningful Financial Inclusion in Asia*. Lucknow, Uttar Pradesh, India: MicroSave. http://www.microsave.net/resource/leveraging_technology_for_meaningful_financial_inclusion_in_asia.
- Miles, Katherine and Anke Green. 2017. "The Role of Insurance Regulation and Supervision in Promoting Inclusive Insurance for Women." In Miles, Katherine, Martina Wiedmaier-Pfister, and Marie-Christina Dankmeyer, eds. 2017. *Mainstreaming Gender and Targeting Women in Inclusive Insurance: Perspectives and Emerging Lessons A Compendium of Technical Notes and Case Studies*. Eschborn, Germany: Women and Inclusive Insurance Project - GIZ, International Finance Corporation, and Women's World Banking. <http://documents.worldbank.org/curated/en/229301511502882182/pdf/121550-WP-Women-Inclusive-Insurance-PUBLIC.pdf>.
- Mishra, Vidisha. 2017. "Gendering the G20: Empowering Women in the Digital Age." ORF Issue Brief. Indian Perspectives on the G20 Summit 2017. New Delhi, India: Observer Research Foundation.
- Nathan Associates. 2013. *Access to Finance: Regional Agricultural Trade Environment (RATE) Summary*. Washington, D.C.: USAID.
- _____. 2017a. *Promoting the Digital Economy in the ASEAN and APEC Regions*. Washington, D.C.: USAID.
- _____. 2017b. *Small & Medium Enterprise Development: S.T.E.A.M. Ahead in ASEAN: A Forum on Women in Technology Summary and Evaluation Report*. US-ACTI - Small & Medium Enterprise Development. Manila, Philippines: USAID.

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

- Nelson, Candace. 2008. *Risk Management and Insurance: Protect Your Family's Future. A Trainer's Guide*. Microfinance Opportunities, Freedom from Hunger, Citi Foundation. <https://www.microfinanceopportunities.org/4-work-with-us/mfo-in-the-field/project-list/fecc/>.
- Organization for Economic Co-operation and Development (OECD). 2016a. *Consumer Protection in E-commerce: OECD Recommendation*, Paris: OECD Publishing. <http://dx.doi.org/10.1787/9789264255258-en>.
- _____. 2016b. *Protecting Consumers in Peer Platform Markets: Exploring the Issues*. 2016 Ministerial Meeting on the Digital Economy, Background Paper. OECD Publishing
- _____. 2017. "Going Digital: The Future of Work for Women." In *The Pursuit of Gender Equality: An Uphill Battle*. OECD Publishing. <https://doi.org/10.1787/9789264281318-26-en>.
- OECD and ASEAN Coordinating Committee for Micro, Small and Medium Enterprises. 2017. *Strengthening Women's Entrepreneurship in ASEAN Towards Increasing Women's Participation in Economic Activity*. OECD. https://www.oecd.org/southeast-asia/regional-programme/Strengthening_Womens_Entrepreneurship_ASEAN.pdf.
- Ong, Peng T., and Helen Foo. 2016. "Why Southeast Asian Companies Are Missing Some of the Best Opportunities in Tech." Tech in Asia (online). March 16, 2016. <https://www.techinasia.com/talk/gender-imbalance-tech-lost-opportunities-southeast-asia>.
- Parekh, Anannya. 2017. "Gender Gap in Tech: A Stumbling Block For Digital Economy." *The Blog*. HuffPost. June 22, 2017. http://www.huffingtonpost.ca/girls-twenty/gender-gap-in-tech_a_22574621/.
- Philippines Statistics Authority, "Q&A: Magna Carta of Women (Republic Act No. 9710)," March 15, 2010, <https://psa.gov.ph/content/q-magna-carta-women-republic-act-no-9710>.
- Pitcaithly, Lee-Anne, Margarete Biallas, Rubin Japhta, and Prashant Murthy. 2016. *Research and Literature Review of Challenges to Women Accessing Digital Financial Services*. Washington, D.C.: International Finance Corporation. <https://www.ifc.org/wps/wcm/connect/1872bbdf-de58-48b8-8158-7ee888081ff7/Research+and+Lit+Review+of+Challenges+to+Women+Accessing+DFS.pdf?MOD=AJPERES>.
- Porteous, David and Olga Morawczynski. 2017. *Inclusive Digital Ecosystems of the Future*. FIBR Project white paper no. 2. FIBR. https://www.microfinancegateway.org/sites/default/files/publication_files/bfa_fibr_nov8_whitepaper_20171220.pdf.
- Powell, Catherine, and Ann Mei Chang. 2016. *Women in Tech as a Driver for Growth in Emerging Economies*. New York: Council on Foreign Relations.
- PTI. 2018. "Bill Gates Dismisses 'Aadhaar' Privacy Threats; Funds World Bank to Bring It to Other Countries," News18 (online), May 3, 2018. <https://www.news18.com/news/tech/bill-gates-praises-aadhaar-technology-funds-world-bank-to-bring-it-to-other-countries-1737211.html>.

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

- Rabah, Jack, "Wikimedia Foundation partners with the GSMA to expand digital literacy in emerging countries," Blog post, GSMA, June 21, 2018. <https://www.gsma.com/mobilefordevelopment/programme/connected-society/wikimedia-foundation-partners-with-the-gsma-to-expand-digital-literacy-in-emerging-countries/>.
- "Reshaping the Future: Women, Girls, ICTs and the SDGs." 2017. UN Women. July 14, 2017. <http://www.unwomen.org/en/news/stories/2017/7/reshaping-the-future-icts-and-the-sdgs>.
- Rowntree, Oliver. 2018. *The Mobile Gender Gap Report 2018*. London: GSMA. <https://www.gsma.com/mobilefordevelopment/programme/connected-women/mobile-gender-gap-report-2018>.
- Schirmer, Isabel and Philipp Decking. *Insurance Financial Literacy that Works for Women*, in Miles, Katherine, Martina Wiedmaier-Pfister, and Marie-Christina Dankmeyer, eds. 2017. *Mainstreaming Gender and Targeting Women in Inclusive Insurance: Perspectives and Emerging Lessons A Compendium of Technical Notes and Case Studies*. Eschborn, Germany: Women and Inclusive Insurance Project – GIZ, International Finance Corporation, and Women's World Banking
- "Sharing Digital Knowledge To Change Lives In Myanmar." Blog post. Microsoft. May 17, 2017. https://blogs.technet.microsoft.com/microsoft_citizenship_asia_pacific/2017/05/17/sharing-digital-knowledge-to-change-lives-in-myanmar/.
- SkillsFuture. n.d. "About SkillsFuture." Webpage. SkillsFuture. <http://www.skillsfuture.sg/AboutSkillsFuture>.
- Sorgner, Alina, and Christiane Krieger-Boden. 2017. "Empowering Women in the Digital Age." G20 Germany 2017, Think 20 Dialogue. G20 Insights. <http://www.g20-insights.org/wp-content/uploads/2017/07/Empowering-Women-in-the-Digital-Age.pdf>.
- Sree, Vidaya. "Electronic Know-Your-Customer (e-KYC) Explained." Online posting. MarketCalls, January 16, 2014, <https://www.marketcalls.in/banking/electronic-know-customer-e-kyc-explained.html>.
- Stuart, Liyana. 2016. "Facebook's #SheMeansBusiness Celebrates Female Entrepreneurs in Asia." *LadyBoss Women Leaders in Asia* (blog). April 19, 2016. <https://ladyboss.asia/facebook-shemeansbusiness-celebrates-women-entrepreneurs-across-asia/>.
- Thakur, Dhanaraj with Laura Potter. 2018. *Universal Service and Access Funds: An Untapped Resource to Close the Gender Digital Divide*. Washington, D.C.: World Wide Web Foundation. webfoundation.org/docs/2018/03/Using-USAFs-to-Close-the-Gender-Digital-Divide-in-Africa.pdf.
- Theodorou, Yiannis, and Erdoog Yongo. 2018. *Access to Mobile Services and Proof-of-Identity: Global Policy Trends, Dependencies and Risks*. London: GSMA. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/02/Access-to-Mobile-Services-and-Proof-of-Identity.pdf>.
- Toronto Centre. 2018. *Advancing Women's Digital Financial Inclusion*. TC Notes. Toronto: Toronto Centre.

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

<https://res.torontocentre.org/guidedocs/Advancing%20Womens%20Digital%20Financial%20Inclusion%20FINAL.pdf>.

“Towards Inclusive and Sustainable Growth in the ASEAN Economic Community.” 2017. ASEAN Secretariat.

TRPC Pte Ltd. 2015. *The ASEAN ICT Masterplan 2020*. Jakarta: ASEAN Secretariat.

TRPC Pte Ltd. and The Internet Society. 2015. *Unleashing the Potential of the Internet for ASEAN Economies*.
<https://www.internetsociety.org/resources/doc/2015/unleashing-the-potential-of-the-internet-for-asean-economies/>.

United Nations, Office of the Special Advisor on Gender Issues, and Department of Economic and Social Affairs. 2002. “Gender Mainstreaming: An Overview.” New York: United Nations.

United Nations Capital Development Fund (UNCDF). 2017. “The Gender Gap in Financial Inclusion: What Can We Learn from Microfinance and Banking Data?” News. September 4, 2017. <http://www.uncdf.org/article/2705/>.

United Nations Conference on Trade and Development (UNCTAD). 2015. *Information Economy Report 2015: Unlocking the Potential of E-Commerce for Developing Countries*. Switzerland: UNCTAD.
http://unctad.org/en/PublicationsLibrary/ier2015_en.pdf.

_____. 2017a. “Consumer Protection in Electronic Commerce.” Note by the UNCTAD Secretariat. TD/B/C.I/CPLP/7. Switzerland: UNCTAD.
http://unctad.org/meetings/en/SessionalDocuments/cicplpd7_en.pdf.

_____. 2017b. *The «New» Digital Economy and Development*. UNCTAD Technical Notes on ICT for Development No. 8. Switzerland: UNCTAD.

_____. 2017c. *Information Economy Report 2017: Digitalization, Trade and Development*. Switzerland: UNCTAD.
http://unctad.org/en/PublicationsLibrary/ier2017_en.pdf?user=46.

United Nations Economic and Social Commission for Asia and the Pacific (ESCAP). 2017a. “Fostering Women’s Entrepreneurship in ASEAN: Transforming Prospects, Transforming Societies.” New York: United Nations.
http://www.unescap.org/sites/default/files/ESCAP-FWE-ASEAN-full_0.pdf.

_____. 2017b. *The Impact of Universal Service Funds on Fixed-Broadband Deployment and Internet Adoption in Asia and the Pacific*. Asia-Pacific Information Superhighway (AP-IS) Working Paper Series. Bangkok: United Nations ESCAP. <http://www.unescap.org/resources/impact-universal-service-funds-fixed-broadband-deployment-and-internet-adoption-asia-and>.

United Nations ESCAP and UN Women. n.d. *Women’s Economic Empowerment in the Changing World of Work: An Overview for Asia and the Pacific*. Background paper. EGM/CWW/BP.2. UN Women.
<https://drive.google.com/file/d/1d1ZaBtdqynyfDcPO2yYfZohOdZfsngZg/view?usp=sharing>.

United Nations Economic Commission for Latin America and the Caribbean. 2015. “Women in the Digital Economy.” Text. February 10, 2015.

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

<https://www.cepal.org/publicaciones/xml/2/51172/womaninthedigitalecoSUMMARY.pdf>

United Nations Secretary-General's High-Level Panel on Women's Economic Empowerment. 2017. *Leave No One Behind: Taking Action for Transformational Change on Women's Economic Empowerment*. New York: UN. <http://hlp-wee.unwomen.org/en>.

United Nations Statistics Division. 2015a. "Chapter 4: Work." In *The World's Women 2015: Trends and Statistics*. New York: United Nations. <https://unstats.un.org/unsd/gender/chapter4/chapter4.html>.

_____. 2015b. "Chapter 8: Poverty." In *The World's Women 2015: Trends and Statistics*. New York: United Nations. https://unstats.un.org/unsd/gender/downloads/WorldsWomen2015_chapter8_t.pdf.

_____. 2015c. "Moving Forward on Gender Statistics." Note for *The World's Women 2015: Trends and Statistics*. New York: United Nations. <https://unstats.un.org/unsd/gender/dataWW2015.html>.

UN Women. 2016. "Women's Entrepreneurship Development: A Powerful Route to Women's Economic Empowerment." Background paper. EGM/CWW/BP.2. UN Women. <https://drive.google.com/file/d/1iflrJhIWUzuMd9PWMDNj1vFthzKRWOK/view?usp=sharing>.

_____. 2017. *Making Innovation and Technology Work for Women*. New York: UN Women. <http://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2017/makinginnovationandtechnologyworkforwomencompressed.pdf?la=en&vs=3025>.

UN Women, Regional Office for Asia and the Pacific (ROAP) and Friedrich Ebert Stiftung (FES), 2017. *Women Migrant Workers in the ASEAN Economic Community*. UN Women

United States Agency for International Development (USAID). March 2012. *USAID Gender Equality and Female Empowerment Policy*. Washington, D.C.: USAID.

USAID, US-ASEAN Connect, and ASEAN. 2017. "Summary Notes for the Workshop on E-Commerce Development in ASEAN." ASEAN.

Verité. 2014. *Forced Labor in the Production of Electronic Goods in Malaysia: A Comprehensive Study of Scope and Characteristics*. Verité. <http://verite.org/wp-content/uploads/2016/11/VeriteForcedLaborMalaysianElectronics2014.pdf>.

Villadiego, Laura. "The Gender Gap in Electronics Factories: Women Exposed to Chemicals and Lower Pay," *Equal Times* (online), December 22, 2017.

"Vulnerable Employment And Poverty On The Rise, Interview With ILO Chief Of Employment Trends Unit," International Labor Organization, January 26, 2010, http://www.ilo.org/global/about-the-ilo/newsroom/features/WCMS_120470/lang-en/index.htm.

Wang, Yue. 2017. "How China's Tech Giants Alibaba And Tencent Want to Shape How The World Pays." *Forbes*. Accessed May 4, 2018. <https://www.forbes.com/sites/ywang/2017/12/06/how-chinas-tech-giants-alibaba->

WOMEN'S ECONOMIC EMPOWERMENT IN THE DIGITAL ECONOMY

[and-tencent-want-to-shape-how-the-world-pays/#259aca17e6d0](#).

_____. 2018. "China Tightens Regulation Over Mobile Payment Apps: What's Next for Tencent and Ant Financial?" *Forbes*, January 3, 2018.

<https://www.forbes.com/sites/ywang/2018/01/03/china-tightens-regulation-over-mobile-payment-apps-whats-next-for-tencent-and-ant-financial/#4e696eac7f1d>.

Widjaja, Nancy. 2015. *Markets at Full Speed: Women as Economic Drivers, Fueled by Finance*. New York: United Nations Capital Development Fund.

"Women ICT Frontier Initiative (WIFI)." Webpage. Asian and Pacific Training Center for Information and Communication Technology for Development (APCICT).

<http://www.unapcict.org/wifi>.

"Women ICT Frontier Initiative (WIFI) for the ASEAN Sub-Region." UNESCAP. August 29, 2017.

Women's World Banking. 2016. *Policy Frameworks to Support Women's Financial Inclusion*. AFI Special Report. Alliance for Financial Inclusion. https://www.afi-global.org/sites/default/files/publications/2016-08/2016-02-womenfi.1_0.pdf.

World Bank. 2014. *Growing Women-Led Enterprises in the Mekong: Testing a Methodology for Accelerating Growth*. Washington, D.C.: World Bank. <https://openknowledge.worldbank.org/handle/10986/21076>.

_____. 2016a. *World Development Report 2016: Digital Dividends*. Washington, D.C.: World Bank. <http://www.worldbank.org/en/publication/wdr2016>.

_____. 2016b. *Innovation in Electronic Payment Adoption: The Case of Small Retailers*. Washington, D.C.: World Bank. <http://documents.worldbank.org/curated/en/765851467037506667/Innovation-in-electronic-payment-adoption-the-case-of-small-retailers>.

_____. 2018a. "Women, Business and the Law 2018." Dataset. Washington, D.C.: World Bank. <http://wbl.worldbank.org/>.

_____. 2018b. "The Changing Nature of Work: Concept Note." World Development Report 2019. Washington, D.C.: World Bank.

_____. 2018c. *Women, Business and the Law 2018*. Washington, D.C.: World Bank. <https://doi.org/10.1596/978-1-4648-1252-1>.

World Bank Development Research Group, Better Than Cash Alliance, the Bill & Melinda Gates Foundation, and Women's World Banking. 2015. *Digital Financial Solutions to Advance Women's Economic Participation: How Governments, Private Sector and Development Organizations Can Bring More Women into the Global Economy through Digital Financial Services*. Prepared for the Turkish G20 Presidency: Global Partnership for Financial Inclusion. <https://www.gpfi.org/sites/default/files/documents/03-Digital%20Financial%20Solution%20to%20Advance%20Women....pdf>.

World Bank and GSMA. 2016. *Digital Identity: Towards Shared Principles for Public and Private Sector Cooperation*. Working Paper 107201. Washington, D.C.: World Bank Group. <http://documents.worldbank.org/curated/en/600821469220400272/Digital-identity-towards-shared-principles-for-public-and-private-sector-cooperation>.

World Economic Forum. 2016. *The Future of Jobs Employment, Skills and*

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Workforce Strategy for the Fourth Industrial Revolution. Global Challenge Insight Report. New York: World Economic Forum. <http://wef.ch/22Cn15C>.

_____. 2017a. *Accelerating Workforce Reskilling for the Fourth Industrial Revolution: An Agenda for Leaders to Shape the Future of Education, Gender and Work*. White Paper. New York: World Economic Forum.

_____. 2017b. *The Global Gender Gap Report 2017*. World Economic Forum. <https://www.weforum.org/reports/the-global-gender-gap-report-2017>.

World Economic Forum and The Boston Consulting Group. 2018. *Towards a Reskilling Revolution: A Future of Jobs for All*. Insight Report. New York: World Economic Forum. http://www3.weforum.org/docs/WEF_FOW_Reskilling_Revolution.pdf.

Young, Elise, and Andrea Bertone. 2016. *USAID Women's Economic Empowerment and Equality Assessment Report*. Washington, D.C.: USAID. http://2ne1nx2xnm9m19ykg20xpt8-wpengine.netdna-ssl.com/wp-content/uploads/2016/03/2016-03-02_56d769b6b2fe8_USAIDWE3AssessmentReport.pdf.

APPENDICES

APPENDIX A. RESEARCH MATRIX

Key Research Questions:	Sub-Questions	Data Source	Method
What are the key ASEAN-specific factors and forces that have:			
Constrained or hindered women from obtaining equitable access to development opportunities and resources	What are the general constraints to women's economic empowerment in ASEAN?	Strengthening Women's Entrepreneurship in ASEAN: Towards Increasing Women's Participation in Economic Activity. OECD. Projected Gender Impact of the ASEAN Economic Community. ASEAN;	Desk review In-depth Individual Interviews (IDIs) with key Informants
Prevented women from playing their full economic role as wage and salary earners or self-employed entrepreneurs and business persons in the digital economy;	What are the specific constraints to WEE in the digital economy? For women as employees? For women as entrepreneurs/business women?	Same as above, plus Literature on women and the digital divide.	Desk review IDIs with Key Informants in ASEAN region
What are the specific strategic measures and key action lines under CSAP and other sectoral action plans, that should contain or incorporate gender empowerment measures and actions so as to initiate and/or promote WEE in ASEAN;	What are the specific strategic measures and key action lines under CSAP that could/should incorporate WEE actions? What are the specific strategic measures and key action lines under CSAP that relate to the digital economy and could/should incorporate WEE actions? What sectoral bodies are most open/interested in incorporating WEE actions into action lines?	AEC Consolidated Strategic Action Plan ASEAN Economic Community Blueprint (2008); ASEAN 2025: Forging Ahead Together	Desk review and analysis IDIs with Key Informants in ASEAN region

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Key Research Questions:	Sub-Questions	Data Source	Method
	What are the cross-cutting WEE actions that can be incorporated across sectors?		
What are the range of practical approaches and specific activities that would allow the gender empowerment measures identified and proposed in (ii) to be introduced and implemented by various ASEAN sectoral committees in the AEC?	<p>What has been the experience with any approaches that have been used in the region to date?</p> <p>What has been the experience with approaches that have been used in other regions/parts of the world to date?</p> <p>What works for empowering women employees in the digital economy? As users or consumers of digital/ICTs?</p> <p>What works for empowering women entrepreneurs in the digital economy? As developers/creators or users of digital/ICTs?</p>	Literature on women and the digital divide.	<p>Desk review</p> <p>IDIs with key informants in ASEAN region</p> <p>IDIs with key informants globally (optional)</p>

APPENDIX B. SELECTED STRATEGIC MEASURES AND ACTION LINES WITH THE POTENTIAL TO ADDRESS CHALLENGES TO WEE IN ASEAN

Characteristics, Elements and Strategic Measures	Action Lines	WEE Challenge Addressed
Characteristic 1: A Highly Integrated and Cohesive Economy		
A4. Financial Integration, Financial Inclusion, and Financial Stability		
15 Promote financial inclusion to deliver financial products and services to a wider community that is under-served, including micro, small and medium enterprises (MSMEs)	Implement a public awareness campaign for insurance - (Underserved to understand importance of insurance - Insurance companies to create products for underserved)	Financial Inclusion
	Formulate a financial inclusion strategy and implementation plan (Includes issuance of guidance note on ... SME financing, among others)	Financial Inclusion
	Promote innovative financial inclusion via digital platforms	Financial Inclusion
	Elevate capacity building of ASEAN member states to enhance financial inclusion ecosystem.	Financial Inclusion
A6. Enhancing Participation in Global Value Chains		
25 Better information sharing	Annual or biennial dialogue aimed at sharing knowledge and reporting progress made in GVC- related activities across different committees and research activities	MSME development
Characteristic 2: A Competitive, Innovative and Dynamic ASEAN		
B4. Productivity-Driven Growth, Innovation, Research and Development and Technology Commercialization		
43 Promote strategic partnerships among the academia, research institutions and the private sector towards developing capabilities and creating an effective channel for technology transfer and commercialization	Intensify the engagement of academia, private sector and relevant partners in the planning, implementation and assessment of joint undertakings in human resource development, and research and development	MSME development Women workers training and reskilling
47 Enhance the support system and enabling environment to nurture a highly mobile, intelligent and creative human resource that	Intensify the engagement of academia, private sector and relevant partners in the planning, implementation and assessment of joint undertakings in human	Women workers training and reskilling

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thrives on knowledge creation and application	resource development, and research and development	
73 Engender and maintain an industrial relations environment that facilitates, as smoothly as possible, investing in workers and firms as learning centers for industrial upgrading, and managing labor adjustments in the integrating ASEAN, and maximize the benefits of regional integration and cooperation by capitalizing on global mega trends such as the expanding interconnected global cross-border flows and accelerating technology-digital advancement that are increasingly defining international production, trade, services and investment	Promote dialogue and induce awareness on Global Megatrends and Emerging Trade Related Issues in ASEAN	Women workers training and reskilling
Characteristic 3: An Enhanced Connectivity and Sectoral Cooperation		
C2. Information and Communication Technology (ICT)		
79 Economic Transformation: explore the further utilization and coordination of ICT for economic development and promote digital trade in ASEAN	Promote digital trade in ASEAN	MSME development
80. People Integration and Empowerment through ICT: strengthen digital inclusion efforts to empower individuals and to enable community development, and explore new ways to enhance Internet broadband penetration and affordability in ASEAN	Develop best practices for next generation telecenters	MSME development Possibly: Women workers training and reskilling
81 Innovation: support ICT innovations and entrepreneurship as well as new technological developments such as Smart City and Big Data and Analytics	Develop an ecosystem conducive to support start-ups and strengthen enterprises	MSME development
82 ICT Infrastructure Development: Improve ICT infrastructure and connectivity especially in the rural areas, and develop measures to enhance the resilience of ICT infrastructure	Reduce development disparities in access to and affordability of broadband and improve ICT interoperability	Digital Divide & Financial Inclusion MSME development
83 Human Capital Development: strengthen the professional development of the ICT workforce in the region	Continue ongoing efforts to narrow the gaps between demand and supply in ICT human resource	MSME development Women workers training and reskilling
85 New Media and Content Industry: encourage the growth and use of e- services and new media in the region	Develop Best Practices guide for local content development and support	MSME development
	Develop Best Practices for e-Service Delivery	MSME development

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	Develop and foster cyber wellness through guidelines, education and outreach programs	MSME development
C3. E-Commerce		
87 Harmonized consumer rights & protection laws	Integrate e-commerce considerations into the ASEAN High-level Consumer Protection Principles	MSME development
C9. Science and Technology		
119 Strengthen existing networks of S&T centers of excellence to promote cooperation, sharing of research facilities and manpower towards joint research and technology development, technology transfer and commercialization	Intensify the engagement of academe, private sector and relevant partners in the planning, implementation and assessment of joint undertakings in human resource development, and research and development;	Women workers training and reskilling
120 Enhance mobility of scientists and researchers from both public S&T institutions and private sector through exchange programs and other appropriate arrangements according to the respective laws, rules, regulation, and national policies	Establish a policy framework for exchange of scientist, researchers and students including women and youth	Women in S&T
	Establish scholarship, fellowship and/or attachment programs for students, researchers and other STI personnel	Women in S&T
	Expand opportunities for women, youth and the disadvantaged group to contribute in STI through incentives and support mechanisms	Women in S&T
121 Establish systems and mechanisms that will increase the engagement of women and youth in STI to promote entrepreneurship	Establish support mechanisms such as mentorship and incentive programs to support and nurture STI enterprises from start-up to the next competitive level of development	Women in S&T MSME development
123 Establish innovative support systems to promote and manage regional STI enterprise arising from spin-offs and joint ventures	Encourage the participation of scientists, researchers and industries in the ASEAN S&T events such as ASEAN Food Conference (AFC) and ASEAN Science and Technology Week (ASTW)	Women in S&T
	Engage dialogue and other strategic partners in joint undertakings on appropriate and commercially viable STI initiatives	Women in S&T MSME development
	Engage relevant stakeholders in developing and implementing an effective communication and STI enculturation plan	Women in S&T
Characteristic 4: Resilient, Inclusive and People-Oriented, People-Centered ASEAN		
D1. Strengthening the Role of MSMEs		
126 Increase access to finance by developing and enhancing the institutional framework in respect	Facilitate AMS to develop credit rating system	Financial Inclusion

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of improving understanding and strengthening traditional financing infrastructure as well as the policy environment and measures that foster alternative and nontraditional financing promote financial inclusion and literacy and the ability of MSMEs to be better engaged in the financial system enhance tax and other incentive schemes	Creation of interactive online platform on a range of financial support available to MSMEs to minimize information gap (ASEAN SME Service Center)	Financial Inclusion MSME development
127 Enhance market access and internationalization by extending and developing support schemes for market access and integration into the global supply chain including promoting partnership with multinational corporations (MNCs) and large enterprises to increase market access and opportunities promote the use of e- Commerce enhancing measures to promote exports through mechanisms such as export clinics, advisory services and ROO utilization	Promote and increase outreach on benefits of the AEC to SMEs	MSME development
	Establish and promote a digital service hub that will enhance trade supply chains and also improve the competitiveness of ASEAN SMEs in a low-cost manner (Competitive pathway)	MSME development
	Promote the development and utilization of e- commerce platforms to encourage expansion of SMEs	MSME development
	Capacity building for of policymakers in designing and improving business registration and license such as simplification of business registration procedure through use of information technology (IT)	MSME development
D2. Strengthening the Role of the Private Sector		
D4. Narrowing the Development Gap		
141 Building business opportunities for growth and employment, and increasing access to financial services	Support access to finance for MSMEs by, among other measures, establishing and strengthening credit bureaus, and further developing credit guarantee systems	Financial Inclusion
143 Emphasize on the development of MSMEs of ASEAN Member States	Increase the capacity of business associations to partner with government in creating a conducive environment for MSMEs and to assist MSMEs to start and sustain their enterprises	MSME development
	Reform the registration process for starting a business by streamlining permits and registration procedures and promoting Good Regulatory Practices	MSME development

APPENDIX C. SELECTED STRATEGIC MEASURES AND ACTION LINES COVERED BY OTHER POLICY RECOMMENDATIONS

OECD recommendations are from *Strengthening Women's Entrepreneurship in ASEAN: Towards Increasing Women's Participation in Economic Activity* (OECD and ACCMSME 2017).

Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
Characteristic 1: A Highly Integrated and Cohesive Economy		
A4. Financial Integration, Financial Inclusion, and Financial Stability		
	Formulate financial inclusion strategy and implementation plan (Includes issuance of guidance note on ... SME financing, among others)	<ul style="list-style-type: none"> • Improve women entrepreneurs' access to financing; raise ceiling on microcredit loans; • Help women transition from microcredit to standard bank financing as they grow their businesses; • Strengthen policy action to improve women entrepreneur's access to bank financing and close the gender gap in business lending; • Offer technical assistance in designing gender-responsive products and services in order to address the unmet demand of women entrepreneurs in the ASEAN countries for start-up and growth financing; negotiate low-interest credit lines for relending to women-owned enterprises; • Design special guarantee provisions for women-owned SMEs in government backed SME credit guarantee schemes; Identify the gender gap in participation levels of women in existing credit guarantee funds by collecting sex-disaggregated data on the SME guarantee clients. (p. 120) • Provide gender-sensitivity training to bank managers and credit officers; (p. 24)
	Develop strategies, policies and initiatives that will increase awareness	<ul style="list-style-type: none"> • Partner with women's organisations and training institutes to deliver financial literacy training

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
	on financial education/literacy and consumer protection	to aspiring and existing women entrepreneurs. (p. 120) <ul style="list-style-type: none"> Combine financial literacy education and training with access to formal financial products. (p. 16)
A6. Enhancing Participation in Global Value Chains		
23 Trade facilitation initiatives focusing on both imports and export	Enhance SME comparative advantage and international competitiveness through capacity building initiatives	<ul style="list-style-type: none"> Ensure that women-owned enterprises are integrated in the supply chains of large corporations and anchor firms: Develop export-readiness programmes targeting women entrepreneurs, learning from the models in Malaysia and the Philippines, but with a view to scaling them to build the export capacity of a larger number of women entrepreneurs. Seek guidance from the UN International Trade Centre on good practices in gender-responsive public procurement policies, regulations and procedures with a view to increasing the participation of women-owned SMEs in public procurement offers. Develop and roll-out supplier development programmes for women-owned MSMEs, which could be accelerated in ASEAN countries with support from governments and donor organisations. Develop programmes that enable women-owned MSMEs to take advantage of corporate supplier diversity policies and programmes. (p. 25 and p. 121)
24 Harmonization with international standards and support for standards compliance capacity building.	Enhance SME comparative advantage and international competitiveness through capacity building initiatives	<ul style="list-style-type: none"> Develop export-readiness programmes targeting women entrepreneurs, learning from the models in Malaysia and the Philippines, but with a view to scaling them to build the export capacity of a larger number of women entrepreneurs.

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
	Assess small and medium enterprise (SME) engagement in GVCs in ASEAN through evidence-based thematic reports	<ul style="list-style-type: none"> • Policymakers should work to develop accurate and comprehensive databases with sex-disaggregated data on MSME ownership and performance as inputs to create better informed and evidence-based public policies, measures, and programme interventions. • ASEAN countries could benefit from carrying out more systematic analyses of the barriers to women's entrepreneurship, to include: the distinct nature of barriers for start-ups and growth-oriented enterprises, and the gender gaps to be addressed in the MSME policy framework and business support ecosystem. (p. 23)
Characteristic 2: A Competitive, Innovative and Dynamic ASEAN		
B4. Productivity-Driven Growth, Innovation, Research and Development and Technology Commercialisation		
43 Promote strategic partnerships among the academia, research institutions and the private sector towards developing capabilities and creating an effective channel for technology transfer and commercialisation	Intensify the engagement of academia, private sector and relevant partners in the planning, implementation and assessment of joint undertakings in human resource development, and research and development	<ul style="list-style-type: none"> • Ensure women are fully integrated in government-supported programmes and initiatives aiming to facilitate ICT-based start-ups. (p. 26)
	Establish support mechanism such as mentorship and incentive program to support and nurture science, technology, and innovation (STI) enterprises from start-up to the next competitive level of development	<ul style="list-style-type: none"> • Increase mentoring opportunities for women entrepreneurs. Successful examples include training women as mentors, then matching women entrepreneurs with mentors. Every effort should be made to create awareness among women entrepreneurs of the recently announced ASEAN Mentors-Entrepreneurs Network (AMEN) and to engage their participation in the offer of mentoring matches. (p. 25)

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
44 Information sharing and networking to stimulate ideas and creativity at the universities and business-level;	Intensify the engagement of academia, private sector and relevant partners in the planning, implementation and assessment of joint undertakings in human resource development, and research and development	<ul style="list-style-type: none"> • Ensure women are fully integrated in government-supported programmes and initiatives aiming to facilitate ICT-based start-ups. (p. 26)
45 Strengthen the competitiveness of the MSMEs in ASEAN through the application of science and technology (S&T) tools and methodologies	Establish support mechanism such as mentorship and incentive program to support and nurture science, technology, and innovation (STI) enterprises from start-up to the next competitive level of development	<ul style="list-style-type: none"> • Increase mentoring opportunities for women entrepreneurs. Successful examples include training women as mentors, then matching women entrepreneurs with mentors. Every effort should be made to create awareness among women entrepreneurs of the recently announced ASEAN Mentors-Entrepreneurs Network (AMEN) and to engage their participation in the offer of mentoring matches. (p. 25)
46 Place a greater focus on entrepreneurship, and development of business incubator programmes for commercialisation	Establish support mechanism such as mentorship and incentive program to support and nurture science, technology, and innovation (STI) enterprises from start-up to the next competitive level of development	<ul style="list-style-type: none"> • Gender diversity should be promoted in government-funded and sponsored mixed incubator and accelerator programs. (p. 25) • Increase mentoring opportunities for women entrepreneurs. Successful examples include training women as mentors, then matching women entrepreneurs with mentors. Every effort should be made to create awareness among women entrepreneurs of the recently announced ASEAN Mentors-Entrepreneurs Network (AMEN) and to engage their participation in the offer of mentoring matches. (p. 25)
	Establish support mechanism such as mentorship and incentive program to support and nurture science,	<ul style="list-style-type: none"> • Increase mentoring opportunities for women entrepreneurs. Successful examples include training women as mentors, then

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
	<p>technology, and innovation (STI) enterprises from start-up to the next competitive level of development</p>	<p>matching women entrepreneurs with mentors. Every effort should be made to create awareness among women entrepreneurs of the recently announced ASEAN Mentors-Entrepreneurs Network (AMEN) and to engage their participation in the offer of mentoring matches. (p. 25)</p> <ul style="list-style-type: none"> • Ensure women are fully integrated in government-supported programmes and initiatives aiming to facilitate ICT-based start-ups. (p. 26)
Characteristic 3: An Enhanced Connectivity and Sectoral Cooperation		
C2. Information and Communication Technology (ICT)		
<p>80 People Integration and Empowerment through ICT: strengthen digital inclusion efforts to empower individuals and to enable community development, and explore new ways to enhance Internet broadband penetration and affordability in ASEAN</p>	<p>Create initiatives to address emerging or growing digital divides in ASEAN;</p>	<ul style="list-style-type: none"> • Strengthen efforts to ensure women are fully integrated in government-supported programmes and initiatives aiming to facilitate ICT-based start-ups. • Provide support to women entrepreneurs' association in their efforts to support women entrepreneurs is using ICTs to improve the performance of their enterprises. • Enter into discussions with the United Nations Asian and Pacific Training Centre for Information and Communication Technology for Development (UNAPCICT) to implement the "Women ICT Frontier Initiative" (WIFI) programme in the country as a vehicle for building the ICT capacity of women entrepreneurs. (p. 121 and p. 122)
<p>81 Innovation: support ICT innovations and entrepreneurship as well as new technological developments such</p>	<p>Develop an ecosystem conducive to support start-ups and strengthen enterprises</p>	<ul style="list-style-type: none"> • Develop dedicated programmes to build and strengthen the ICT skills and capabilities of women entrepreneurs, including the application of ICT-enabled technologies to improve their

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
as Smart City and Big Data and Analytics		<p>efficiency and broaden their market access.</p> <ul style="list-style-type: none"> • Strengthen efforts to ensure women are fully integrated in government-supported programmes and initiatives aiming to facilitate ICT-based start-ups. • Provide support to women entrepreneurs' associations in their efforts to support women entrepreneurs is using ICTs to improve the performance of their enterprises. • Enter into discussions with the United Nations Asian and Pacific Training Centre for Information and Communication Technology for Development (UNAPCICT) to implement the "Women ICT Frontier Initiative" (WIFI) programme in the country as a vehicle for building the ICT capacity of women entrepreneurs. (p. 121 and p. 122)
83 Human Capital Development: strengthen the professional development of the ICT workforce in the region	Continue ongoing efforts to narrow the gaps between demand and supply in ICT human resource	<ul style="list-style-type: none"> • Develop dedicated programmes to build and strengthen the ICT skills and capabilities of women entrepreneurs, including the application of ICT-enabled technologies to improve their efficiency and broaden their market access.
C3. E-Commerce		
C9. Science and Technology		
Characteristic 4: Resilient, Inclusive and People-Oriented, People-Centered ASEAN		
D1. Strengthening the Role of MSMEs		
125 Promote productivity, technology and innovation through measures to enhance MSME productivity by understanding key	Share best practices/standards of basic productivity and quality for microenterprises (strengthening micro enterprises through improving production	<ul style="list-style-type: none"> • Ensure women have equal and formalised opportunities to participate in entrepreneurial and business management skills programmes, including equal opportunities for young women to participate in Start-up Weekends and other

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
<p>trends in productivity build industry clusters through industrial linkages, and promote technology and building capabilities to foster industry clustering as well as promote innovation as a key competitive advantage through technology usage and its application to business and business-academia linkages</p>	<p>management skills); including appropriate technology adoption among SMEs to support higher production capability in focused industries (Competitive pathway)</p>	<p>entrepreneurship challenge competitions.</p> <ul style="list-style-type: none"> Support existing self-employed women with viable enterprises with advice and technical assistance so they can scale up their activities and integrate into the formal economy. (p. 25)
	<p>Develop concepts of special industrial parks/zones to foster focus industries where both SMEs and MNCs can build partnerships (Competitive pathway)</p>	<ul style="list-style-type: none"> Gender diversity should be promoted in government-funded and sponsored mixed incubator and accelerator programmes. Bridging the gender gap in access to the supports available in these facilities can help businesses grow and create jobs.
	<p>Develop on-line interactive platform for ASEAN business incubation network (ABINet) for exchange of ideas and information (Competitive pathway)</p>	<ul style="list-style-type: none"> Promote gender diversity in government-funded and sponsored mixed incubator and accelerator programmes to bridge the gender gap in access to the supports available in these facilities to help businesses grow and create jobs. Funding for incubation and acceleration activities (in cases where this exists) could be tied to the gender diversity approaches and outcomes realised by these incubators and accelerators. In some cases, it may be advisable to introduce women-focused business incubators to help women entrepreneurs with high-potential business ideas scale-up their businesses.
	<p>Promote of collaboration between creative industry agencies and SMEs/entrepreneurs to advance the skills of knowledge-based creative industries supported by the use of IT-based capacity (Competitive pathway)</p>	<ul style="list-style-type: none"> Ensure women have equal and formalised opportunities to participate in entrepreneurial and business management skills programmes, including equal opportunities for young women to participate in “Start-up Weekends” and other entrepreneurship challenge competitions. Ensure women are fully integrated in government-supported programmes and

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
		<p>initiatives aiming to facilitate ICT-based start-ups.</p>
	<p>Enhance business-academia collaboration through the setting up of a network programme for the promotion of joint collaboration among SMEs, large enterprises and academia (Competitive pathway)</p>	<ul style="list-style-type: none"> • Gender diversity should be promoted in government-funded and sponsored mixed incubator and accelerator programmes. • Ensure women are fully integrated in government-supported programmes and initiatives aiming to facilitate ICT-based start-ups.
	<p>Enhance business-academia collaboration through programmes for universities to share their facilities with SMEs (Competitive pathway)</p>	<ul style="list-style-type: none"> • Ensure women are fully integrated in government-supported programmes and initiatives aiming to facilitate ICT-based start-ups.
<p>126 Increase access to finance by developing and enhancing the institutional framework in respect of improving understanding and strengthening traditional financing infrastructure as well as the policy environment and measures that foster alternative and non-traditional financing promote financial inclusion and literacy and the ability of MSMEs to be better engaged in the financial system enhance tax and other incentive schemes</p>	<p>Conduct roundtable discussions <u>between SMEs, regulatory agencies, and financing institutions</u> to share current issues on access to finance, such as credit rating, credit scoring, credit bureau, secured transaction law, microfinance, SMEs focused lending, intercompany credits (accounts receivable, promissory notes, factoring, Small Debt Resolution Scheme), etc.</p>	<ul style="list-style-type: none"> • Establish formal mechanisms for conducting policy dialogue with women entrepreneurs and their representative organisations and mainstreaming their concerns and issues; • Ensure that women entrepreneurs are represented in public private policy dialogue fora and consulted on legislative and policy reforms. (p. 84)
	<p>Develop policy options in collaboration with relevant sectoral bodies to enhance conventional financing such as credit guarantee scheme and trade finance (Competitive pathway)</p>	<ul style="list-style-type: none"> • Establish formal mechanisms for conducting policy dialogue with women entrepreneurs and their representative organisations and mainstreaming their concerns and issues
	<p>Study on policy options and good practices for equity finance and alternative financing for SMEs and start-ups and organization of roundtables with various stakeholders, in</p>	<ul style="list-style-type: none"> • Establish formal mechanisms for conducting policy dialogue with women entrepreneurs and their representative organisations and mainstreaming their concerns and issues;

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
	collaboration with relevant sectoral bodies	<ul style="list-style-type: none"> • ASEAN countries could benefit from carrying out more systematic analyses of the barriers to women's entrepreneurship, to include: the distinct nature of barriers for start-ups and growth-oriented enterprises, and the gender gaps to be addressed in the MSME policy framework and business support ecosystem.
	Enhance market information, FTAs [free trade agreements], and potential partners (ASEAN SME Service Centre) (Competitive Pathway)	<ul style="list-style-type: none"> • Develop programmes and initiatives to improve women's export potential and opportunities, open up procurement opportunities for women-owned SMEs, and ensure that women-owned enterprises are integrated in the supply chains of large corporations and anchor firms. (p. 25) • Develop and roll-out supplier development programmes for women-owned MSMEs, which could be accelerated in ASEAN countries with support from governments and donor organisations.
	Facilitate networking and partnership between SMEs and large enterprises/MNCs (Competitive pathway)	<ul style="list-style-type: none"> • Develop programmes that enable women-owned MSMEs to take advantage of corporate supplier diversity policies and programmes.
	Support for business matching and partnerships (Trade fairs - MNCs & SMEs; Networking - SME CEOs [chief executive officers] and business leaders) (Competitive pathway)	<ul style="list-style-type: none"> • Develop programmes that enable women-owned MSMEs to take advantage of corporate supplier diversity policies and programmes.
	Share model strategies on international standards for SMEs to be integrated into the global supply chain (Competitive pathway)	<ul style="list-style-type: none"> • Develop export-readiness programmes targeting women entrepreneurs (using models in Malaysia and the Philippines as a source of inspiration).
	Cooperate with ASEAN Consultative Committee on Standards and Quality	<ul style="list-style-type: none"> • Develop export-readiness programmes targeting women entrepreneurs (using models in

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
	(ACCSQ) to drive greater awareness and adoption of international standards (original started "Capacity building for SMEs on international standards in ...") (Competitive pathway)	<p>Malaysia and the Philippines as a source of inspiration).</p> <ul style="list-style-type: none"> • Develop programmes that enable women-owned MSMEs to take advantage of corporate supplier diversity policies and programmes.
<p>128 Enhance MSME policy and regulatory environment that promotes intra- and inter-governmental cooperation and coordination mechanisms, involvement of MSMEs in the decision-making process to enable better representation of MSME interests, provide support to micro- enterprises in the informal sector and their integration streamline processes involved in obtaining of permits and business registrations to enable less costly and faster business formation</p>	<p>Develop comparable MSME statistics through annual business surveys for KPI [key performance indicators] monitoring</p>	<ul style="list-style-type: none"> • Policy makers should work to develop accurate and comprehensive databases with sex-disaggregated data on MSME ownership and performance as inputs to create better informed and evidence-based public policies, measures, and programme interventions. • A workable definition for "woman-owned business" should be established in order to develop criteria for targeted government incentives, such as public procurement. • ASEAN countries could benefit from carrying out more systematic analyses of the barriers to women's entrepreneurship, to include: the distinct nature of barriers for start-ups and growth-oriented enterprises, and the gender gaps to be addressed in the MSME policy framework and business support ecosystem. Performing this assessment of the environment for women's entrepreneurship development at the ASEAN-country level could serve as the foundation for national comprehensive strategies and action plans.
	<p>Develop MSME policy and implementation guidelines for intra- and inter-governmental cooperation and coordination in policy and regulation (includes "publication of guidelines/handbook on good practices in MSME</p>	<ul style="list-style-type: none"> • ASEAN countries could benefit from carrying out more systematic analyses of the barriers to women's entrepreneurship, to include: the distinct nature of barriers for start-ups and growth-oriented enterprises, and the gender gaps to be addressed in the MSME policy framework

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
	policy")	and business support ecosystem. Performing this assessment of the environment for women's entrepreneurship development at the ASEAN-country level could serve as the foundation for national comprehensive strategies and action plans.
	Publish of an updated ASEAN SME Policy Index and country reports	<ul style="list-style-type: none"> • Policy makers should work to develop accurate and comprehensive databases with sex-disaggregated data on MSME ownership and performance as inputs to create better informed and evidence-based public policies, measures, and programme interventions.
	Disseminate and advocate for regulations on business formation and provision of information on available MSMEs support to informal business owners	<ul style="list-style-type: none"> • Gender mainstreaming of BDS-providing organisations may be required, including provisions of gender-sensitivity training to counsellors and advisors in SME support centres (especially government-supported centres) to increase the level of gender awareness in dealing with women clients. • Support BDS providers with technical assistance in modifying the content, delivery, and facilitation approach of training and advisory services to be more gender responsive.
	Development of ASEAN accelerator toolkits and online application and registration for business start-ups	<ul style="list-style-type: none"> • Harness new technologies in improving the outreach of BDS services to women entrepreneurs in remote areas; this can be accomplished through mobile delivery and information communications technologies (ICTs).
	Capacity building for of policymakers in designing and improving business registration and license such as simplification of business registration procedure through utilisation of IT	

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
<p>129 Promote entrepreneurship and human capital development through creating a more conducive environment for entrepreneurship through the ASEAN Online Academy, enhancing human capital development for MSMEs, in particular youth and women.</p>	<p>Establish ASEAN-wide internship scheme/post-study programmes in business/entrepreneurship</p>	<ul style="list-style-type: none"> • ASEAN could consider strengthening the emphasis on women's entrepreneurship development in its Strategic Action Plan for SME Development by mainstreaming gender across all of the strategic goals. This action would provide an enhanced level of guidance to member states on MSME-related actions to support the development of women entrepreneurs and women-owned MSMEs at the national level. • Countries should increase the level of gender inclusiveness in national MSME development strategies and alignment of MSME development policies and measures with policy directions set in national women's empowerment and gender equality p. 23
	<p>Develop of common curriculums specifically designed for advanced industries in collaboration of international institutions (through e-learning via the ASEAN Online SME Academy)</p>	<ul style="list-style-type: none"> • Harness new technologies in improving the outreach of BDS services to women entrepreneurs in remote areas; this can be accomplished through mobile delivery and information communications technologies (ICTs).
	<p>Establish vocational training and counselling centres for micro enterprises, women and youth in collaboration with the private sector (strengthening micro enterprises)</p>	<ul style="list-style-type: none"> • Facilitate better access of women entrepreneurs to business development support (BDS) services, including in rural areas. The provision of gender-sensitive and responsive BDS services is critical to the goal of supporting more women to start viable enterprises and improve their chances for success. • Gender mainstreaming of BDS-providing organisations may be required, including provisions of gender-sensitivity training to counsellors and advisors in SME support centres (especially

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
		<p>government-supported centres) to increase the level of gender awareness in dealing with women clients.</p> <ul style="list-style-type: none"> • Support BDS providers with technical assistance in modifying the content, delivery, and facilitation approach of training and advisory services to be more gender responsive.
	<p>Promote and facilitate women's participation in MSMEs (women entrepreneurs) (Annual public/private dialogue; award for outstanding MSME)</p>	<ul style="list-style-type: none"> • Facilitate better access of women entrepreneurs to business development support (BDS) services, including in rural areas. The provision of gender-sensitive and responsive BDS services is critical to the goal of supporting more women to start viable enterprises and improve their chances for success. Gender mainstreaming of BDS-providing organisations may be required, including provisions of gender-sensitivity training to counsellors and advisors in SME support centres (especially government-supported centres) to increase the level of gender awareness in dealing with women clients. • Support BDS providers with technical assistance in modifying the content, delivery, and facilitation approach of training and advisory services to be more gender responsive.
	<p>Promote women entrepreneurship through capacity building, market access, branding and packaging</p>	<ul style="list-style-type: none"> • Facilitate better access of women entrepreneurs to business development support (BDS) services, including in rural areas. The provision of gender-sensitive and responsive BDS services is critical to the goal of supporting more women to start viable enterprises and improve their chances for success.
<p>D2. Strengthening the Role of the Private Sector</p>		
<p>130 Implement a more inclusive and</p>	<p>Review and update the Rules of Procedures for</p>	<ul style="list-style-type: none"> • Governments should establish formal mechanisms for

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
consultative process involving the private sector	Private Sector Engagement	conducting policy dialogue with women entrepreneurs and ensure that they are represented in public-private dialogue fora and consulted on legislative and policy reforms.
	Institutionalise regular consultative process among relevant ASEAN bodies with lead private sector entities (business associations and business councils) in support of the implementation of sectoral work plans under the AEC	<ul style="list-style-type: none"> • Business and industry associations, including chambers of commerce and industry, should be encouraged to extend and increase their memberships to businesswomen and aim to mainstream their interests and concerns in policy dialogue with the government. • Governments should establish formal mechanisms for conducting policy dialogue with women entrepreneurs and ensure that they are represented in public-private dialogue fora and consulted on legislative and policy reforms.
	Promote web links on specific AEC initiatives (e.g. Tariff Finder and ASSIST) to business associations in the region	<ul style="list-style-type: none"> • Business and industry associations, including chambers of commerce and industry, should be encouraged to extend and increase their memberships to businesswomen and aim to mainstream their interests and concerns in policy dialogue with the government.
	Support and encourage ACCSQ working groups / product working groups to engage with trade and other relevant associations to consult on development and to review trade related implementation issues on standards, conformity assessment and technical regulation.	<ul style="list-style-type: none"> • Business and industry associations, including chambers of commerce and industry, should be encouraged to extend and increase their memberships to businesswomen and aim to mainstream their interests and concerns in policy dialogue with the government.
D4. Narrowing the Development Gap		
140Reduce the burden placed by business regulations on the creation and successful	Reform the registration process for starting a business by streamlining permits and registration procedures and promoting	<ul style="list-style-type: none"> • Commission studies on the barriers to WED [women's enterprise development] (country-level), including on the challenges women entrepreneurs face in starting,

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
operation of formal enterprises	<p>Good Regulatory Practices</p> <hr/> <p>Provide support for the development of government policies and strategies to help in MSME's domestic and international expansion</p>	<p>managing and growing a business, with a view to assessing the extent to which these barriers affect different groups of women entrepreneurs and how these are being addressed through remedial measures. The purpose is to better inform the development of appropriate policies, measures, and programme interventions.</p> <hr/> <ul style="list-style-type: none"> • Appoint an advisory committee or establish a mechanism on women's entrepreneurship development, such as a Women's Business Council, to advise the government on appropriate policy directions. • Establish a clear focal point for WED inside government to improve the leadership and co-ordination of WED policies and programmes across relevant ministries and agencies and promote joint and complementary actions in support of WED. Establish WED focal points or desks in the economic ministries, including in the ministry responsible for MSMEs. Establish formal mechanisms for conducting policy dialogue with women entrepreneurs and their representative organisations and mainstreaming their concerns and issues; / Ensure that women entrepreneurs are represented in public private policy dialogue fora and consulted on legislative and policy reforms.
141 Building business opportunities for growth and employment, and increasing access to financial services	Support access to finance for MSMEs by, inter alia, establishing and strengthening credit bureaus, and further developing credit guarantee systems	<ul style="list-style-type: none"> • Strengthen policy actions to improve women entrepreneurs' access to bank financing, • Consider making special guarantee provisions for women-owned MSMEs in government-backed SME credit guarantee schemes and designing guarantee products especially for women's SMEs.

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
		<p>As a foundation for this, identify the gender gap in participation levels of women in existing credit guarantee funds by collecting sex-disaggregated data on the SME guarantee clients.</p>
	<p>Broaden access to financial literacy and productivity training while increasing market awareness for MSMEs – with a focus on women and youth</p>	<ul style="list-style-type: none"> • Combine financial literacy education and training with access to formal financial products. • Ensure women have equal and formalised opportunities to participate in entrepreneurial and business management skills programmes, including equal opportunities for young women to participate in “Start-up Weekends” and other entrepreneurship challenge competitions.
<p>142 Enhance productivity and competitiveness of rural economies, especially in the newer ASEAN Member States</p>	<p>Broaden access to financial literacy and productivity training while increasing market awareness for MSMEs – with a focus on women and youth (this is also pursued under strategic measure nos. 140-141)</p>	<ul style="list-style-type: none"> • Combine financial literacy education and training with access to formal financial products. • Ensure women have equal and formalised opportunities to participate in entrepreneurial and business management skills programmes, including equal opportunities for young women to participate in “Start-up Weekends” and other entrepreneurship challenge competitions.
	<p>Support access to finance for MSMEs by, inter alia, establishing and strengthening credit bureaus, and further developing credit guarantee systems</p>	<ul style="list-style-type: none"> • Facilitate improved access to credit and education on financial products. Strengthen policy actions to improve women entrepreneurs’ access to bank financing and close the gender gap in business lending <ul style="list-style-type: none"> ○ Offer technical assistance in designing gender-responsive products and services in order to address the unmet demand of women entrepreneurs in the ASEAN countries for

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
		<p>start-up and growth financing.</p> <ul style="list-style-type: none"> ○ Design special guarantee provisions for women-owned MSMEs in government backed SME credit guarantee schemes. ○ Provide gender-sensitivity training to bank managers and credit officers.
	<p>Broaden access to financial literacy and productivity training while increasing market awareness for MSMEs – with a focus on women and youth (this is also pursued under strategic measure no. 142)</p>	<ul style="list-style-type: none"> ● Combine financial literacy education and training with access to formal financial products. ● Ensure women have equal and formalised opportunities to participate in entrepreneurial and business management skills programmes, including equal opportunities for young women to participate in “Start-up Weekends” and other entrepreneurship challenge competitions.
	<p>Provide support for the development of government policies and strategies to help in MSME's domestic and international expansion</p>	<ul style="list-style-type: none"> ● Policymakers should work to develop accurate and comprehensive databases with sex-disaggregated data on MSME ownership and performance as inputs to create better informed and evidence-based public policies, measures, and programme interventions. ● ASEAN countries could benefit from carrying out more systematic analyses of the barriers to women's entrepreneurship, to include: the distinct nature of barriers for start-ups and growth-oriented enterprises, and the gender gaps to be addressed in the MSME policy framework and business support ecosystem. Performing this assessment of the environment for women's entrepreneurship development at the ASEAN-country level could serve as the foundation

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Characteristics, Elements and Strategic Measures	Action Lines	OECD Strengthening Women's Entrepreneurship Policy Recommendations
		for national comprehensive strategies and action plans.
Cross-cutting issues		
Examples of cross cutting items include: intentionally including women and/or women owned enterprises, particularly those involved in digital or ICT business, in promotional efforts:		
B9. Global Megatrends and Emerging Trade-Related Issues		
Intentionally include representatives of business women and women-owned MSMEs in any government engagement with the private sector, for example:		
B6. Good Governance		
58. Promote a more responsive ASEAN by strengthening governance through greater transparency in the public sector and in engaging with the private sector	No Action Lines	<ul style="list-style-type: none"> • Business and industry associations, including chambers of commerce and industry should be encouraged to extend and increase their memberships to businesswomen and aim to mainstream their interests and concerns in policy dialogue with the government.
59. Enhancing engagement with the private sector as well as other stakeholders to improve the transparency and synergies of government policies and business actions across industries and sectors in the ASEAN region	No Action Lines	<ul style="list-style-type: none"> • Business and industry associations, including chambers of commerce and industry should be encouraged to extend and increase their memberships to businesswomen and aim to mainstream their interests and concerns in policy dialogue with the government.

APPENDIX D. SUMMARY OF POLICY RECOMMENDATIONS PROVIDED BY STRENGTHENING WOMEN'S ENTREPRENEURSHIP IN ASEAN: TOWARDS INCREASING WOMEN'S PARTICIPATION IN ECONOMIC ACTIVITY

The OECD/ASEAN Coordination Committee on MSMEs report provided a comprehensive set of policy and policy action recommendations for supporting women's entrepreneurship development across the region. These policies are primarily targeted for implementation at the national level. We list them here for easy reference.

Policy improvement:

- Strengthen the emphasis on/ inclusion of WED [women's enterprise development] in the ASEAN Strategic Action Plan for SME Development, placing more emphasis on addressing the needs of women entrepreneurs across all five strategic goals of the plan.
- Improve the level of gender inclusiveness in national MSME development strategies, and their cognisance of the potential economic gains from ensuring greater participation of women in their various support programmes and services. Ensure alignment of SME policies and measures with the relevant strategic priorities laid out in the national women's empowerment/gender equality strategy and action plan.
- Ensure alignment of MSME policies and measures with the relevant strategic priorities laid out in the national women's empowerment/gender equality strategy and action plan. This may require closer linkages between the ministries responsible for women's affairs and the ministries responsible for MSME development and more effective implementation of gender mainstreaming in MSME policies and measures.
- Develop systems for collection and comprehensive reporting of sex disaggregated data on MSME ownership, including a gender analysis of the characteristics of MSMEs and their performance, in order to better inform policy development (Cambodia is a good model to examine, especially its comprehensive gender analysis of the 2011 Economic Census).
- Commission studies on the barriers to WED (country-level), including on the challenges women entrepreneurs face in starting, managing and growing a business, with a view to assessing the extent to which these barriers affect different groups of women entrepreneurs and how these are being addressed through remedial measures. The purpose is to better inform the development of appropriate policies, measures, and programme interventions.
- Appoint an inter-ministerial committee, with private sector representation, to oversee the production of a national WED strategy to call a higher level attention to the specific quantitative targets, policies and programmes essential for increasing and strengthening women entrepreneurs and women-

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owned enterprises in the country. As the foundation for development of the strategy/action plan, conduct an assessment review of the framework conditions and support environment for WED in the country (i.e. a national WED assessment study).

Enhancing the institutional structure for WED

- Appoint an advisory committee or establish a mechanism on women's entrepreneurship development, such as a Women's Business Council, to advise the government on appropriate policy directions.
- Establish a clear focal point for WED inside government to improve the leadership and co-ordination of WED policies and programmes across relevant ministries and agencies and promote joint and complementary actions in support of WED. Establish WED focal points or desks in the economic ministries, including in the ministry responsible for MSMEs.
- Establish a network of women's enterprise centres in the country with a view to providing business development support to women entrepreneurs and meeting their needs in a women-friendly environment.
- Strengthen the role of women entrepreneurs in business and industry associations by encouraging chambers of commerce and SME associations to establish businesswomen committees or women entrepreneur working groups, such as in the examples in Cambodia, Malaysia, and Vietnam.
- Establish formal mechanisms for conducting policy dialogue with women entrepreneurs and their representative organisations and mainstreaming their concerns and issues; ensure that women entrepreneurs are represented in public private policy dialogue fora and consulted on legislative and policy reforms.

Policy implications

For countries that have not already done so, a comprehensive set of policies for strengthening enterprise support programmes for women entrepreneurs is derived below for consideration by policymakers in Southeast Asian countries:

Improve women entrepreneurs' access to financing

- Raise the ceiling on micro-credit loans so women entrepreneurs have more room to access microfinance to expand their microenterprises.
- Implement programmes that help transition women micro entrepreneurs from micro-credit to bank financing as they grow their businesses.
- Strengthen policy actions to improve women entrepreneurs' access to bank financing, such as by issuing instructions to banks to allocate a certain percentage of their loan portfolio to women-owned SMEs; providing gender-sensitivity training to bank managers and credit officers and orientation on the positive gains from lending to women entrepreneurs; offering technical assistance in designing products and services to better meet the needs of

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women, and/or negotiating low interest credit lines for relending to women-owned enterprises.

- Consider making special guarantee provisions for women-owned MSMEs in government-backed SME credit guarantee schemes and designing guarantee products especially for women's SMEs. As a foundation for this, identify the gender gap in participation levels of women in existing credit guarantee funds by collecting sex-disaggregated data on the SME guarantee clients.
- Partner with women's organisations and training institutes to deliver financial literacy training to aspiring and existing women entrepreneurs.

Facilitate better access of women entrepreneurs to BDS services

- Establish women's enterprise centres as entry points for women to access a range of business support services.
- In designing entrepreneurial skills training programmes, consider the targeting of different market segments of women entrepreneurs (e.g. young educated women, disadvantaged rural women, homemakers, etc.). Ensure young women have equal opportunity to participate in Start-up Weekends and other entrepreneurship challenge competitions.
- Integrate entrepreneurial skills training with delivery of vocational and technical skills training programmes to women.
- Develop more regularised training opportunities for women entrepreneurs to improve their management skills. Focus more of this training on helping women develop growth plans/strategies for their businesses.
- Reach women entrepreneurs in rural areas with BDS services, perhaps through mobile delivery. (The village business incubation programme in Jordan could be another example to follow.)
- Provide gender-sensitivity training to counsellors and advisors in government-supported SME support centres to increase the level of gender awareness in dealing with women clients; provide technical assistance in modifying the content, delivery, and facilitation approach to be more gender-responsive.
- Promote gender diversity in government-funded and sponsored mixed incubator and accelerator programmes to bridge the gender gap in access to the supports available in these facilities to help businesses grow and create jobs. Funding for incubation and acceleration activities (in cases where this exists) could be tied to the gender diversity approaches and outcomes realised by these incubators and accelerators. In some cases, it may be advisable to introduce women-focused business incubators to help women entrepreneurs with high-potential business ideas scale-up their businesses.
- Scale up existing mentoring schemes (training women as mentors, matchmaking of women entrepreneurs with the mentors).
- Ensure that the recently announced ASEAN Mentors-Entrepreneurs Network (AMEN) of the ASEAN BAC is inclusive of women mentors and that every

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effort is made to create awareness among women entrepreneurs of the service and to engage their participation in the offer of mentoring matches.

Improve access to markets for women-owned enterprises

- Develop export-readiness programmes targeting women entrepreneurs, learning from the models in Malaysia and the Philippines, but with a view to scaling them to build the export capacity of a larger number of women entrepreneurs.
- Seek guidance from the UN International Trade Centre on good practices in gender-responsive public procurement policies, regulations and procedures with a view to increasing the participation of women-owned SMEs in public procurement offers.
- Develop and roll-out supplier development programmes for women-owned MSMEs, which could be accelerated in ASEAN countries with support from governments and donor organisations.
- Develop programmes that enable women-owned MSMEs to take advantage of corporate supplier diversity policies and programmes.

Develop initiatives to build the ICT skills and capacity of women entrepreneurs

- Develop dedicated programmes to build and strengthen the ICT skills and capabilities of women entrepreneurs, including the application of ICT-enabled technologies to improve their efficiency and broaden their market access.
- Strengthen efforts to ensure women are fully integrated in government-supported programmes and initiatives aiming to facilitate ICT-based start-ups.
- Provide support to women entrepreneurs' association in their efforts to support women entrepreneurs is using ICTs to improve the performance of their enterprises.
- Enter into discussions with the United Nations Asian and Pacific Training Centre for Information and Communication Technology for Development (UNAPCICT) to implement the "Women ICT Frontier Initiative" (WIFI) programme in the country as a vehicle for building the ICT capacity of women entrepreneurs."²⁶⁸

268 OECD and ASEAN Coordinating Committee for Micro, Small and Medium Enterprises 2017.

APPENDIX E. ACTION AGENDA ON MAINSTREAMING WOMEN'S ECONOMIC EMPOWERMENT (WEE) IN ASEAN

The Action Agenda aims to mainstream Women's Economic Empowerment through innovation, trade and inclusive business, and human capital development by encouraging each ASEAN Member State to support the following actions:²⁶⁹

- 1) **ADOPT CONCRETE AND MEASURABLE ACTIONS** to address the barriers that impede maximizing women's full economic potential in the areas of: finance, information access, and markets; human capital development and leadership; and innovation and technology;
- 2) **PROMOTE** women's participation and skills development in science, technology, engineering, arts and mathematics (S.T.E.A.M.), including information and communication technologies (ICT) by providing, for example, incentives for women innovators, allocating more foreign investments in science research institutes and foundations, and by creating an enabling environment for ICT-empowerment of women entrepreneurs and to promote ICT as enabling tools for the advancement of women and their economic empowerment;
- 3) **INVEST** in programs which provide enabling environments for women micro, small and medium enterprises (MSMEs) to prosper through ease of doing business initiatives, incentives and favourable tax regulations, helping them participate in inclusive and innovative businesses whether as consumer, seller, supplier, distributor, and worker, and by addressing the constraints that limit their integration in the international markets and global value chains (GVCs);
- 4) **INCREASE** women's representation and leadership in the workforce at the executive and managerial positions by intensifying human capital development and capacity building programs that empower women to bear equal roles in all sectors as men do and, enhance gender equality policies and strategies to close the gender pay gap;
- 5) **ENCOURAGE PUBLIC AND PRIVATE SECTOR COLLABORATION** through the ASEAN BAC and AWEN for advocacy, networking, and outreach purposes to create more opportunities for women in business; AWEN shall echo the voices of women MSMEs as its representative in the ACW under ASCC and in the ACCMSME under AEC; and
- 6) **CONSIDER** organizing an annual ASEAN Women's Business Conference led by AWEN in coordination with other relevant sectoral bodies under the ASCC and the AEC where ASEAN Member States' public and private sector representatives,

²⁶⁹ Source: ASEAN Secretariat. 2017d. *Action Agenda on Mainstreaming Women's Economic Empowerment (WEE) in ASEAN*. Association of Southeast Asian Nations. <http://asean.org/storage/2017/11/Action-Agenda-on-Mainstreaming-Women-Economic-Empowerment.pdf>.

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academe, and civil society converge to share good practices, discuss gaps and challenges, and put forward recommendations to achieve women's economic empowerment and gender equality in the region.

APPENDIX F. DATA ON ACCESS, USE, AND BARRIERS TO MOBILE PHONES AND INTERNET

Broadband coverage, unique subscribers and unique mobile internet users as of first quarter, 2017, selected countries²⁷⁰

Country	Broadband Coverage	Unique Subscribers	Unique mobile internet users	Total Population	Unique mobile internet users as share of population
Cambodia	90%	10,410,050	7,814,584	16,204,486	48%
Indonesia	90%	216,777,727	109,226,349	260,580,739	42%
Myanmar	90%	35,783,960	16,035,975	55,123,814	29%
Philippines	93%	74,300,647	51,411,846	104,256,076	49%
Thailand	98%	59,983,387	52,091,212	68,414,135	76%
Viet Nam	79%	49,429,809	39,248,248	96,160,163	41%

270 Hasnain and Pasti, 2017; and CIA, World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/geos/xx.html>.

APPENDIX G. DATA ON BARRIERS TO OWNING A MOBILE PHONE AND ACCESSING THE INTERNET

Barriers to owning a mobile phone
(percent of non-mobile owners who identified the following as a main barrier to mobile ownership)²⁷¹

			Indonesia	Myanmar	Philippines
			Percent of Respondents		
Affordability	Handset/SIM Cost	Women	29	26	27
		Men	33	22	27
	Credit Cost	Women	22	18	27
		Men	24	12	34
Usability and Skills	Handset not in my language	Women	16	14	14
		Men	11	12	3
	Do not know how to use a mobile	Women	34	36	29
		Men	22	30	28
	Reading/Writing Difficulties	Women	22	11	15
		Men	13	18	12
Relevance	Mobile is not relevant for me	Women	23	39	11
		Men	10	34	14
Safety and Security	Personal Safety	Women	3	9	8
		Men	4	5	7
	Strangers Contacting me	Women	9	6	15
		Men	7	4	10
	Information Security	Women	8	6	11
		Men	4	3	12
Accessibility	Battery Charging	Women	22	16	13
		Men	26	13	15
	Network Coverage	Women	7	7	12
		Men	7	11	13
	Family does not approve	Women	7	4	7
		Men	3	2	2
	Access to Agent Support	Women	6	12	10
		Men	5	8	10
	ID	Women	3	7	9
		Men	1	5	7

271 Oliver Rowntree, 2018.

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Perceived barriers to mobile internet use (% of mobile users who have not used mobile internet and claimed the following as the main barrier)²⁷²

			Myanmar	Philippines
		Percent of Respondents		
Affordability	Handset/SIM Cost	Women	16	30
		Men	22	19
	Data Cost	Women	18	37
		Men	20	22
Usability and Skills	Do not know how to access internet on mobile	Women	28	13
		Men	28	17
	Do not know how to use a mobile	Women	18	3
		Men	16	2
	Reading/Writing Difficulties	Women	12	1
		Men	15	4
Relevance	Internet is not relevant for me	Women	37	14
		Men	33	12
	Insufficient local information	Women	10	8
		Men	14	5
	Insufficient content in local language	Women	14	4
		Men	12	5
Safety and Security	Harmful content (self/family)	Women	11	18
		Men	11	0
	Strangers Contacting me	Women	6	13
		Men	6	10
	Information Security	Women	9	15
		Men	9	17
Accessibility	No access to internet enabled phone	Women	18	29
		Men	14	28
	Drains my battery	Women	7	12
		Men	15	8
	Network Coverage	Women	14	20
		Men	10	22
	Family does not approve	Women	8	6
		Men	3	4
	Access to Agent Support	Women	9	7
		Men	11	7
	Slow connection/Cannot do what I want	Women	9	19
		Men	11	23

272 Ibid.